



COMPARING TRADITIONAL AND AGILE SOFTWARE DEVELOPMENT METHODOLOGY USING MOBILE APPLICATION

K.Suguna¹, S.Babu²

¹Department Of Computer Science & Applications
Sri Chandrasekharendra Saraswathi Viswa Maha Vidyalaya University
Kanchipuram, Tamilnadu.

²Assistant Professor of Department Of Computer Science & Applications
Sri Chandrasekharendra Saraswathi Viswa Maha Vidyalaya University
Kanchipuram, Tamilnadu.

ABSTRACT

Software was more important to the life. More than 50 years software was part of the life. The stationary shop, hospital, medical shop, Business and most of the area covered in software. Then all the area compulsory some methodology are used. Basically two methodology are used Heavyweight methodology, lightweight methodology. So in this paper discussing which one best in mobile application. Some factors are used in this paper. Those factors are approach, Success measurement, Perspective to change, Requirement, size, Refactoring, cycles, customer satisfaction and management style. That base to get the conclusion.
Keywords: software development methodology, heavyweight methodology, lightweight methodology, factor, mobile application.

1. INTRODUCTION

Software is important one of the trendy life. More than 50 years we are addictive in software. It has cover owl process. Software has some developing methodology. They covered hospital, medical shop, hotel, provision store, cinema theater, mobile phone and so on. All are combined in the software. Suppose we don't have food all live but the mobile phone are not working they felling very bad and their performances are very crudely.

Software get some steps that based developed the product. That the bud rectifies are very hard, so they introduced the some methodology. That they methodology are heavy weight methodology and light weight methodology. Accordingly in 1960's did not combine the steps.

In 1969's introduce the structural programming. 1970's to use the structural system Analysis and design and then 1990's Object Oriented programming, RUP, RAD, DSDM, Extreme programming and so on. This is mass diversion of the software development methodology.

In 2000's we introduce the unified agile methodology and then disciplined agile delivery. 2010's scaled agile function and large scale scrum are introduced. That all are just my searching knowledge I collect the information.

Agile methodology is the popular methodology of this generation. Agile has friendly methodology. Java language, apex that all are perform in this formulae based. Then the heavyweight methodology also performing well but the customer review based to change the data that time the agile is good.

Because waterfall model to completed to step by step process. One step completed that time only go to another step until do not move in another step. That time step one review comes then once again starts to step 1 and step 2. So get more time. But agile is if you any change goes to correct that area only. So that times to save the time.

That based to explain which one is the best methodology to the mobile application. This is small introduction of dissertation. This dissertation to developed searching knowledge and then reading knowledge based only explained. Any mistake are find please give some apology.

OVERVIEW

I am discussing to comparison of traditional and trendy software development methodology using mobile application. The people do not live without mobile phone. They must to use the mobile phone. Mobile phone is most important of this generation. Mobile phone gets some merits and demerits also. We utilized the merits and then to agree the demerits of the mobile phones.

The traditional software development methodologies are waterfall model, prototyping model, incremental model, Rapid Application Development model, Spiral model and so on. In this topic the waterfall models how to perform the mobile application. That merits and demerits are discussing in this dissertation. The traditional software development also called as the heavy weight methodology.

The lightweight software development methodology performs the mobile application. That merits and demerit are explaining it. Then the lightweight agile software development methods are Extreme Programming, Scrum, Feature Driven Development, Dynamic System Development Method, Adaptive Software Development, and so on.

In these two methodologies which one is best Methodology of mobile application? That's one to find this dissertation. We are take water fall model in heavy weight methodology and then to take agile methodology of lightweight methodology.

HEAVYWEIGHT METHODOLOGY

Heavyweight methodologies and also considered to be the traditional way of developing software. These methodologies are based on a consecutive series of steps, such as requirements derivation, solution compiling, testing and delivery. Traditional methodologies require defining and documenting a stable set of requirements at the starting of a project. There are many different traditional methodologies but only discussed in Waterfall model.

Waterfall

In the year of 1960s, "code and fix" was the method employed by software developers. As Christophe and Thibaut describes, "one year of forcefully code, one year of debugging". Due to this hard nature of "code and fix" approach, Winston Royce in 1970 described the waterfall methodology. The waterfall model approaches the highlight a structured progression between defined phases.

