

Implementation of Agile Project Management in IT companies

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ABSTRACT

With the huge rise of Internet, software programming has turned into an essential piece of practically every aspect of business today. Since customers have a surmounting interest for instantaneousness and comfort, organizations are forced to add online services to their services. Because of this there is an increase in employees for the improvement of services to address consumer needs. Since organizations want to increase their profits, resources should be properly allocated to reduce the cost. This can be accomplished by actualizing a process framework that best changes their employees to quality products.

Agile project management is a new methodology designed to minimize the risk and development costs. Throughout the development phase it is based on incremental development and frequent feedback gathered from customers. The change in implementing agile framework from traditional framework will lessen the risk associated while creating a large software programming application by diminishing lead times and increasing team morale and productivity. Literature review and findings suggest that by implementing agile project management framework in the software development process it helps in increasing the benefit in IT companies.

Key Words: Agile Project Management, Traditional Methodology, Return on Investment

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1. INTRODUCTION

A process model is important to define a timetable of deliverables for the software development project and to guarantee that each individual from the team, from administration to employees to customers, comprehends the desires of the software development life cycle. While a waterfall model has been utilized for a long time, organizations are starting to understand its inborn limitations. Due to fixed timelines of getting requirements, coding, testing and implementing as per needed, it did not meet the customer change requirements which may lead to risk in projects. My study describes the steps which need to follow while following the agile methodology to reduce risks and costs.

Employees implementing agile methodology will be implementing the process in iteration which will be following like two to four weeks iteration. So in this each iteration each step of the software development cycle will be implemented. This will be into effect making that customer requirements will be met per each iteration which will be completed in two to four weeks. If any changes are required then they can be easily handled. In this process risk is less when compared to traditional model which will reduce the cost of software projects while implementing agile framework. As in this process continuous feedback is taken from the customers the final product will be perfect as requested by the customer who provides more customer satisfaction and provided more profits to the companies and also reduces the software development costs.

Research investigates the pros and cons of both frameworks to determine the issues while changing in a business context. Initially started with a study of identifying the limitations of both

frameworks and the advantages of implementing the agile project management framework. Then explored the impact of changing from a traditional, plan-driven driven model to agile methodology on measures of cost, quality, productivity, and consumer loyalty. Finally explored the degree of agility characterized as the fit between the practices of a firm and the adoption of agile methodologies, implemented by many organizations and its association with decreased risks and increased the profit.

2. BACKGROUND

There have been few endeavors at measuring and demonstrating the effect of changing to a agile software development process on increasing the benefit and overall software quality. Some experts are in the process of incorporating the agile process with risk management and some observed that there is a large improvement while moving from traditional model to agile process framework which has the incremental model of development.

2.1 Limitations of waterfall Method

The most widely identified issues connected with traditional waterfall model include frequently changing requirements, an absence of a chance to comprehend changing, client requirements, and large number of issues identified at the time of testing.

2.1.1 Requirements

Traditional method needs an extensive planning before implementation of the software development life cycle. As there will be huge documentation process before starting of the project and those should be thoroughly followed during the process of execution and implementation of the project which should be followed to rework throughout all phases of software development life cycle. This traditional model is not adaptive to the frequent changing market; most of the items are handled at the final part of the project and may not be provided as per the customer needs.

2.1.2 Customer Requirements

The study is conducted and observed from different projects implementing traditional framework and observed that customers are being provided with small portion of code. This affirms the absence of a chance to pick up knowledge into moving customer needs. There will be no possibility of taking feedback from the customer while implementing the traditional model. As in this process if there is any change which is provided by customers at the end of the project and if at the last customers are coming for a change at the end then it will lead to execute the complete process accordingly.

