Agile Project Manager Behavior: The Taxonomy

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Abstract—The past few years have witnessed dynamic changes in the field of software project management. These provided evidence of the strength of agile methodologies as a strategy that can speed up the development of rhythms and growth of innovation. Managing a project involves a complexity of requirements and developmental processes. This provides challenges to the project manager as he is accountable for the failure of a completed project. As such he is required to tackle any problems by adopting agile methodology during the development process. In Malaysia there is little research done to examine the behavior of the agile project manager. This study aims to analyze the behavior when project managers adopt agile in managing the development projects. Moreover, a review of the relevant literature has helped in developing an understanding of the agile project manager's behavior as this is necessary for them to become more agile inside development projects. For that reason, this paper has identified seven behaviors that the manager needs to adopt during software development process. These include Leadership, Openness, Results Orientation, Ethics, Communication, Strategic and Creative and Innovative. This paper contributes to the relevant theory by developing taxonomy of the agile project manager's behavior. Practitioners can use this taxonomy as a sensitizing device that helps the manager to consider behavior that promotes success of their projects. This is important to ensure an increase productivity and profitability, which are the business strategies of software development projects.

Keywords—agile behavior; agile methodologies; agile project manager; leadership; communication; openness; strategic; result orientation; creative; innovative; ethics;

I. INTRODUCTION

Currently, many companies favor the agile methodologies of Extreme Encoding (XP), SCRUM, Crystal and Feature-Driven Development [1]. This is because agile methodologies have proven to report improved timeline and cost savings, compared to those in the heavyweight family [2].

However, agile project managers have an important role to play in ensuring a project's success. This relates to the kind of behavior required to achieve the success. Good project management enables the person who manages it to acquire the right skills, knowledge and characteristics particularly in

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relation to time management, risk management, scope management, and cost budgeting [3].

In relation to [4] the actual correlation involving management analysis group (MRG) habits and global authors' principles from New Zealand, Australia and US (US), these have helped leaders to receive reflective improvement and statistical information in the process of becoming more successful. This provides the motivation to conduct a study on agile project management, and this proves an effective project for the Malaysia setting as there is lack of studies that examines the agile project manager's behavior.

Therefore, the objective of the study is to analyze the behavior required by an agile project manager in managing agile development projects and also that which can facilitate an increase in the production of software development.

II. LITERATURE REVIEW

A. Behavior Competencies

Communication methods, perspective concerning conflicts and also criticisms is usually leadership style involves behavior regarding patterns behavior to all kinds regarding circumstances [5][6].

15 behavioral competence factor [6] suggested in PM practice [5], which are relevant to the profession of project management and in the context of the project. However, only eight are selected as best define for an agile manager such as innovative, strategic, tactical, excitement, communication, delegation, production and consensual.

However, the main aim of this research is to analyse the agile project manager behavior required in order to manage the success of agile development projects and facilitate the increase on the production of software development. Therefore, seven agile project manager behavior in determining project success have been identified such Leadership, Openness, Results Orientation, Ethics, Communication, Strategic and Creative and Innovative.

B. Leadership

Leadership involves giving path as well as motivating other to satisfy the project's objectives. Leadership style

adopted includes patterns of behavior, communication, conflict resolution, criticism, teamwork, decision making and delegation [6]. The normal empowering leadership conduct includes five dimensions such leading by example, Participative decision making, coaching, information sharing and showing concern/interacting along with employees [7].

However, to determine success of agile project manager in leadership behavior, as a leader must have great communication skills. According to [7] leadership is primarily accomplished through communication. While according to [8] leaders communicate a lot with personnel will enhance employees' experience of communicating efficiency. In agile, the most efficient as well as effective means of conveying information and within a development team is face-to-face conversation [9].

In additional, a leader has to make the decision making. The leader's behavior repertoire may cover anything from delegating decisions to his team members to encouraging those to express their particular ideas and also opinions. In previous research, [10] agile software development needs alignment connected with decisions about the strategic, tactical, and functional levels in order to overcome these types of challenges. While, understanding Agile team dynamics and also collaborative decision making techniques is very important because agile project management consists of leading teams which can be self-organizing [11].

C. Creative and Innovative

In agile manifesto [12], agility is reliant upon those people who are alert and also creative [12], and will maintain which alertness and also creativity to the full duration of a software development projects. In this research, three innovative behaviors have identified.