Each phase consists on a specific set of activities and deliverables that must be accomplished in front of the following phase can begin. The phases are always named differently but the common idea is that the first phase tries to capture what the system will do, its system and software requirements, the second phase control how it will be designed. The third stage is where the developers start developing the code, the fourth phase is the Testing of the system and the final phase is focused on Implementation tasks such as training and large documentation. However, in engineering practice, the term waterfall is used as a common name to all sequential software engineering methodology. Figure 1 shows a traditional waterfall lifecycle.

Water fall model to get step by step process. Once end the first step to went another step. Other wise still process before stage only.

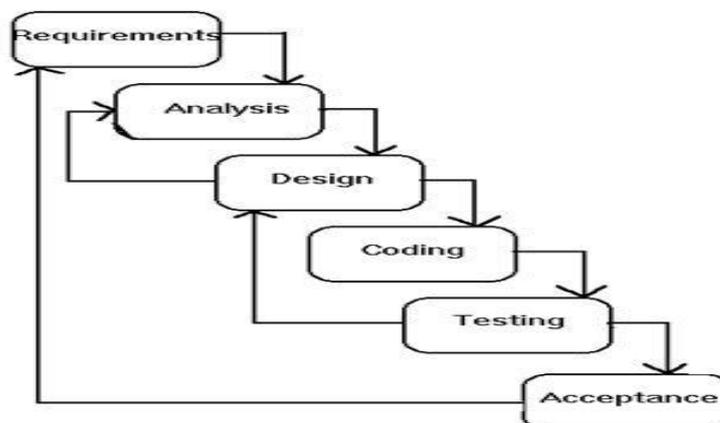


Figure 1: Waterfall Lifecycle

AGILE METHODOLOGY

Agile modeling dedicate “the quality of being agile; readiness for motion; nimbleness, activity, dexterity in motion” as mentioned in the Oxford Dictionary – software development methods are aim to offer once again an answer to the eager business community asking for lighter weight along with faster and quick software development processes. To explain some of those developed: XP, Adaptive Software Development-ASD, Agile Modeling, Crystal Methods, Dynamic System Development Model-DSDM, Lean Development and Scrum. All these methodologies confirmed that high quality software and more importantly customer satisfaction could only be achieved by deliver “lightness” to their processes. Some of the most used agile methodologies are listed below. In figure: 2 to explained the basic process of agile method.