2.1.3 Large number of Defects/Issues

Major issue in traditional model is that testing will be done at the last and the number of issues will be identified in the tasting phase. Since testing is done just before the last stage of the development because of the issues again going to initial stages and working on the issues will lead to need of huge amount of time. Keeping in mind the end goal to meet a settled due date, insufficient testing should be possible to locate an adequate measure of issues and in this way the test scope is low. Since it is generally the case that the project manager is exuberant in estimating proper timelines and usage does not pass without the issue, numerous errors will occur then the product is delivered to the customers, which will lead to dissatisfaction of the customer. This

may lead in nor getting future deals from the customers which diminishes the profit and return on investment.

Even though there is plenty of time available for testing it is difficult to find each and every bug as there should be through verification of the code at a time. As the testing will be once only when the development of the code is done which will be done at the last, and if any bugs are being observed at that time then it will lead to redesign of the application which will increase the budget to fix the bugs. So because of this in traditional model there will be possibility of costs being increased and drives down the productivity of a task.

2.2 Limitations of Agile Methodology

Agile methodology is not the process without any issues, the number and seriousness of issues that affect expenses and degree of profitability of an arrangement driven system extraordinarily exceed those of a agile approach. Normal issues staying for nimble after the change from customary techniques are identified with high testing lead times, low test scope, and numerous groups requiring high coordination. Agile methodology does not fit to large projects, as there is a need to much iteration to complete the project and there is a need to more time to work on single functionality. So at that time the cost of production of those type of items may lead to more cost while implementing agile methodology.

3. ADVANTAGES OF AGILE

From the literature it is observed that there is a tremendous benefit of implementing agile framework, which relates to the business measures of implementation that have been utilized up to this point, expenses and rate of return.

There exist numerous advantages moving from traditional model to agile model. The improvements include more fixed requirements, identifying the defects early, decreasing the testing time, and having more interaction with customers. We will now discuss more detail about the cost and ROI can be improved and the benefits that can be obtained implementing agile than traditional model.

3.1 Requirements

The main important thing in moving from traditional to agile approach is related to core competency approach in all phases of the development. Agile approach is developed based on the issues occurred while implementing the traditional model which are mostly relate to getting clear requirements and planning. Accordingly it is regular to see how agile method in general fritter away to such issues. Here the customers are directly communication with the developers and involved in the development phases which involves frequent communication and discussion about the requirements whenever needed. After giving demo to the users they will provide their feedback and that will be handled along with the new requirements which will go in next iteration in the coming two to four weeks of time. As they are providing the changes frequently they can be handled with quick response and it will be implemented in next iteration. So due to those frequent requirement changes based on customer feedback it will be a minimal requirement changes which may not affect the existing functionality.

In traditional model there will not be a providing for getting customer feedback or communication with the developers which is a major obstacle to develop the products as customers will not be accessing the code which is developed. While in the agile methodology customer provides feedback after each and every iteration and communicate their further changes and development team will be responding to the changes requested by the customers. As development is done in multiple iterations there will not be much impact if there are changes. So this type of rework reduces the cost of the development as it will be in initial stages and this increases the profits of the companies.

3.2 Defect Identification

As testing will be done in multiple iterations defects can be easily identified earlier than in the traditional model. Each iteration has testing model and as it is in small pieces it will be easy for the testers to complete full testing than doing the testing in waterfall model. As testing is done continuously defects can be identified earlier and fixed quickly which will not lead to huge severity. Because of this there will not be more cost expenditure for fixing the issue as they are early identified. As the iteration is two to four weeks only there will not be any huge trouble if they want to rebuild the code. As issues are identified earlier we can get positive feedback from the customers and which increases the ROI.

3.3 Frequent Communication

In the agile process to upload the standards there is a need to of strong teamwork and much communication should be maintained not only with the current team and also with the other teams. Agile methodology develops relationship with different employees as they will be cross functional as there will be much communication developed between the customers and employees within the same project. Because there is an increase in the communication then there will be more morale between the team members. An affectionate group improves productivity as individuals feel that work can be accountable because of the work done by the peers. This improves team productivity and creates high performance that that of the individuals work that is being contributed. Such communication between the employees enhances the nature of the item and results in expanded incomes and ROI.