First, the agile project manager must be creative in communication as communication is a huge part of Project Management. Creativity can enhance agile project manager's communication and improve its effectiveness. According to [13] one way to be clear with communication is through effective use of colors, charts, and pictures to communicate concepts visually. Additionally, to encourage creativity, communication in the team has to be open – problem solving, tips and options should be shared freely between people in the team. This promotes diversity in terms of ideas and open communication promotes as well. When people share the work or task, this promotes dedication and more importantly support one another's attempts to be more creative [14].

Second, the agile project manager must ensure that a team member is not depressed in completing the development project. One solution is for the agile project manager to provide expertise or training to the team members. According to [15] concentrating on team coaching is important to the agile project manager. The goal of team coaching is to help the team become a better self-managing team [16]. Other than that, the manager must enhance external contacts (e.g., encourage travels, foster collaboration with others outside the organization, etc.). According to [13], his company holds an annual fun day by including fun and relaxing activities like riding in a hot air balloon or doing 'skeet' shooting. By doing

these, the agile project manager reduces the pressure of team members.

Lastly, the agile project manager must be creative during meetings. The over-use of meetings and the prevalence of boring meetings within the corporate world are legendary. The agile project manager can apply creativity such as conducting the meeting other than in a common meeting room. For example, having a walking meeting like going 'off-site'. According to [13] the agile software development project in a company conducts daily standup meetings on the roof, outside, through the winter. He explained that creative ideas are easily generated as people at the meeting feel excited and motivated due to the creative location and conditions.

D. Openness

Benefiting from others' understanding and knowledge is openness method. Openness is generally an important skill considering that a project manager in consultation with various experts: almost the entire team member comes with an area of expertise exactly where there're more experienced compared to the project manager [5].

According to [17] one of scrum value that is important to expectation management is openness. The Daily Scrums make visible the overall and individual status and commitments. While, according to [18], Openness to ideas, collaboration, communication.

In this research has identified three Openness must have agile project manager as follows: openness collaboration, communication and transparency. According to [19] the particular agile manifesto places the main client relationship. Cooperation delivers a set of challenges. He explained, when using the agile approach, manager is called to collaboration with client within a constant stakeholder discussion.

Second openness agile project manager must have is communication openness. According to [8] communication openness was understood as listening, honesty, trust, honest, support and other similar meanings in the past. Agile project manager should be aware of that communication in agile team is more intense, more interactive and more cooperative. Hence, feedback permits a communicative setting that facilitates open communication and the early discovery of problems [20].

Third openness agile project manager must have is transparency. Transparency is a key value in agile management as it may improve venture performance in addition to productivity [21]. Generally, it is viewed as obvious and wide open communication connected with business info in teams also to customers, keeping your development method transparent in addition to understandable for all involved parties [20]. Openness plays straight away to one connected with Agile's crucial concepts: openness. Openness (and experimentation) induces us to uncover creative methods to tell people what we're undertaking [22].

E. Communication

Communication behavior is an important to agile project manager [20]. According to [23] often, the goal of communication is always to clarify or acknowledge the receipt of info, including verifying information prior to a study and acknowledging and repeating messages to make certain understanding. While, according to [24] communication behaviors which are misunderstood can create distance and misinformation.

Agile practitioners emphasize on communication between the customer and team and look after adequate documentation. Many case studies of agile methods show active communication decreases equivocal and uncertainty one of many team and customer by gathering constant requirements and feedback on working software [25].

Effective communication behavior for agile project manager must have Feedback Face to face and frequent communication among developers and between developers and customers [26], [27],[28]. While, effective communication second behavior discussions through telephone, video, audio conference, voice mail and email [29], [30], and [28].

Then next communication behavior an agile project manager should have is osmotic communication. Osmotic communication is one of the agile communications utilized among small agile teams [31].

According to [32] in osmotic communication, information related to the agile project and its development flows not only between sender in addition to receiver but also by osmosis. For example: whenever 2 agile team members are discussing all about something, the information is overheard as well by other agile team members. It is osmotic communication in which hearing agile team members will probably decide whether or not to help participate on the discussion or even not. Osmotic communication helps agile team members to help collect details related to project development status, technical particulars and so on. Therefore, Osmotic communication makes the cost associated with communications low along with the feedback rate high, and so that errors are corrected extremely easily as well as knowledge can be disseminated quickly.

