

A Research Plan to Determine the Agile Project Management Executives' Perspective

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Abstract

The agile strategy used in projects provides effectiveness in its management. This study aims to plan research to find executive perceptions toward the agile approach for Project Management. The research methodology consists of a literature review to examine the main factors influencing the projects' agile strategy. The plan suggests the use of an online questionnaire to collect their responses. The list of questions in the instrument will come from the review of literature from previous studies. The suggested proposition for future research is to list the main factors that transform the project into agile according to the executive view to contribute to the agile strategy area. Identifying the main factors that transform a project into agile according to the executive view contribute to knowledge in the field.

Keywords: agile main factors, agile strategy, agile project management, agile techniques

1. INTRODUCTION

Projects that involve a high level of innovation require new approaches to its management (Birkinshaw, 2018). The agile strategy offers management processes that fit well in high-level innovation projects (Conforto, Salum, Amaral, da Silva, & Magnanini de Almeida, 2014). An in-depth study about the agile strategy is relevant to improve the management of projects (Mirzaei, & Mabin, 2017).

Justification for the study

The number of companies using the agile strategy increases every year. Nevertheless, the culture in many of those organizations is harsh in recognizing the value-added benefit of agile methods in the management of projects (VersionOne, 2018). The purpose of this study is to plan research to find the executive perceptions of the agile strategy for Project management. Executive opinions can help in the identification of the main factors that influence the success of agile project management. The findings will contribute to unveil relevant knowledge for

improving research in the agile strategy for projects.

2. BACKGROUND

The agile strategy

The agile strategy has its roots in the Agile Manifesto (Gustavsson, 2016). The agile strategy consists of adopting one of the agile methods available today in the management of projects. Those agile methods are Scrum, Extreme Programming (XP) (Henriques, & Tanner, 2017), Kanban, Scrumban (Stoica et al., 2016), Axiomatic Design, Adapt (Weber et al., 2017), Crystal, Agile Software Process, and Pragmatic Programming (Rajagopalan, & Mathew, 2016).

Description of the agile strategy

Agile Manifesto focusses on the customer approval of the project (Gustavsson, 2016). Scrum advances in iterations or short cycles, called Sprints (Makoto-Higuchi, & Noboru-Nakano, 2017). A sprint, or iteration, consists of the verification and the adaptation in the plan to reach its scope quicker and more effective. Extreme Programming (XP) centers on the customer demands, while not addressing all the requirements. The short iterations of work allow customer participation in the direction of the final product (Rajagopalan & Mathew, 2016). Kanban emphasizes on improving the activities to keep the project moving forward, while team communication is critical (Stoica et al., 2016). Scrumban is a combination of Scrum and Kanban that spotlight the stakeholder interests (Stoica et al., 2016). Axiomatic Design consists of the design breakdown from the highest level to the most abstract level to reach the scope of the project (Weber et al., 2017). Adapt is a blend of Scrum and Axiomatic Design, promoting the adjustments of the procedures to support the team activities in reaching the scope (Weber et al., 2017). Crystal tailors the uncertainties in the business rule (Rajagopalan, & Mathew, 2016). Agile Software Process (ASP) accentuates quicker development, even the ambiguities of the requirements (Rajagopalan, & Mathew, 2016). Pragmatic programming (PP) is an authentic style to develop solutions in reaching the scope (Rajagopalan, & Mathew, 2016).

Innovative agile project strategies

There are two main innovative agile project strategies: The optimized agile technique (OAT) (Sánchez-Morcilio & Quiles-Torres, 2018) and the agile project management underpinnings (APM) (Sánchez-Morcilio & Quiles-Torres, 2019). The optimized agile technique (OAT) synthesizes different studies related to effectively adopt agile

