How to address Impediments in Scrum?

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Summary

All software development methodologies encourage communication among team members and teams are motivated to have frequent meetings to share ideas, problems and solutions. Agile manifesto revolves around people and interactions and other manifesto items, so the creators who while jotting down the agile principles envisioned the concept of delivering value to customer through short deliveries. Within this time-boxed activity of short feedback cycle lays a thought of The Daily Stand-up Meeting (TDSM). TDSM is a short meeting of team members, of about 15 minutes of length in which one of the questions is what obstacles are impeding progress of team. The answer is not the matter of concern in TDSM. This paper focuses on the areas being covered within 'impediments in agile and their possible solutions'

Key words:
Issues, Blocker, Beyond Control, sidebar Meetings, TDSM, Obstacle, Barrier, Work Slowdown

1. Introduction

The daily standup meeting raises many questions that need to be shed light on. The team and the Scrum Master later works on the solutions of questions being raised in this fifteen minute very effective meeting. One of the issues raised in TSDM is known as any impediments faced by the team or team members. The scope of this paper is limited to discussing the impediments and the type of impediments a team can confront. The solutions will also be proposed for few of them. Researchers and agile vocabulary says that these issues block the productivity of the team. When team's productivity is blocked the pace in which team has been working on the project is also affected negatively. Most of the researchers have discusses the impediments in terms of implementing agile processes in an organization but the context of this paper is specific to the impediments faced by the teams in any development projects. The daily scrum has a very short duration so it is important to know to know how and when these issues will be resolved. It is evident that Scrum Master needs to communicate to individuals in teams to extract the obstacle being met by that particular team member. Solution can only be worked out after knowing the problem. This paper outlines the number of these almost beyond control problems that could be part of any software project. Impediments, in no context, could be considered as an excuse for a team for not doing their work. There could be known and unknown impediments so the impacts of both types of these impediments can be mitigated. An attempt will be made to propose solutions to the impediments being jotted down in this paper.

Definition of impediment in context of this paper is something that hinders the team from achieving the Sprint Goal. It could be anything from team member's capability to complexity of the application to be developed. Identification of impediments has a lot of significance in agile and also for any team working according to agile manifesto. Removing impediments to flow is critical to improving a team's or organization's process [1].

2. SCRUM

Agile family is composed of dynamic agile techniques like Scrum, Kanban, Extreme Programming, Crystal etc. Scrum is widely used agile method today. The reason behind popularity of scrum is its incremental and iterative nature. Scrum team includes Scrum Master, Product Owner and development team. It divides the task of product development into sprints. Each sprint is designed to achieve iterations of work generally ends in one to four weeks. Sprints have a limited life; it ends on the planned date whether the objective has been achieved or not. On every sprint's starting team selects the item according to prioritize customer requirement. At the end of each sprint team gathers and share updates of development that will be further used in next sprint. Progress of project is controlled and viewed through sprints. The progress of tasks in each sprint is daily communicated with team members in the daily standup meetings.

2.1 The Daily Standup Meeting (TDSM)

The Daily Standup Meeting (TDSM): TDSM is a short meeting in scrum methodology that is conducted daily for 10 – 15 minutes. All members of team including Scrum master and Product Owner must attend this meeting. It is named standup as no details or solutions are discussed in this meeting. Each team member quickly shares its progress of a day task and any troubles or problems encountered in it. Scrum Master is responsible to facilitate and solve the

problems. TDSM helps to identify and resolve problems in early phases.

3. Issues

In different researches, books and reliable text impediments are referred to as blockers as well. It is considered as something that slows down team [2]. Impediments are like "Life threatning Elements to Project's Success" because it keeps away teams from getting work done and alleviates team's velocity. Impediments come in many forms: a sick team member, a missing resource, lack of management support or even a cold team room. If it's blocking the team from doing its work, it's an Impediment [3].