Lastly, communication behavior an agile project manager must have is listening communication. Listening can be a communication behavior throughout a lot of different methods. Comprehension listening, critical listening and evaluation listening are usually communication behaviors with positive effects [24]. According to [9] Agile project manager must listening to what the customers need the system to do and understand these needs well enough to give the customer feedback about the technical aspects of how the problem might be solved, or cannot be solved.

F. Result Orientation

A project manager possesses required ensure project results satisfy ones stakeholder relevant and to help focus current teams and also attention on key objectives to obtain orientation optimum outcome. [5].

Therefore, according to [33], three option principles for you to overcome distrust, results-oriented leaders must develop high-performing teams through modeling three key principles: trust, credibility, and respect. A set associated with guiding principles for software developers known in the Agile Manifesto provides a understanding associated with

tips on how to establish trust between ones customer and provider in a software project environment will be expected to agile project manager.

According to [34] throughout the project, as project manager should work with the customer toward a shared definition of done for the requires the further trusting relationship and more flexible contract equipment.

However, the trust between our client and the team lets the parties avoid waste connected in addition to effort [36]. The idea increases the particular velocity at which the developers certainly deliver program code and also the consumer will certainly propose requirement changes.

Other than that, there are all kinds of skills, qualities, and talents project manager need to be a successful project manager, but credibility is the single most important quality every project manager must possess. Credibility is a combination of being seen to be trustworthy, convincing, and reliable [35].

According to [33] project manager provide the team members with the tools they need to be able to do their job well. A results-oriented leader is usually to be able to broaden section members' learning along with capabilities, and also that creates credibility. In addition also, respect the stakeholders very important in agile [9] [17], and [36] because agile project manager will benefit being realistic for having project's interests at heart.

G. Strategic

A strategic leader is good at developing in addition to executing strategy. However, strategic leader is usually in a position to inspire and guide team members at thinking strategically information on their own roles along with responsibilities [37].

According to [38] Strategic leaders, on the other hand, tend to exhibit curiosity about many things and take a more holistic view of the world.

Without having an effective leadership strategy, this really is believed, that the organizational techniques do not work. The 4 Characteristics of Strategically Agile Leaders in writing [38] as the basis of strategic leadership. The first three are curiosity, creativity, and courage. The fourth is strategic agility.

Strategic agility is especially important for knowledge throughout agile project manager behavior. Strategy is usually important to cover attention to the strategic direction this leads towards big goal, and make decisions accordingly. Strategic agility can assist organizational leaders to assess their company's level of Strategic Agility [39].

According to [40] describes how agile techniques are transcending beyond software development teams and transforming the greater business community. He explains how agility can result in better, cheaper, and faster business strategies, and he emphasizes that an Adaptive Leadership model is key to strategic agility in the enterprise.

In this paper, research some of tips to Increase Strategic Agility of agile project manager and what can a project manager do in order to raise yourself leadership competency when it comes to strategic agility? The following are

techniques, to increase Strategic Agility of agile project manager is:

Interaction strategies among team resources become more important when agile methodologies are in practice [41]. The importance of using a good interaction inside client during software development process will be accepted. According to [42], the client is actually the part of a team. Client demands to help end up being understood as well as being given foremost priority through the managers

Transformational Strategy: in general and transformational leadership specifically has recently been considered a vital individual issue that affects innovation as well as performance in the workplace [43]. Leadership behavior involving portfolio managers is important with facilitating improved project performance as well as the item will allow managers in order to transform their project teams and ultimately impacts project performance.

Coordination strategy: Coordination is usually recognised being an important aspect of agile software development within the small amount of theoretical [44]. He explained scrum board, product backlog, sprint backlog, daily meetings were practices identified. According to [45] in the task coordination process, one's project manager Prerequisites to be able to acquire milestones, state of a artifacts, risks related to each activity, and feedback coming from team members. Workload, strengths, as well as area of work of each team members are criteria of consideration on the task allocation process.

H. Ethics

Ethics embraces the morally accepted accomplish as well as behavior of every agile project. Ethics should be respected to allow project manager without conflict challenge in project. [5]. However, according to [46], ethics define how individuals, professionals, and corporations choose to interact with one another.

According to [47] during conducting project management, an project manager must also don't forget his obligation to be an a good ethical, responsible employer, and corporate citizen. While, according to [48], ethical behavior leads to better project.