methodologies in project management (Sánchez-Morcilio & Quiles-Torres, 2018). OAT is an agile strategy that consists of three main aspects. The selection of the right agile tool to manage projects efficiently is the first OAT aspect (Manole, & Avramescu, 2017). Some of the agile tools to consider are MS Project 2019, Atlassian JIRA, Taiga, Version One, Assembla, and Asana. Second, the continuous authentication of the quality standards from the customer demands' perspective in all project phases: initiation, planning, executing, controlling, and monitoring, and closing or lessons learned. Customer demands must provide a high level of feedback while promoting flexibility for creativity and value-added business for the project (Dovleac, & Ionică, 2017). Third, the establishment of appropriate communication protocol among the project team members. The communication protocol must consist of performing short, but often meetings, and prioritizing the team member conversations while documenting those agreements for future reference (Tsai, Chen, & Chen, 2018).

The agile project management (APM) underpinnings are the most recent discoveries regarding agile strategies (Sánchez-Morcilio & Quiles-Torres, 2019). The APM underpinnings include three agile elements, known as agile coverage, found in the Agile Practice Guide (2017). Those three underpinnings are Backlog Refinement, Team Composition, and Backlog preparation (Sánchez-Morcilio & Quiles-Torres, 2019). The three underpinnings were the agile coverage having the most relevance in reinforcing the Agile Manifesto Values (Agile Manifesto, 2001).

Each underpinning's description is according to the Agile Practice Guide (2017). The Backlog Refinement refers to the discussion level between the project team and the customer relating to how the proposed solution adds value to the business. Team Composition refers to how the product owner, the servant leader, and the cross-functional teamwork towards finding solutions while creating business value within those solutions. The Backlog Preparation refers to the list of deliverables the team needs to tackle by prioritizing each one based on the amount of business value it will contribute.

3. METHODOLOGY

The research methodology is a review of literature, in which a plan to find the executive perceptions of agile project management. This study's findings will direct future quantitative

research that examines the main factors influencing the agile strategy in projects.

Inclusion criteria

This study's plan suggests that future research's inclusion criteria are to have executives' participation, including Chief Information Officers, Chief Technology Officers, and project managers from different industries, essential for future research.

Exclusion criteria

This study's plan suggests that future research's exclusion criteria are to academics and students for future research.

Research objectives

The suggested research objectives for future research are:

Research Objective 1 (RO 1): The purpose of this study is to find executive perceptions toward the agile approach for Project Management.

Research Objective 2 (RO 2): The identification of the main factors that transform a project into agile according to the experience of the executives from the field.

Proposition

The suggested proposition for future research is to list the main factors that transform the project into agile according to the executive view to contribute to the agile strategy area.

Research application tools

The suggested application tools for future research are an online questionnaire using SPSS (IBM SPSS, 2012) to analyze its results.

Research instrument

The questionnaire is the research instrument proposed by this study, in which executives will complete based on their filed experiences regarding the agile strategy in project management. The tool will include the basic demographics and a list of questions to determine their knowledge and expertise about the agile approach.

Research instrument demographics

The instrument proposed by this study suggests the basic demographics about the participants, such as years of experience, highest college degree, position in the company, number of employees in the company, main company area of specialization, the primary industry of service, company places of operation, age of the company, number of customers, company ownership, such as sole proprietorship, society, or corporation, and total annual revenues for the company.

Proposed questionnaire

As part of the research plan, this study proposes an instrument to find agile strategies in project management according to the executives' perceptions. The proposed questionnaire grounded its development according to the innovative agile project strategies discussed earlier. The proposed questionnaire consists of four areas: demographics, OAT agile strategy, APM underpinnings agile strategy, and the project management effectiveness.