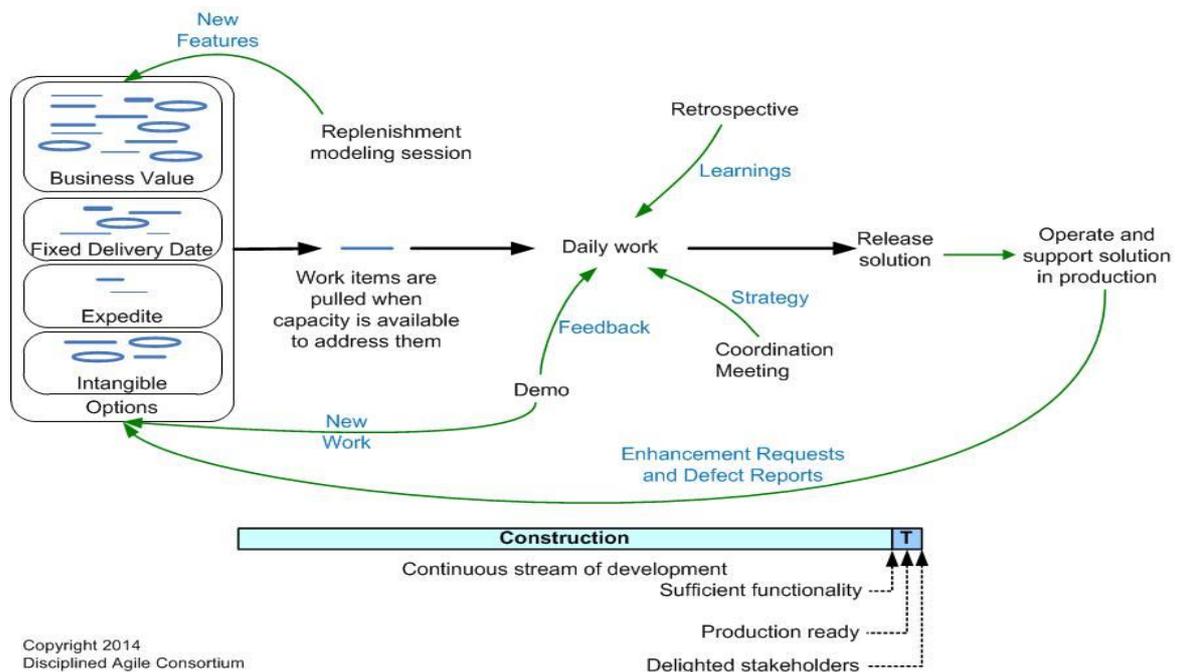


Figure: 2. Agile Methodology basic process

An agile team is a automatic organizing team. Authorities are communicated to the team as a fully, and the team complete the best way to complete them. Agile teams discuss and convey together on all aspects of the project. That is why agility works best in small teams. As Alistair Cockburn and Jim Highsmith specify, “Agile development is more crucial with big teams. The medium size project has only nine people, within the reach of most common agile processes. Yet, it is amusing to infrequently identify successful agile projects with 120 or approximately 250 people”. The programmer in an agile process are not nervous of change. Agilists welcome different at all stages of the project. They view different to the requirements as best things, because they mean that the team has accomplished more about what it will take to satisfy the market.

STUDENT PERFORMANCE

In this academic give more tasks give to student. That practice to improve the student knowledge. And then my higher education also helps this dissertation. The software engineering is best and important subject of the modern world. That one gives more important to developing the product. More methodologies are using to develop the product.

In this dissertation which one is best to use developing the mobile application? Some studied knowledge and searching knowledge base discussing in this topic.

In this dissertation use some factors on those methodologies. Those factors are Approach, size, management style, Customer satisfaction, Success measurement, Perspective to change, Requirement, Refactoring and cycles. That base to comparing the heavy weight water fall methodology and agile methodology.

OBJECTIVES

- Approach, Team size, management style, and risk factor are using in water fall methodology and agile methodology.
- That base to get some idea of which one is best of mobile application.

Those factors are gets some objectives of my document

2. PROPOSED METHODOLOGY

First discuss the heavyweight methodology and agile methodology. And also discuss the mobile application life cycles. And differentiate and discriminators of heavy and agile methodology. TO get some factors that factors are Success measurement, management style, Perspective to change, customer satisfaction, Requirement, size, Refactoring, and Cycles. Agile and Traditional methodology that two methodologies base which one is best in mobile application. That is the main point of this dissertation. Above factor base to analysis the methodologies. Just to comparing the two factor that base which one is best in the mobile application. More factors to get and comparing that base to get and draw the diagram. Easily to identify the one is best in the mobile application.

3. COMPARING THE FACTORS:

Approach and Perspective to change:

In this figure:3 explain the approach and perspective to change factors using to give some graph answer. The Two factor base predictive approach to increasing and the value the change sustainability reduces that flows of traditional methodology given below.

Then the adaptability and change adaptability base to give some flow of the agile method. These two factors comparing the agile get leading in mobile application

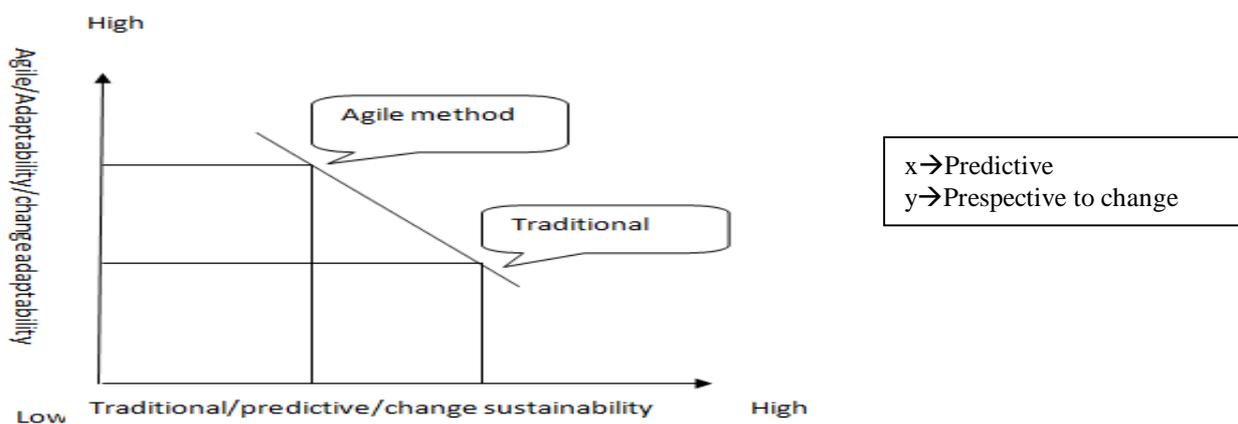


Figure: 3 Approach and perspective to change factor base differentiate agile and traditional methodology

