

Handling Transition Product Backlog with Scrum off Scrum

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Abstract— Software development is a challenging task where different kinds of obstacles are to be faced throughout the life cycle. When those obstacles are solved a successful product will be produced. Software development is structured activity that is carried out by following a process model. With this kind of development both customers and developers are not satisfied collectively. Different impediments may arise while developing a product out of which some may be solved in the current environment and others may not be such are called as Transition Product Backlog. A product will take its full shape by finding solutions to all those impediments. Enterprises adopt a new culture which is able to resolve Transition Product Backlog that is supported by scrum.

Index terms –Transition product backlog, Enterprise transition team, Scrum rollout team, Scrum and Sprint.

I. INTRODUCTION

Product development is a business activity that has high competition in developing market, especially when it comes to software products competition in the market is more. This is because there are more number of software companies coming forward to meet the requirements of customer. As said for any developing organization final goal is to develop products that satisfy the requirements of customer. To develop software products software companies uses different types of process models from traditional to modern. Every process model has its own strengths and weaknesses. The traditional and modern process models are flexible to software developers and any one from these two groups is not flexible for both customers and developers. So, a new group of process models were developed named as “Agile software development” process models that are flexible mainly for the customers.

The agile methods are based on iterative and increment development as other models as shown in figure 1. But the key feature is that the teams in agile methods are self organized and cross functional. These methods support adoptive planning, evolutionary development and product delivery. The product development is a repeated process which has time limit and causes fast and flexible response to change [5]. There are many process models in agile among them scrum and extreme programming (XP) are successful

and widely used in software development. In this paper we discuss the post adoption process of scrum. The adoption process is described in [3] and the practices for adoption in distributed agile teams are discussed in [1].

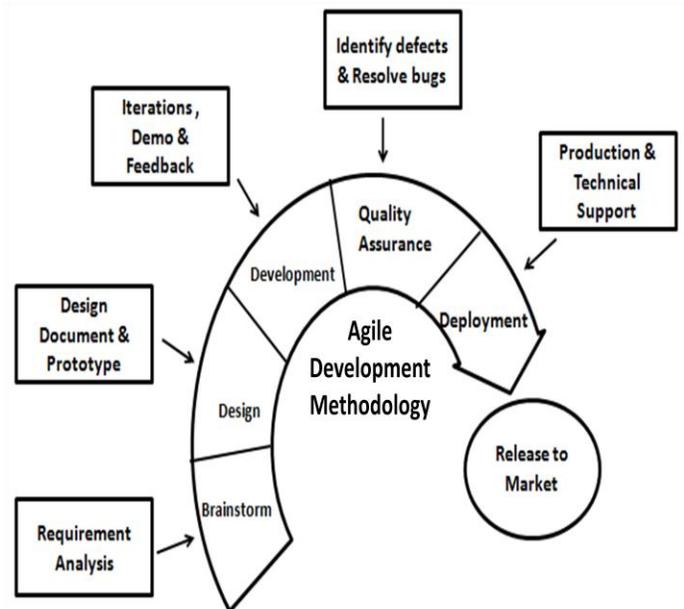


Figure 1. Agile Methodology

II. SCRUM

Ken Schwaber first described scrum in 1996 [8]. Scrum is a control process management model which reduces all the complexities that occur during software product development. It is the only better way to build software more effectively to the most satisfaction of customers.

Scrum has a simple frame work with effective team associated to work on multipart software projects. Scrum is more often used to handle multipart software products, using iterative and incremental practice. It drastically increases the output and reduces time to develop products that a classical waterfall model is missing. With effective time management

this process model enables organizations adjust to rapidly changing requirements and manufacture products that encounter the requirements of customer. This is made possible by the self organized scrum team members namely product owner, scrum master and the cross functional team members. Along with fast releases that are possible by scrum quality of the software is also important. This is achieved by additional feature such as UI programming which is a new technique for agile software development to improve quality [2].

For such fast releases scrum management and developing team members should be well known about the requirements and technologies that is possible with cross functional teams. So they deliver working software incrementally and empirically. Due to this, Scrum process management framework is mostly used in every software development companies. Development cycles are used by the scrum process framework each called as a sprint. In scrum process it has different teams like Enterprise Transition Teams (ETC), Scrum Rollout Teams (SRT) and Scrum Development Teams (SDT).

III. SPRINT

Sprints are the basic units of development in scrum methodology. A sprint is as usual where work is carried in iterative work cycle. In scrum methodology during these cycles work is finished and made ready for review. Generally, sprints are 30 days long, but today many teams prefer short sprints that last for a week or two.

