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Evaluation of Agile Managers and their Impact on the Software Development Process?

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Abstract: Self - organization is one of the key agile principles. How we can apply it in the software development process is a challenge for Agile managers? in this research paper we drew on relevant literature as the theoretical basis to investigate the self - organized learning that happens in the industry, Agile methodologies are widely used in the software industry. Adopting Agile methods, a very large scale of dramatic change is required in the organization and team management. Indeed, different categories of managers in Agile teams play vital roles and have different responsibilities. This may affect the whole software development process. This research paper focused on investigating the roles and responsibilities of Agile managers in Agile teams and companies. After reviewing the literature, it clearly showed that Agile managers are responsible for promoting agility, the formation of Agile teams, eliminating obstacles, budget management, ensuring the return on investment, etc. However, being an Agile manager, it is a very difficult task, especially when new roles and responsibilities are required to be adopted. Indeed, most often, managers cannot accept managerial roles with low authority, as expected in Agile methodologies.

Keywords: Agile manager, Agile Methodologies, Agility in Software Development, etc.

1. Introduction

Long back, the Software development process was very tedious and followed, so many models like the prototype, waterfall model, spiral model, etc. for the software development process. It is also observed that these traditional models were time - consuming and also had drawbacks at specific levels. Finally, Agility methodology comes into the picture with certain features and remarkable enhancements in the software development era. Researchers and software developers also observed that Agile is very good but with certain drawbacks at the Agile manager level, in fact, these are human roles that impress the flow of software development [1, 2] due to different people with different roles, attitudes and perceptions which such a variety highly affect the development process.

Current trends in software company is changing plan - driven software development process with Agile methodologies. Now, Agile approach tries to focus on the human aspects of software development more than they what considered in plan - driven/traditional methods [4, 5]. Transitioning to Agile methods, however, is not easy as software teams and organizations expect. Indeed, many challenges and obstacles need to be handled before and during the changing methodology process [6, 7].

Some of the challenges may related to the new roles and responsibilities of the team member, as defined in different Agile methodologies. This issue may be complicated for the more important roles such as upper managers, middle managers, and low - level managers [8 - 10]. However, this issue has been noticed and addressed in several research paper also but, still there is a lot of gap to highlight the roles and responsibilities as defined in Agile methods. Management style in Agile methodologies are dramatically different than traditional software development. Therefore, focusing on the new responsibilities and positions of managers in Agile software development, known as Agile manager, would be

interesting. This study only emphasis on the roles and responsibilities of Agile managers in Agile teams.

1) The major characteristics of Agile Development process:

Agile methodology always appreciates customer involvement throughout the software development process only due to this approach, there requirement and objective will be clearly visible to the agile team at every level of the software development process not only this it will be also helpful is any changes even in the late phase of the development. All of these lead to achieving more quality, happiness and customer satisfaction.

Agile approach also appreciates decentralized management that leads to decrease of authority especially with top managers, throughout in the project. If self - organized team is a group of highly motivated and cross cultured experts which organize themselves in the software development process.

Agile approach also appreciates cross cultural management system, in which team member can have a good understanding among the team without any conflict. That will also play important role in the development of software process.

Agile approach, customers feel happier and more satisfied because they regularly involved in all the phases of the software development process although it is not happening with traditional system ie customer involved only at the initial and final phase of the software development process. They always give their suggestion at the end of the phase for modification which is really very difficult and irritating.

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Table 1: Compare Agile methods Vs Traditional methods in terms of the human role

| terms of the name for | | |
|-----------------------|-----------------------|---------------------------------|
| Parameter | Agile methods | Traditional methods |
| Focus | End Users | Software Development Process |
| Development approach | Adaptive | Predictive |
| Effort estimation | Collaborative | Project managers/experts |
| Work assignment | By Team Members | Only by Project Managers |
| Planning | Evolutionary planning | Comprehensive up - front design |
| Task/duty ownership | Collective ownership | Separated |
| Feedback | Welcomed | Not expected |
| Role of Management | Motivate teamwork | Command and control |
| Knowledge sharing | Informal | Formal |
| Management style | Decentralized | Centralized |
| Users involvement | In all phases | First and last phases only |

Agile projects, software products are developed in several iterations in an iterative and incremental way. So, the final products will be delivered in form of several product increments. In Agile project management, role of project manager is not explicitly defined and responsibilities of project managers are shared among the team members [13]. However, some Agile methods have defined some managerial roles with are not same as project managers.