Demographics

1. Highest college degree (High school, College, Graduate, Doctoral degree)
2. The years of experience managing projects, please approximate (Five years, Ten years, 20 years)
3. Your position in the company (owner or associate, employee)
4. The number of employees in the company, please approximate (Ten employees, 50 employees, 100 employees)
5. You are a (project manager, project team member, other)
6. You are a project management professional (PMP) (yes, in the process of becoming PMP, would like to be, no)
7. You are a PMI Agile Certified Practitioner (PMI-ACP) (yes, in the process of becoming PMP, would like to be, no)
8. Your area of specialization within project management (software development, hardware implementation, automation, including software and hardware, other)
9. Your company serves primarily within the industry (biotechnology, technology, pharmaceutical, hospitals, healthcare clinics, construction, banking, restaurants, food manufacturing, central government, city government, education, air transportation, ground transportation, agriculture, consulting, retail, security, real state, professional services, including accounting, psychology, and the like, other)
10. Your company serves in the sector of (private, quasi-public, federal government, central government, city government)
11. Your company places of operation (Puerto Rico, Caribbean, United States, Canada, Europe, Asia, Central America, South America, Australia, Africa)
12. Your company customers are mostly in (Puerto Rico, Caribbean, United States,

- Canada, Europe, Asia, Central America, South America, Australia, Africa)
13. The age of your company, please approximate (Five years, Ten years, 20 years)
 14. The number of customers your company serves, please approximate (Five, Ten, 20, 50, 100, 500 1000)
 15. Your company ownership is (sole proprietorship, society, or corporation)
 16. Total annual revenues for the company, please approximate (500,000 USD, 5,000,000 USD, 10,000,000 USD)

OAT Agile Strategy Factor

1. The agile tool your company uses (MS Project 2019, Atlassian JIRA, Taiga, Version One, Assembla, Asana, other)
2. When managing a project, the flexibility for creativity within the customer demands is (high, medium-high, medium, medium-low, low)
3. When managing a project, the value-added to the business while complying with the customer demands is (high, medium-high, medium, medium-low, low)
4. The continuous authentication of the quality standards from the customer demands' perspective in the initiation phase is (high, medium-high, medium, medium-low, low)
5. The continuous authentication of the quality standards from the customer demands' perspective in the planning phase is (high, medium-high, medium, medium-low, low)
6. The continuous authentication of the quality standards from the customer demands' perspective in the execution phase is (high, medium-high, medium, medium-low, low)
7. The continuous authentication of the quality standards from the customer demands' perspective in the monitoring and controlling phase is (high, medium-high, medium, medium-low, low)
8. The continuous authentication of the quality standards from the customer demands' perspective in the closing phase is (high, medium-high, medium, medium-low, low)
9. The communication protocol for meetings within the project team members is (very often, somewhat often, often, rarely)
10. The communication protocol for a meeting duration in general within the project team members is, please approximate (15 minutes, 30 minutes, 45

minutes, one hour, one and a half hour, two hours)

11. The communication protocol for the meeting discussion priorities in general within the project team members are, please approximate (highly focused, focused, somewhat focused, not focused)
12. The communication protocol for the meeting documentation in general within the project team members is, please approximate (high, medium-high, medium, medium-low, low)

APM underpinnings Agile Strategy Factor

Backlog Refinement

1. The project team and the customer discussions focus on proposing a solution while adding value to the business. (completely agree, agree, somewhat agree, disagree or not familiar with the topic)
2. The project team and the customer discussions focus on complying with the story (solution) requirements. (completely agree, agree, somewhat agree, disagree or not familiar with the topic)
3. The project team and customer discussions focus on understanding the stories. (completely agree, agree, somewhat agree, disagree or not familiar with the topic)
4. The project team and the customer discussions focus on determining if the work produced contributes value to the business. (completely agree, agree, somewhat agree, disagree or not familiar with the topic)
5. The project team and the customer discussions focus on spike (experimenting with the work produced to find possible risks. (completely agree, agree, somewhat agree, disagree or not familiar with the topic)
6. The project team and customer discussions are frequent and enough to understand the story and produce results. (completely agree, agree, somewhat agree, disagree or not familiar with the topic)
7. The product owner presents the stories to the project team while the project team learns about them and determines its potential challenges. (completely agree, agree, somewhat agree, disagree or not familiar with the topic)
8. The product owner and the project team have one-hour discussions midway a two-

week iteration to determine if their work is complying with the stories. (completely agree, agree, somewhat agree, disagree or not familiar with the topic)