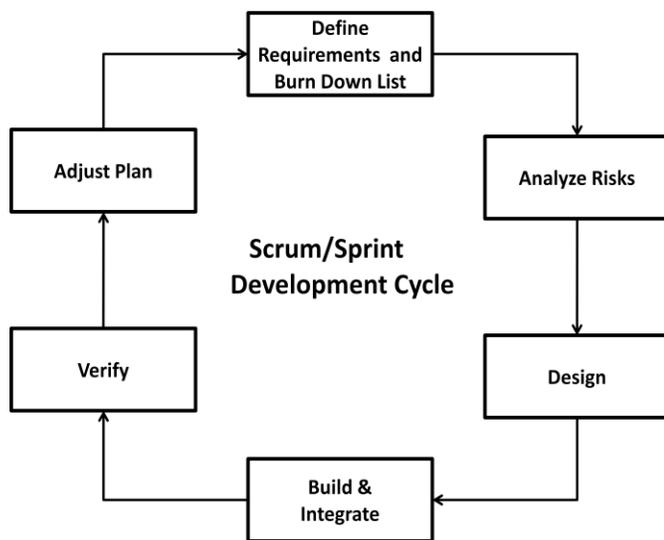


Figure 2. Scrum Overview

At every sprint, a team creates a deliverable product, no matter how basic that product is. All the sprints are followed by a sprint planning meeting where the sprint tasks are established and recognized. After the end of sprint meetings an estimated sprints goals are made. During these meetings the product-owner and team members decides about requirements that are to be moved from product backlogs to sprint backlogs.

Each sprint is followed by a sprint review, where the process is reviewed in order to identify the lessons and problems that can be used and solved to improve in the coming sprint. This retrospective meeting reflects on the work that was finished during the sprint period by the team members. This meeting gives a chance for them to discuss about it another time and think for better alternatives to carry out the things more effectively and develop good products.

IV. BACKLOG

Backlog is the key point of entry for knowledge about requirements and the single authorized source for defining the work to be carried. The backlog is a list of features or technical tasks which the team maintains at a point of time are known to be necessary and sufficient to complete a work. The change of backlog is expected throughout the life cycle of project as the team gains knowledge of the work. A backlog consists of bugs, technical work and knowledge acquisition. These types of risks that generally occur in traditional environment are discussed and role of agile when they are to be mitigated is also discussed [6]. Every process model has its own way of handling impediments or risks. The overall analysis of handling risks by scrum methodology is discussed [7].

Risks when they are to be handled in agile environment especially in scrum are called as product backlogs. Generally, product backlogs are managed by product owner and scrum team. Product owner prioritizes product backlog items that are mostly needed and then scrum team chooses the items from the backlog list that they can finish in the next sprint. Such selected prioritized items are noted in the sprint backlog [9].

A. Transition Product Backlog

These are the backlogs that are listed and forced for transition. Transition occurs when a list of backlogs cannot be removed in the current environment. So the software developing companies adopt a new process model to remove these backlogs. Such backlogs that are transitioned from one environment to another environment are called transition product backlogs. These backlogs are handled by scrum off scrum.

V. ROLE OF TEAMS IN HANDLING BACKLOGS

Scrum supports three different types of teams namely Enterprise Transition Teams, Scrum Rollout Teams and Scrum Development Teams. Figure 3 shows the formation of scrum rollout teams from enterprise transaction team.

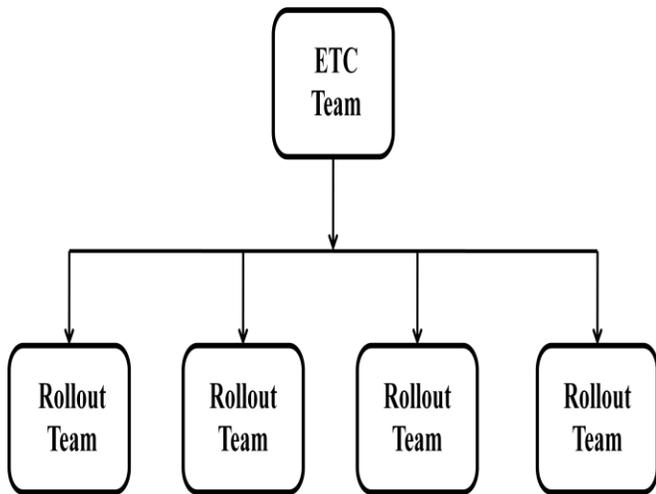


Figure 3. Formation of rollout teams from ETC

The enterprise transition scrum team creates scrum rollout teams to perform the tasks related to enterprise change and for transition product backlog [4]. The product owner is one member of each enterprise transition team, who is responsible for prioritizing list of product backlogs. He manages to process the highest priority backlogs first from the requirements of customer. The unprocessed requirements are passed to the next iteration.

Scrum rollout teams can be the ongoing teams or formed by the enterprise transition scrum team prior to a sprint planning meeting. The rollout team meets with the ETC team at sprint planning meeting to discuss about upcoming rollout TPB and the sprint is started. The high priority TPBs are to be divided into segments so that they can be done within a single sprint. All the rollout sprints start and end on the same day to synchronize the work involved.

In each sprint, scrum development team brings out a part of the product that is completed and which has got its shape. In every sprint planning meeting a list of prearranged requirements is determined which are called as product backlogs. These product backlogs are considered for coming sprint and are handled in the sprint. In the sprint planning meeting itself, the product backlogs that are having high priority is brought to the notice of development team by the product owner. The development team evaluates those prioritized tasks to assess how much they can commit to complete. Such selected prioritized items are noted in the sprint backlog.