This PMI ethics value makes use of words and phrases including responsibility, fairness, accuracy, honesty, admiration, credibility, secrecy as well as "professional standards". A good effective and also ethical agile project manager possesses following characteristics:

- Honesty: Honesty is important in order to be an ethical and also effective agile project manager. A great honest leader provides own fact as well as circumstances truly and completely.
- Respect the Stakeholders: A good agile manager is respecting the stakeholders because a project manager will have a few contacts with the project's stakeholders can lead to problem in addition to disagreements at times. This will likely stand throughout good stead for its future [49], [50] and [51].

• Be fair: A good leader must be fair. Agile project manager need to be fair in dealings with everyone in the agile project development. According to [52] if project manager do this then project manager are sure to build good relationships and gain the kind of reputation for ethical behavior. While, according to [53] as project management professionals, responsibility to be impartial and use only professional justifiable means when making decisions.

In most instances, the agile manager needs to act with accepted codes involving professional conduct. These types of ethics define leadership. Leaders may operate the above talked about traits just as yardsticks regarding influencing their particular behavior.

III. RESEARCH METHOD

In this research, systematic literature analysis is used to collect data and information in order to achieve the objectives of this research agile project manager behavior. Systematic literature analysis serves to present new perspectives and to increase the understanding of a specific phenomenon or explain a practical action.

This source serves to employ a theory as guidance for the researchers in completing the study. Research always starts with a problem along with questions. The research question that should be answered by agile project manager behavior model during the literature review process is as follow:

- **Q1:** What are the behavior needs of agile project manager to work software development project?
- **Q2:** What is the behavior that contributes to success of projects software development project?

In the process of systematic literature analysis, the researcher may read from one text to another so as to answer the research questions, as well as to identify the agile project manager behavior. Research questions serve as guidance to this study and influence the selection and collection of data.

160 articles have been identified making use of these searching approaches which later on refined from article publication year. Therefore, Table 1 shows 55 articles identified regarding agile project manager behavior. The data used is composed of written materials such as books, articles, journals, website and theses by using the ACM Digital Library, IEEE Xplore, ScienceDirect – Elsevier, SpringerLink, Wiley Inter Science Journal Finder and etc.

IV. DISCUSSION

Fig. 1 shows the taxonomy regarding agile project manager behavior required by agile project manager. The result of reading articles in systematic literature analysis would help in identifying the seven behavior agile project manager of research discussed in this paper. All the research contents contribute with the sub contents with realistic and based on the Literature Review.

TABLE I. ANALYSIS OF LITERATURE

Materials such	Author/ Years	No. of
		Relevant Articles
IEEE Xplore	[8],[7],[16], [25], [42], [45], [50]	7
Elsevier	[3], [6], [10], [27], [43]	5
ACM Digital Library	[1]	1
Springer Link	[51]	1
Science Direct	[23], [37]	2
Journal of computer science and Engineering (JCSE)	[15]	1
Journal of database management (JDM)	[26]	1
MNK Publication	[29]	1
WILEY	[9], [30]	2
Website	[54],[12],[14],[18],[20], [22],[24],[31],[33], [55],[35],[38],[39],[40], [41], [46], [47], [48], [52][49],[53]	21
Book	[19], [21], [32], [34]	4
Conference	[28], [36],[44]	3
Others	[2], [4], [5], [11],[13], [17]	6
Total		55

V. CONCLUSION

In conclusion, seven behaviors of an agile project manager have been analysed that will be adopted in the process of software development project. This paper contributes to the relevant theory by providing a taxonomy of agile project manager behavior in the area of agile software development. Practitioners can use this taxonomy as a sensitizing device to ensure the agile project manager considers the behavior that can promote success of a project. This behavior has significant importance to ensure the process of software development will be going smooth as planned by agile project manager, and increase productivity and profitability in business strategy of software development projects.