There is a huge correlation between process engineering and agile practices. In the last stage of development of the projects companies will be likely to employ agile methods and enjoy the implementation nature of the process and encourage the implementation of the products.

After shifting from traditional model to agile model there are great improvements in severity. The impact on testing lead times is sketchy; with the end of any analysis, I assume that testing lead times is unimportant in respect to those under a traditional methodology and those for different periods of the agile improvement cycle. These changes, when all is said in done, increment ROI, seeing as the positive reduction in the number of outdated requirements and increase the customer satisfaction which reduces in cost and increase the profitability.

4. METHODOLOGY

I will now begin to analyze my data obtained from different levels of IT employees with their experience in their companies which they observed when they moved to agile framework from

traditional framework. I observed that from changing from traditional model to agile model reduced the costs in my research.

4.1 Data Collection

Developed questioner and shared with the different experienced IT employees and measured the difference which they identified while implementing the traditional framework and agile framework. My study observed the different experiences which employees have observed while implementing the agile framework which helps in reducing the cost.

Not just I desire to pick up understanding about the companies implementing agile practices, but also about its plan-driven procedure before the switch. Finding out about the issues the firm experienced with a more traditional methodology would comprehend the request to apply agile methodology. Notwithstanding giving the workers outright inquiries concerning both methodologies, I incorporated a basic component to demonstrate an increase or decrease in critical business factors, for every development stage, as a result of the change.

4.2 Data Analysis

Questioner is shared to several software professional that started implementing agile methodology. There is a huge response from the professional to whom I provided the questioner for fulfillment. I believe this foot-in-entryway strategy brought about the most positive response. After sending this questioner I had got a good response from the employees who implemented the agile methodology. My initial analysis is based on the data collected from these professionals.

5. RESULTS

I want to analyze that the observations identified with the teams implementing agile methodology are same to my research work. Some companies may not be implementing agile methodology throughout their software development life cycle. If there is sudden crunch of time and resources then teams should stop their requirements and start the new iteration as per needed. While implanting agile methodology employees feel that there is a huge pressure on employee's in-order to meet customer satisfaction. From these observations it is observed that costs are decreased as a result of a better sense of strong cooperation between the teams.

At the same time it is observed that if there is an error then it used to effect the complete process as testing is done at the end in the traditional model. As working on the defects at the last time may lead to more errors which will impact on the return of investment.

6. FUTURE WORK

My results identified that with time and responding to change received from customers implemented agile project management framework, huge tremendous results are found. Looking forward to gather more data to generate more wide analysis. The decrease in cost and increase in return on investment may also provide more facts about the advantages of Agile Project Management.

7. REFERENCES

- Claudia de O. Melo^a, Daniela S. Cruzes^b, Fabio Kona, Reidar Conrad^b.(2011) Interpretative Case Studies on Agile Team Productivity and Management.
- Fernandez, D. J., & Fernandez, J. D. (2008). Agile Project Management—Agilism Versus Traditional Approaches. *Journal Of Computer Information Systems*, 49(2), 10-17.
- Karlesky, M, and Voord, M (2008), Agile Project Management (or, Burning your Gantt Charts), Embedded Systems Conference Boston\
- Project Management Institute (2011). PMI Agile Certified Practitioner Examination Content Outline, Retrieved March 3, 2015 from
- Schwalbe, K. (2014). *Information Technology Project Management, Seventh Edition*, Cengage Learning, Boston.
http://www.pmi.org/Certification/~/_media/Files/PDF/Agile/PMI_Agile_Certification_Content_Outline.ashx.
- Senevirathne, Akalanka (2014). Risk management in agile projects. LinkedIn | Pulse. Retrieved June 13, 2015 from <https://www.linkedin.com/pulse/20140618100310-89184031-risk-management-in-agile-projects>.
- Serrador ,P., Pinto,K. (2015). Does Agile work? - A quantitative analysis of agile project success (6-12) (Journal retrieved from USF Online library)
- Waters, K., (2007) Agile Adoption, Agile Project Management