3.1 People-oriented Impediment

a) Resistance to Change: The scrum teams are self-organizing and hence considered autonomous. The autonomy and self-organization empowers teams with their decision-making and getting involved in performing their tasks with greater responsibility. These benefits could only be gained when teams successfully and willingly adopts the SCRUM. While researching about human-aspects related to impediments in SCRUM, it was observed and noted in many researches that people in organizations respond negatively in SCRUM/Agile adoption. They are used to traditional way of accomplishing their jobs and not at all interested in incorporating a new methodology about which they have already developed some myths. This impediment is called 'Resistance to Changed Environment/Methodology'. [4]

b) Lack of knowledge: of an individual about any user story within sprint or a slow learner, both factors could prove to be fatal in long run. These kinds of impediment had been evident in many software projects in past. Since a team consists of different kinds of people, they all possess different characteristics. Sometimes it seems difficult to communicate a very easy concept or requirement to one of the team members because of his or her slow learning capabilities. This issue has relevance with real-world. There are team members who are new to the problem domain, they also lag behind in grasping the things related to the current sprint. Since people are most valuable entities in and project following SCRUM methodology, so every possible effort is made to overcome this issue.

c) Lagging in Communication and collaboration: The team consists of people with mixed capabilities so there might be people in team who lack communication skills. They also try not to participate in discussions. They are shy to collaborate with their peers. A lot of people is also there who want to dictate people and have severe attitude problems. Such kind of people could prove to be 'PARASITES' for the team and the project's success. "Many people have problem in collaboration and communication. They have not enough confidence to participate in group works and group decision making. In this case communication is not good." P11, Agile Coach. [4]

d) Lack of ownership by the Team: People are used to be directed about the work and getting the assignments from some authoritative person in team, therefore they lack to own the work that they should do. Without a regimented schedule or constant supervision, some employees will simply do nothing at all [5].

e) Conflict among team members: It is common to have conflicts among team members since a team comprises of people with different psyches and understanding levels. Many of them might have ego problems. They don't tolerate even good suggestions to make their work better. Few of them are not easy to interact with and do not mingle with others in team. This attitude could create a fussy environment which hinders people from producing their 100%.

f) Ego Problem: This problem persists with people who are facing some kind of superiority complexes. They consider themselves better than other team-mates and in this case if any conflict arises, their ego stops them from coordinating with others in team. Such people are not considered good team players.

3.2 Organizational Impediments

a) Lack of Training: A common perception is that people should not be trained since they could switch to some other place to work. Moreover releases are planned and given priorities over training people [6].

b) Misguided Cost Savings: Most of the times cost is saved without considering the overall impact that is actually increasing it rather than decreasing [6].

c) Unfulfilled Promises: Management doesn't fulfill all promises being committed with employees. This creates kind of frustration among team members and hence affecting their productivity.

d) Misguided Cost Savings and Synergy Efforts [6]: The overall impact of cutting down costs by compromising on factors that could affect efficiency pf people and other resources, is not considered. This could lead to bock the ways to productivity and hence creating impediments for the people at work.

3.3 Process-oriented Impediments

One of the most marked characteristic of agile is that it is considered to be a light-weight process. It is conceptually simple but organizations get really hard time in keeping this

simple as it sounds. Following are some process related impediments in agile:

a) Ineffective Process: The Scrum Master is unable to lead the team appropriately and hence process becomes ineffective in making things go on track for team.

b) Amalgam of Processes: Sometimes organizations combine different processes but this proves to be a bog disaster and team instead of taking advantages reap the disadvantages of the combo of the processes [6].

c) Ineffective Scrum Master: It takes courage to report problems to senior management and to make changes that many in the organization may view as a direct threat to their security. Even the best Scrum Masters will have their credibility questioned at some point [6].

d) No Documentation at all: This is one of the myths or misconception about agile. Documentation is considered a time-taking phenomenon, but this could not be scratch out of the SDLC even in agile. People talk about a lot that agile discourages any documentation which is absolutely incorrect. A project without documentation could be disastrous.

e) Upfront and incomplete analysis: Traditional software engineering practices this approach. Initial and upfront analysis of anything put forth by the customer could lead to incomplete scrutiny. Changes are also viable in any software development project so organizations face this impediment.

3.4 Technology-oriented Impediments

a) Ineffective tool selection: If a tool is of no worth for the developer why he/she must use it?

b) Slow or unreliable builds: This process must be fast and reliable but sometimes this is not the case and the build comes out which is unreliable [7].

c) Unaddressed QA Issues: Quality assurance is an on-going process in agile model and in practice teams don't care about the issues related to QA [6].