Requirement and Customer:

In figure:4 explained the requirement and customer factor base analysis the methodology. Requirement factor are largely stable in traditional model and largely emerged in agile model. Customer factor always present in agile model and the ideal of traditional mode. So that way the diagram is flow.

In this state also agile only increased.

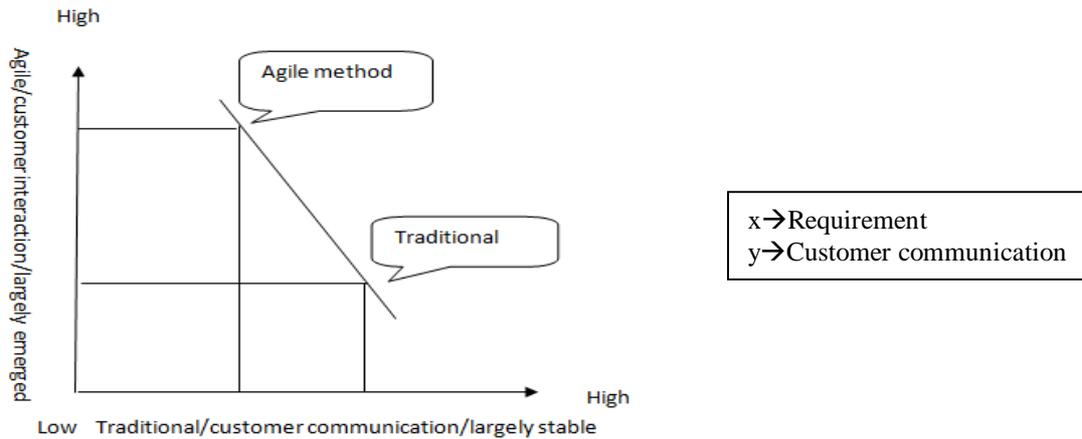


Figure: 4 Requirement and customer factor base differentiate agile and traditional methodology

Size and Success measurement

In figure 5 to analysis the factors are size and success measurement. Agile project size is small and traditional project size is high. Success measurement considered very important to product. That base only to measure the success. The traditional software get large size documentation and the final stage only to communicate with customers that time to get more time lack. So reduce one point in success measurement. The agile always performed in small size. Agile to get always communicate to customers.

So the success of measurement also increased, so lead in agile method.

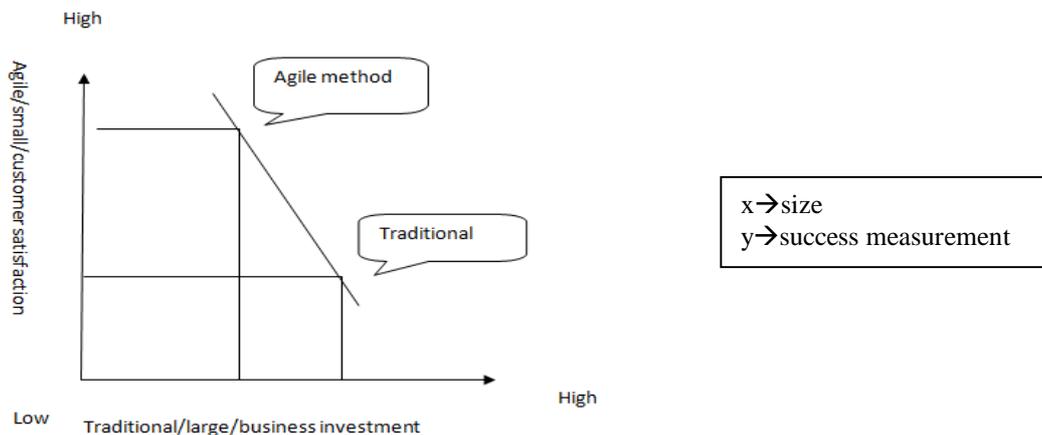


Figure: 5 Size and success measurement factor base differentiate agile and traditional methodology

Refactoring and Cycles

In the figure 6 to get refractors and cycles base recognize the one best. The agile is very cheap and traditional methodology are get expensive one. That base also I think agile is best.