So, it is a conclusion part that, Agile approach changed roles and responsibility dramatically. Even table 1 clearly show that, the differences between Agile and disciplined methods in terms of the roles, responsibilities, attitudes, and behaviors of people involved the software development process. This may lead to raise challenges and issues for the involved people in adapting to their new roles and responsibilities [14].

2) Challenges of Agile managers:

Agile project management challenges are different from traditional software development process manager earlier studies clearly notice this issue and addressed the difficulties and challenges faced by software teams with leveraging managerial roles [15].

In most cases traditional managers such as top - level managers refuse to accept their new roles in Agile teams [12, 16]. Indeed, they cannot ignore their authority in decision making during the projects [17]. Also, most of the senior managers are not agree with Agile knowledge management style which focuses on implicit knowledge and face - to - face communication and collaboration [14, 16]. In fact, they believe that project will fails when Agile team members leave the project.

Another issue is lack of trust between managers and team members [12]. This is the main reason that why most often managers cannot rely on team members for decision making. Although every member of team is contributing their best and not only this, but also success of project directly proportional to their salary package as well as their future. So, there is no question on trust and intension of the team member. This is really very critical in Agile distributed teams and companies. This is a big cultural concern which affects applying Agile methods in real projects [10].

Beside the above challenges sometimes higher authority unable to manage the cross cultural, and face lot of problem within the team member and finally we can see the impact on the final project. Agile project managers sometimes have many challenges in communication with all Agile practitioners including technical team and business owners. Also, Agile managers always are faced with the frequent changes asked by business party. They need to effectively managed to minimize wasted efforts. Furthermore, Agile managers must promote Agile principles and practices within the development teams [14]. Indeed, such managers need to solve the challenges may affect the team to be Agile.

3) Agile managers: roles and responsibilities

Agile managers play very important role in success of Agile project. However, it seems that usually they have no direct technical or managerial role in directing the projects.

Agile managers are responsible to form Agile teams by selection of technical skilled, communication, motivated, and high skilled team members. Once the perfect team formed then their strong impact, we can see throughout the whole software development process as well as software projects. Obviously, having perfect teams is the most crucial prerequisite of project successfulness. Hiring the right people and directing such a skilled team should be considered as one the most important responsibilities of Agile managers, as notified by the research paper.

Agile managers also promote self - organizing within the development teams. Practically it is very difficult because, this goes back to the fact that most often people are not ready to be responsible and accountable. Thus, Agile managers have to use effective strategies to handle this issue.

Another responsibility of the Agile managers is to provide software teams with the resources they need. In fact, without facilitate coaching and mentoring (if required) of development teams, cannot formed a perfect team within the organization, especially when technology is frequently change.

Agile managers are also responsible for establishing infrastructure of sharing information among the team members. So that problems can be resolved and important suggestion can be shared among the team member. it is also observed that few problems come in project which can be solved on the basis of experiences only. So, Agile managers need to facilitate openly sharing information using daily integration meetings, quick customer feedback, team collaboration, face - to - face communication, and interaction with customers [15].

Customer itself is most important member of Agile teams. Agile managers have to motivate customers to effectively collaborate with the development team throughout the project. Because only customer can give their requirement and suggestion in every phase of the development. Most of the time we consider them only in first and last phase of the software development process which always problematics and cause of failure of the project. So, Continuous customer

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participation is considered as one of the essential keys in the software project success.