3.5 Customer-oriented Impediments

a) Making assumptions: Team members assumes the details of work instead of asking product owner [10].

b) involvement of product owner: Product owner should be part of development process and meetings. Mostly decisions are taken without the involvement of customer that leads to failure of project [10][11].

c) Product owner interruption: Unnecessary interference and status asking by product owner. Also, adding requirements in sprints [12].

d) Bug reporting on email: Customers report bugs through emails that are mostly misinterpret by developer [13].

3.6 Managerial Impediments

a) Transparency: Team members located far may have a huge impact on clarity directly influencing quality of project [10].

b) Altering team: Changing members of team in scrum halts the development process [10].

c) No risk management: Scrum doesn't pay any attention to risk handling [12].

d) Improper team distribution: Scrum master didn't select technically skilled team members for the project [13].

3.7 External Impediments

In addition to the above-mentioned impediments, research has shown that several external impediments may also play role in diminishing the performance of a scrum team. Bannink [14], discussed about the role of entities that are external to the software development organization/team. According to [14], inadequate documentation, and lack of quality assurance and testing are two major shortcomings of Scrum methodology which may lead to uncertainty and creating unnecessary delays in the project.

Through Scrum methodology emphasizes team autonomy, the abovementioned factors may provoke external entities such as suppliers and customers to influence the development team.

a) Communication with External Stakeholders: Communication plays the most important role in life any project. Failure to communicate clearly with the suppliers or customers may result the failure to realize value from a project. It is therefore imperative that any impediments obstructing communication with suppliers and customers be removed. [15]

b) Change of Scope and Requirements: Customers, from time to time, may place requests for change of project scope or change in a requirement due to the reasons such as new statutory requirements or change in a business process. [15]

c) Backlog Management: External stakeholders may feel the need to influence the priorities of the software development team. [14]

d) Outsourcing Body of Knowledge: Lack of in-house knowledge may force organizations to rely on external specialists such as Scrum Masters. This poses as risk for the development team as these specialists may be relocated to other projects by their organizations.[14]

4. Solutions

Recognizing and identifying impediments is as challenging as proposing a solution to those impediments. Impediments need to be addressed in a well-planned way since these impediments hinder the team's velocity and affect their productivity negatively. For above mentioned impediments here is a list of solutions that would assist organizations solving the problems they face.

4.1 Enhancing Readiness for Change

Resistance to change can be reduced by enhancing readiness for change. Holt et al. (2007) found that four factors influence the individual readiness for change:
- Am I capable to bring about this change (self-efficacy);
- Are our leaders committed (management support);
- Is this the right change for our organization (appropriateness); and
- Is the change beneficial to our organization (personal valence). [8]

4.2 Collaborate and Communicate Openly

To build team-wide accountability, teams need to communicate openly. Strategies to encourage this include allowing the team to work directly with the customer, ensuring that technical conversations are not shut down, and soliciting input from all team members [8].

4.3 Adopting Single Approach

It is better to educate management to adopt a single approach.

4.4 Realistic Promises

Management must be guided to make realistic promises in order to motivate team to give their 100%. The best way is to start with rather tiny but reasonable pledge that organization is happy to fulfill in future to reap the benefits.

4.5 Sidebar Meetings

This is sort of meeting where an individual or a team can discuss the hurdles they have been facing and the solutions of those problems. The Scrum Master calls on resources for this meeting and resolve the impediments met by the teams.

4.6 Spending Money in Right Direction

Organizations should be convinced to spend budget on those crucial areas which they consider not so important. The point is that overall impact of cutting down cost could be damaging and this aspect should be kept in mind while saving costs.

4.7 Training People

People are valuable in any agile setup, so reasonable time and money must be invested to train them in their domains. Trainings will move their morale and dedication up high.

4.8 Only Necessary Documentation

Documentation that is necessary should be done for the projects. Document with just barely good enough detail. Each system and environment has its own unique documentation needs, and certainly one size does not fit all. Keep the documentation as concise as possible: overviews, road maps, and high-level architecture diagrams are generally preferred over detailed documentation. [9]

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