9. The product owner has a clear vision of the story requirements. (completely agree, agree, somewhat agree, disagree or not familiar with the topic)
10. The product owner and the project team agree on how story ideas will be adopted. (completely agree, agree, somewhat agree, disagree or not familiar with the topic)
11. The project team and customer discussions concentrate on adding value to the business only. (completely agree, agree, somewhat agree, disagree or not familiar with the topic)

Team composition

1. The product owner, the servant leader, and the cross-functional teamwork focus their efforts towards finding solutions while creating business value within those solutions. (completely agree, agree, somewhat agree, disagree or not familiar with the topic)
2. The product owner is responsible for guiding the direction of the work produced, while identifying its business value. (completely agree, agree, somewhat agree, disagree or not familiar with the topic)
3. The servant leader acts as a facilitator, providing coaching and removes impediments for the project team to work at its best capacity. (completely agree, agree, somewhat agree, disagree or not familiar with the topic)
4. As a project team member, the cross-functional team member has the necessary skills to complete the high-quality work for the stories in the shortest possible time and without depending on external personnel. (completely agree, agree, somewhat agree, disagree or not familiar with the topic)

Backlog preparation

1. The team's list of deliverables prioritizes each one based on the amount of value it will contribute to the business. (completely agree, agree, somewhat agree, disagree or not familiar with the topic)
2. An ordered list exists where it sets the priority on the work to do for the stories. (completely agree, agree, somewhat agree, disagree or not familiar with the topic)

3. The product owner re-plans the next iteration based on what the team produces. (completely agree, agree, somewhat agree, disagree or not familiar with the topic)
4. There is a roadmap to show the sequence or progression of the deliverables over time. (completely agree, agree, somewhat agree, disagree or not familiar with the topic)
5. There is enough work to understand what is required and what would bring business value to it. (completely agree, agree, somewhat agree, disagree or not familiar with the topic)
6. The work produced for the stories is customer value focused. (completely agree, agree, somewhat agree, disagree or not familiar with the topic)

Project management effectiveness

1. The projects you have participated as either a project team member or project manager are successful (completely agree, agree, somewhat disagree, disagree)
2. The projects you have participated as either a project team member or project manager are finished on time (completely agree, agree, somewhat disagree, disagree)
3. The projects you have participated as either a project team member or project manager are finished late. (completely agree, agree, somewhat disagree, disagree)
4. The projects you have participated as either a project team member or project manager are finished earlier than was agreed. (completely agree, agree, somewhat disagree, disagree)
5. The projects you have participated as either a project team member or project manager are finished complying with the scope. (completely agree, agree, somewhat disagree, disagree)
6. The projects you have participated as either a project team member or project manager are finished complying with the scope while adding value to the business (completely agree, agree, somewhat disagree, disagree)
7. The projects you have participated as either a project team member or project manager are finished by complying with the scope while fulfilling its quality standards. (completely agree, agree, somewhat disagree, disagree)

8. The projects you have participated as either a project team member or project manager are finished on budget. (completely agree, agree, somewhat disagree, disagree)
9. The projects you have participated as either a project team member or project manager are finished over budget. (completely agree, agree, somewhat disagree, disagree)
10. The projects you have participated as either a project team member or project manager are finished under budget. (completely agree, agree, somewhat disagree, disagree)

4. INTENDED FINDINGS

The intended findings for RO 1 will reveal the executive perceptions toward the agile approach for Project Management. The intended results for RO 2 will identify the main factors that transform a project into agile according to the experience of the executives from the field. The SPSS statistical analysis tool will support the explanation of the findings. This study's findings are relevant to the academy since it proposes to research executives' perceptions to reveal the main factors of agile in project management, focusing on the agile strategy.

5. CONCLUSION

This study will reveal the plan to research the executive perceptions toward the agile approach for Project Management. The proposed plan suggests quantitative research by administering a questionnaire to determine the perspectives of project management executives towards agile. The study also proposes a rigorous statistical analysis that leads to the main factors that transform an endeavor into an agile project.

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