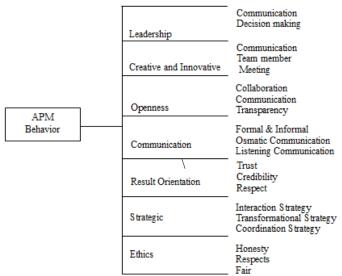


Fig. 1. Taxonomy Agile Project Manager

REFERENCES

- [1] B. S. Augustine, B. Payne, and F. Sencindiver, "Management□: Steering," vol. 48, no. 12, pp. 85–89, 2005.
- [2] I. Attarzadeh and O. Siew, Hock, "Modern Project Management : Essential Skills and Techniques," Commun. IBIMA, vol. 2, pp. 1-9, 2008
- [3] S. C. Misra, V. Kumar, and U. Kumar, "Identifying some important success factors in adopting agile software development practices," J. Syst. Softw., vol. 82, no. 11, pp. 1869–1890, Nov. 2009.
- [4] D. Spann, "Agile Manager Behaviors□: What to Look For and Develop Access Experts to the About Cutter Consortium," vol. 7, no. 9, 2006.
- [5] K. Gerrit, "Contextual competences Behavioural competences Technical competences The Eye of Competence competences," in IPMA, 2006.
- [6] P. Trivellas and C. Drimoussis, "Investigating Leadership Styles, Behavioural and Managerial Competency Profiles of Successful Project Managers in Greece," Procedia - Soc. Behav. Sci., vol. 73, pp. 692–700, Feb. 2013.
- [7] K. Skovolt, "Leadership Communication in a Virtual Team," pp. 1–12, 2009.
- [8] Z. Li, X. Ying, and C. Long, "Impact of empowering leadership behavior on communication satisfaction and its mechanism," 2013 Int. Conf. Manag. Sci. Eng. 20th Annu. Conf. Proc., pp. 1308–1313, Jul. 2013.
- [9] Doug DeCarlo, eXtreme Project. Jossey bass, 2004.
- [10] N. B. Moe, A. Aurum, and T. Dyba, "Challenges of shared decision-making□: A multiple case study of agile software development," Inf. Softw. Technol., vol. 54, no. 8, pp. 853–865, Aug. 2012.
- [11] M. Cottmeyer, "The Agile Project Manager," 2009.
- [12] M. Fowler and J. Highsmith, "The Agile Manifesto," no. August, 2001.
- [13] P. D. Warner, "Creativity and Innovation in Project Management,"
- [14] F. Attanasio, "Strategies for generating creative and innovative ideas in Scrum Teams," 2014. [Online]. Available: http://agileatlas.org/articles/item/strategies-for-generating-creative-and-innovative-ideas-in-scrum-teams.
- [15] S. V. Shrivastava and H. Date, "Distributed Agile Software Development," vol. 1, no. 1, pp. 10–17, 2010.
- [16] L. Yi, "Manager as Scrum Master," in IEEE Transactions on Software Engineering, 2011, pp. 151–153.
- [17] S. Ken, "Agile Project Management with Scrum," Microsoft Press, 2004.
- [18] K. Goran, "Agile as a humane way of software development the road from cooperation to collaboration," 2013. [Online]. Available: http://www.operatingdev.com/2013/03/agile-as-a-humane-way-of-software-development/.
- [19] Jim Highsmith, Agile Project Management. Pearson Education Inc, 2009.
- [20] Thomas, "The Concept of Transparency in Agile Project Manageament," 2012. [Online]. Available: http://p-a-m.org/2012/03/the-concept-of-transparency-in-agile-project-management/.
- [21] E. S. Andersen, Rethinking Project Management: An Organisational Perspective. Financal Times Management (November 30, 2008), 2008.
- [22] D. Fancher, "My Day Of Agile," 2011. [Online]. Available: http://davefancher.com/2011/03/31/my-day-of-agile/.
- [23] N. B. Moe, T. Dingsoyr, and T. Dyba, "A teamwork model for understanding an agile team: A case study of a Scrum project," Inf. Softw. Technol., vol. 52, no. 5, pp. 480–491, May 2010.
- [24] T. Althea, "Types of Communication Behavior," 2013. [Online]. Available: http://www.ehow.com/info_8075513_types-communication-behavior.html.
- [25] K. Mikko and A. Pekka, "Communication in Distributed Agile Development□: A Case Study," in IEEE Software Engineering and Advanced Applications, 2007, no. Seaa.
- [26] D. Turk, R. France, and R. Bernhard, "Assumptions Underlying Agile Software Development Processes," J. database Manag., 2004.