VI. SCRUM OFF SCRUM

Scrum off scrum is a technique to scale scrum up for multiple teams working on the same product. Each daily scrum with-in a sub-team designates one member as ambassador, to participate in a daily meeting with the ambassadors from other teams. These ambassadors may be technical contributors or scrum master or even managers of each team based on the context. The ambassadors report about completion of work, next step to be done and impediments on behalf of the teams they represented. Proper solutions for

impediments are expected to focus on the challenges of co-ordination between the teams. The scrum off scrum will track these items as backlogs, where each item contributes to the improvement between teams co-ordination. It is also known as meta-scrum.

In the life cycle of project development, scrum has four objects which belong to scrum team. One of the four objects is the prioritized list of whole things needed to complete the product called product backlog. TPB is a kind of product backlog. These product backlogs rise in change of enterprise. Transition product backlog items are given by enterprise transition scrum team and also come from scrum development team, as these teams notify them as impediments. The main issues in transition product backlog are kicked off using scum process model as a part of developing projects. The rest of transition product backlog are also handled by using scrum.

VII. ROLE OF ETC AND SRT IN SCRUM OFF SCRUM

A. Enterprise Transition Team

It is responsible for planning and managing the achievement of scrum at an enterprise level. This also includes defining and scheduling the scope of scrum implementation. The ETC consists of senior management people of organization and the rest of team consists of human resources, administration unit and finance unit.

It sets a goal for each and every sprint and develops necessary product. Scrum Master holds ETC together and guides them in using scrum process model where it turnout to give good results.

B. Scrum Rollout Team

Scrum rollout team is responsible for implementing the adoption and observes that the organization is effectively changed to it. Change of enterprise takes place from scrum rollout team. It carryout the work that is related to organization change called for highest priority Transition Priority Backlog work. Prioritized lists of work that are to be finished are carryout through adoption of scrum. Each team appoints its own scrum-master. The composition of scrum rollout team comes out from either management or from other sources. One member of enterprise transition team will be the product-owner for each team during each sprint. These teams meet with enterprise transition team at the sprint planning meeting. The sprint is started by describing the upcoming rollout transition product backlog.

VIII. CONCLUSION

Organizations that encounter impediments while developing software products at different stages are gathered. These impediments are to be solved for finishing the product, which is not possible by the actual environment. So a change of enterprise culture is needed. In this case those impediments are called as transition product backlog.

These transition product backlogs are solved to finish the product with change of developing culture by adopting

scrum. Scrum off scrum handles such kind of backlogs to release the product without any difficulties.

REFERENCES

- [1]. Dr. Satya Prasad Ravi, Lakshmi Sridhar Movva, B. Reddaiah "Distributed Agile Development: Practices for building trust in team through Effective communication" International Journal of Software Engineering (IJSE), Vol.3, No.2, 2012: PP.23-31.
- [2]. Lakshmi Sridhar Movva, Dr. Satya Prasad Ravi, B. Reddaiah, "UI Programming in Scrum" International Journal of Computer Applications (IJCA), Vol.73, No.18, 2013: PP.6-10.
- [3]. B. Reddaiah, R. Pradeep Kumar Reddy, Dr. C. Nagaraju, V. Harsha Sree, "A Novel Approach to Adopt Scrum by an Enterprise" Joint International Conference on Communication, Computing and Power Technologies and Artificial Intelligence and Evolutionary Computations in Engineering Systems (ICCCPT-2015 & ICAIECES-2015), pp.40, April-2015.
- [4]. B. Reddaiah, Dr. Satya Prasad Ravi, Lakshmi Sridhar Movva, "Risk Management Board for Effective Risk Management in Scrum" International Journal of Computer Applications (IJCA), Vol.65, No.12, 2013: PP.16-23.
- [5]. Dr. satya Prasad Ravi, Lakshmi Sridhar Movva, B. Reddaiah, Rajasekhar kilaparathi "Agile Cloud Computing: A combination of 'Agile' and 'IaaS' – a cloud computing service model: International research association of computer science and technology – Engineering science and technology: An International Journal (ESTIJ), Vol.2, No.3, June 2012: PP.399-402.
- [6]. Dr. satya Prasad Ravi, B. Reddaiah, Lakshmi Sridhar Movva "Framework to mitigate dynamic and static risks with respect to agile" International research association of computer science and technology – Engineering science and technology: An International Journal (ESTIJ), Vol.2, No.1, June 2012: PP.63-68.
- [7]. Dr. satya Prasad Ravi, B. Reddaiah, Lakshmi Sridhar Movva, Rajasekhar kilaparathi "A critical review and empirical study on success of risk management activity with respect to scrum" International research association of computer science and technology – Engineering science and technology: An International Journal (ESTIJ), Vol.2, No.3, June 2012: PP.467-473.
- [8]. Advanced development methods (1996) controlled chaos: living on the edge, <http://www.controlchaos.com/old-site/ap.html>.
- [9]. Schwaber K (2004) Agile project management with scrum Microsoft press, Redmond. ISBN 978 - 0 - 7356 - 1993 - 7.

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