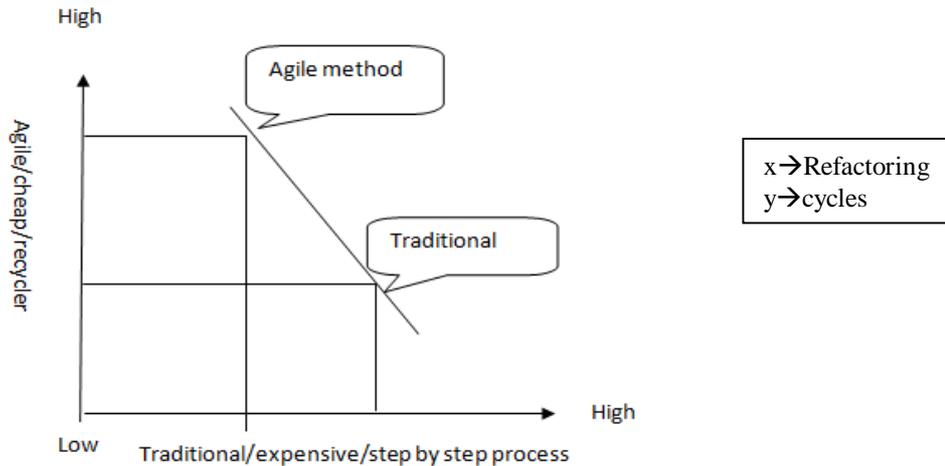


Figure: 6 Refactoring and cycles factor base differentiate agile and traditional methodology

The waterfall model get step by step process once the process completed that time to get more lack of time. And the documentation also increased. One step completed go to next step otherwise do not go to another step. The documentation maintenance is very difficult in waterfall method.

The agile get the recycler every one hour gathering to meeting and to communicate to all design of the project. Any changes can occur that time to change the bug. This is main and important point of agile method.

Customer Satisfaction

Customer satisfaction is main and important of product. The product is delivery that reviews main in the industry. That base to get more market value. In the competitive world do not wait in any process. That waiting time another person goes to win. In my thought also in the mobile application accept the agile methodology.

All the factors base analysis the dissertation agile one is the best in the mobile application.

4. CONCLUSION

There has been mention increase in mobile application development projects as the orders for mobile applications are increasing and the potential number of different mobile applications is virtually unlimited. Furthermore, the existed research work related to mobile software's confirms agile practices to be a natural fit for the development of mobile applications. An appropriate agile method could be selected for a given project and can be joined to a specific requirement based upon project's complexity and team size. Although the parallel mobile application development models as discussed and reviewed in this paper are encouraging but still theoretical. Later, the conclusions from those studies could be reply to mobile software development companies and researchers that would suitably adopt agile methodologies as a generic development culture without trouble about specific agile methodologies.

5. RESULT

No possiblity to used heavy weight methodology in mobile application. Traditional methodology is the best one in the mobile application. But this is not end in the software development methodology. One big person says, "Changes only not change". So we are waiting for another latest methodology.

References

- [1] <http://ncycles.com>, D. Marks, "Development Methodologies Compared", N CYCLES software solutions, December 2002, , Accessed on 2/2/2005
- [2] B. Grady, C. Robert, J. Newkirk, Object Oriented Analysis and Design with Applications, 2nd edition, Addison Wesley Longman, 1998
- [3] C. Larman, Agile & Iterative Development: A Manager's Guide. Addison-Wesley, 2004.



- [4] B. Boehm, "A Spiral Model of Software Development and Enhancement," IEEE Computer, May 1998
- [5] B. Boehm, R. Turner, "Balancing Agility and Discipline: A Guide for the Perplexed", Boston, MA: Addison-Wesley. pp. 5-57, ISBN 0-321-18612-5,
- [6] 2004.<http://www.agilemanifesto.com>, W. Cunningham, "Agile Manifesto." Accessed on 10/7/2004
- [7] R. Charette, "The Decision is in: Agile Versus Heavy Methodologies", Cutter Consortium, Vol. 2 No.19, March 2002