Agile managers must be proactive regarding delivery of the project on time, they must regularly monitor the progress chart of the software development. Otherwise, at the end of the phase lot of problem will be there and valuable product will not ready to deliver to the customer on time, Agile managers need to help business party to re - prioritize feature lists to improve ROI and create innovative product.

Quality control is another important responsibility of Agile managers. Agile managers need to promote agility in the organization and software teams. Once the perfect Agile team is formed and they must follow standards such as PMBOK. Furthermore, Agile managers must follow well - known standards, define different scenarios, and control different situations during the project.

2. Conclusion

After a review of the many research papers, it seems that Agile managers are only responsible for facilitating Agile working as well as handling the problems and challenges faced by Agile teams. To do this, Agile managers need to hire only competent people to promote agility in the best way among the other team members.

References

- [1] M. John, F. Maurer, and B. Tessem, "Human and social factors of software engineering," St. Louis, MO, 2005, p.686.
- [2] T. J. Gandomani, H. Zulzalil, A. A. Abdul Ghani, A. B. M. Sultan, and K. Y. Sharif, "How human aspects impress Agile software development transition and adoption, " International Journal of Software Engineering and its Applications, vol.8, no.1, pp.129 -148, 2014.
- [3] K. Beck, A. Cockburn, R. Jeffries, and J. Highsmith. (2001, Feb.2016). Agile manifesto. Available: http://www.agilemanifesto.org
- [4] Cockburn and J. Highsmith, "Agile software development: The people factor, " Computer, vol.34, no.11, pp.131 133, 2001.
- [5] D. Cohen, M. Lindvall, and P. Costa, "An introduction to Agile methods," Advances in computers, vol.62, pp.1 66, 2004.
- [6] T. J. Gandomani and M. Z. Nafchi, "Agile transition and adoption human - related challenges and issues: A Grounded Theory approach, " Computers in Human Behavior, vol.62, pp.257 - 266, 2016.
- [7] C. Sikka, S. Dhir, and M. Hooda, "A Survey on Challenges in Software Development During the Adoption of Agile Environment," in Innovations in Computer Science and Engineering: Springer, 2016, pp.219 - 224.
- [8] H. Yang, S. Huff, and D. Strode, "Leadership in software development: Comparing perceptions of agile and traditional project managers, " San Francisco, CA, 2009, vol.3, pp.1601 1612.
- [9] S. Nerur, R. Mahapatra, and G. Mangalaraj, "Challenges of migrating to agile methodologies,"

- Communications of the ACM, vol.48, no.5, pp.72 78, 2005.
- [10] V. G. Stray, Y. Lindsjorn, and D. I. Sjoberg, "Obstacles to efficient daily meetings in agile development projects: A case study, " in ACM/IEEE International Symposium on Empirical Software Engineering and Measurement, 2013, pp.95 102: IEEE.
- [11] J. A. Highsmith, Agile Software Development Ecosystems. Boston, MA: Addison - Wesley Professional, 2002.
- [12] T. J. Gandomani, H. Zulzalil, A. A. A. Ghani, A. M. Sultan, and M. Z. Nafchi, "Obstacles to moving to agile software development; at a glance, " Journal of Computer Science, vol.9, no.5, pp.620 625, 2013.
- [13] D. J. Fernandez and J. D. Fernandez, "Agile project management Agilism versus traditional approaches,"
- [14] Journal of Computer Information Systems, vol.49, no.2, pp.10 17, 2008.
- [15] J. A. Crowder and S. Friess, Agile project management: managing for success. Springer, 2015.
- [16] J. Rothman, "Agile Managers: The Essence of Leadership, " Cutter IT Journal, vol.23, no.3, p.21, 2010.
- [17] M. K. Nayak and M. R. Patra, "Agile Project Management - Redefining the Role of Managers," Management, vol.11, p.2, 2001.
- [18] M. Drury, K. Conboy, and K. Power, "Decision making in agile development: A focus group study of decisions & obstacles, "Salt Lake City, UT, 2011, pp.39 - 47.

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