- [27] O. Hazzan and I. Hadar, "Why and how can human-related measures support software development processes?," J. Syst. Softw., vol. 81, no. 7, pp. 1248–1252, Jul. 2008.
- [28] M. Eykelhoff, "Communication in global software development," in Twente student conference on IT, University of Twente, 2007.
- [29] P. Joshi, "Communication Issues In Agile Methodology: A Survey," Int. J. Latest Res. Sci. Technol., vol. 2, no. 4, pp. 15–20, 2013.
- [30] D. Smite, "Global software development projects in one of the biggest companies in Latvia: is geographical distribution a problem?," Softw. Process Improv. Pract. (Wiley InterScience), vol. 11, no. 1, pp. 61–76, Jan. 2006.
- [31] Chandana, "Osmotic Communication Agile□: Agile Certification Training," 2012.
- [32] A. Cockburn, Osmotic Communication (the Crystal Clear Book). Pearson Education Inc, 2004.
- [33] S. Kevin, J., "Results-Oriented Leadership," pp. 1-2, 2012.
- [34] G. Mike, Chapter 2□: Agile Project Management Framework. RMC Publications, 2012, pp. 1–11.
- [35] B. Lynda, "Credibility," 2013.
- [36] R. Hoda, P. J. Noble, and S. Marshall, "Agile Project Management," in New Zealand Computer Science Research Student Conference (NZCSRSC), 2008, no. April.
- [37] K. B. Boal and R. Hooijberg, "Strategic leadership research: Moving on," Leadersh. Q., vol. 11, pp. 515–549, 2000.
- [38] S. Steven J, "The 4 Characteristics of Strategically Agile Leaders," 2013. [Online]. Available: http://www.cmoe.com/blog/strategically-agile-leaders.htm.
- [39] N. Adler, "The strategically agile organization: development of a measurement instrument," 2012. [Online]. Available: http://www.strategicagility.com/?About_Us.
- [40] J. Highsmith, "Adaptive Leadership," 2013. [Online]. Available: thoughtworks.com.
- [41] Serena, "An introduction to agile software development," Danube Technol., no. June, 2007.
- [42] R. Akbar and M. F. Hassan, "A Collaborative-Interaction Model of Software Project Development," IEEE, 2010.

- [43] J. Kissi, A. Dainty, and M. Tuuli, "Examining the role of transformational leadership of portfolio managers in project performance," Int. J. Proj. Manag., vol. 31, no. 4, pp. 485–497, May 2013
- [44] D. E. Strode and S. L. Huff, "A Taxonomy of Dependencies in Agile Software Development," in Australasian conference on information systems, 2012, pp. 1–10.
- [45] D. K. M. Mak and P. B. Kruchten, "Task Coordination In An Agile Distributed Software Development Environment," IEEE CCECE, no. May, pp. 606–611, 2006.
- [46] B. Mcgraw, "The Ethical Project Manager," 2010. [Online]. Available: http://fearnoproject.com/2010/04/18/the-ethical-project-manager/.
- [47] AlexisW, "Ethical Issues in Project Management," 2013. [Online]. Available: http://www.brighthubpm.com/project-planning/53025-ethical-issues-in-project-management/.
- [48] M. John, "Project management a question of ethical and moral responsibility," pp. 188–189, 2011.
- [49] A. Scott , W., "Active Stakeholder Participation□: An Agile Best Practice," 2013. [Online]. Available: http://agilemodeling.com/essays/activeStakeholderParticipation.htm.
- [50] K. Power, "Stakeholder identification in agile software product development organizations: A model for understanding who and what really counts," in Proceedings - 2010 Agile Conference, AGILE 2010, 2010, pp. 87–94.
- [51] K. Conboy and L. Morgan, "Future research in agile systems development: Applying open innovation principles within the agile organisation," in Agile Software Development: Current Research and Future Directions, 2010, pp. 223–235.
- [52] F. Ben, "5 Ethical Codes of Conduct for Project Managers Email Updates," 2012. [Online]. Available: http://cobaltpm.com/5-ethical-codes-of-conduct-for-project-managers/.
- [53] O. Olusegun, "Professional Practices and Ethics of a Project Manager, Part 2," 2014. [Online]. Available: http://resources.intenseschool.com/professional-practices-and-ethics-of-a-project-manager/.
- [54] Johanna, "Agile Managers : The Essence of Leadership," 2010.
- [55] T. MyMG, "Agile PM Building Trustful Relationships Between Customer And Developer," 2012.