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Research Paper

FRAMEWORK FOR DEVELOPING AGILE PROJECT MANAGERS

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ABSTRACT

Organizations are choosing to transition from Traditional Project Management (TPM) to Agile Project Management (APM) for competitive advantage. APM offersmany benefits such as better customer satisfaction, shorter project times, and higher project success rates. But as organizations set out to adopt Agile practices, their project managers are experiencing challenges that hinder their development and ability to be competent in the agile environment. The problem identified was the underdeveloped process of training and coaching project managers to gain agile competencies. A literature research was performed to capture challenges that both the organization and the project manager were experiencing, project manager competency, and current development tools and techniques. With the information gathered from the literature review, a solution was formulated and proposed. The proposed solution provided a process to train and coach project managers new to APM to gain agile competencies using the Traditional Predictive Life Cycle. An implementation plan for the solution was also provided. However ,because the proposed solution has not been tested and only based on a review of the literature, future research will need to be done to validate the effectiveness of the proposed solution.

KEYWORDS: *Agile, Agile Project Management, APM, Managers, Framework*

1. INTRODUCTION

Projects are utilized by organizations to achieve business objectives (Hartman, Watts Treleven, 2013) and have become the selected way to complete work in many organization (Ravinder & Kollikkathara, 2017). Project management is important in organizations because it manages the progress of a project, helps develop clear objectives to align with business goals ,and applies various factors such as knowledge, skills, tools, and techniques to project activities to achieve the project requirements (Project Management Institute [PMI], 2017a). As projects continue to grow in size, scope, and frequency, the importance of project management will also continue to grow (Ravinder & Kollikkathara, 2017). There are many standardized project management methodologies such as Waterfall, LEAN, Scrum, and Hybrid, to name a few. Each project management methodology takes a different approach to a project and has different project steps. In a traditional project management (TPM) methodology, there are five standard process groups: initiating, planning ,executing, monitoring and controlling, and closing (PMI, 2017a). The traditional project life cycle aligns with those process groups and flows in a sequential format (Shein, Robinson & ,Gutierrez, 2018). In most TPM projects, a project stage finishes before the next stage can begin. Once a stage is complete, it is often not revisited (Baird & Riggins, 2012). A visual of this process often looks like a waterfall, which is why the Waterfall Method is usually referenced as the traditional way of completing a project .

TPM has an established track record. However, as organizations face the demand to work faster to remain competitive and larger organizations find themselves competing with smaller organizations and startups, there was a need to work projects faster than the TPM process but still maintain the same level of quality. As a predictable methodology, TPM worked well. But in an environment of constant change, Agile Project Management (APM) offered a fresh insight into working projects faster and efficiently. Whether it is TPM or APM, project managers play a vital role in project management because they are the individuals to lead or a part of the team in charge of achieving the project objectives (PMI, 2017a). As the demand for projects and the importance of project management continues to grow; the need to have well-prepared project managers will also increase (Hartman et al., 2013). The project manager must possess a variety of competencies to be effective in a TPM environment. The list of competencies is lengthy and includes skills such as leadership, communications, motivation, etc. When organizations decide to move from a TPM environment to an APM environment, it presents challenges for project managers who are familiar with a project

methodology that has been utilized for decades .Without proper training and coaching, project managers can struggle with the project methodology change because they do not possess the necessary competencies to function in an APM environment. Multiple scholarly sources discuss best practices for organizations when transitioning to an Agile project management methodology (Dikert, Paasivaara, & Lassenius ,2016 ;Ghezzi & Cavallo, 2018; Senapathi & Drury-Grogan, 2017) but the gap in the literature is how can organizations help their project managers better transition from TPM to APM and be successful at it.

Some challenges that project managers face when their organizations decide to move from TPM to APM are internal conflicts (Dikert et al., 2016), lack of APM knowledge and experience) Dikert et al., 2016; Taylor, 2016), and lack of support (Dikert et al., 2016; Taylor, 2016). Internal conflict often occurs because of resistance and adjustment issues toward change. Resistance to change can happen on many levels such as individuals that fully accept the transition or those who are against the idea and do not feel the need to change. Then there are the neutral parties who are not against the change but find themselves struggling to adjust to the change. Along with the challenges of transitioning to a new project management methodology ,project managers can also struggle with gaining APM competencies. Organizations need to be able to provide some in-house training programs along with coaching opportunities that can help project managers develop a better understanding of APM.

Especially helping project managers see the change in their role when transitioning from TPM to APM Overview of the Solution Published research established that organizations are adopting agile project management)APM) methodologies to achieve higher customer satisfaction and project success (Gustavsson ,2016 ;Schatz & Abdelschafi, 2005). However, the transition from the traditional project management (TPM) environment to APM presents various challenges at the project manager level. Through the literature, the identified common challenges were resistance to change, lack of knowledge, and support (Bannick, 2014; Dikert et al., 2016; Jovanović et al., 2017; Pawel ,2017 ;Taylor, 2016). Other barriers that varied across literature were team cultures (Jovanović et al., 2017), not having additional resources to help with current duties (Dikert et al., 2016; Taylor ,2016) the disbursement of project teams (Pawel, 2017), and keeping old commitments (Dikert et al., 2016). Any of the suggestions to address the identified challenges stated that project managers needed to get familiarized with APM. But there remained no solution to how organizations can help their project managers prepare and gain APM knowledge.

1.2 Description of the Solution

Figure 1: High-Level Overview of Proposed Framework .

The proposed framework follows the traditional project life cycle highlighted in Figure 2 .

Figure 2. Traditional-Predictive Life Cycle.

Adapted from 'Agile Practice Guide' by Projectand provides a logical path to train and coach the traditional project manager on APM methodology. By using the traditional project life cycle, something TPM project managers are familiar with; it will help remove some tension in transitioning to APM practices. The framework begins with an assessment of the project manager's APM competencies. When the evaluation is complete, the next phases are training and coaching. The fourth phase is using live work as a learning tool. The final phase is the evaluation of the project manager's APM competencies again, but there are two possible outcomes as shown in Figure 4; a repeat of the phases or a project manager with APM competencies. The repeat of phases is an influence of Assess and Analyze. The first phase of the proposed framework is to assess the project manager's competency in APM. The proposed framework will use the assessment process as defined by the Project Manager Competency Development Framework(PMI, 2017c), also

referred to as the PMCD Framework. Because the project manager is transitioning to APM, the assessment will only evaluate the project manager's competency in APM. It is important to understand what level of APM competency the project manager currently has to analyze the amount of training and coaching that is needed. The assessment of the project manager will include the agile project manager competencies previously identified in the literature review :servant leadership, collaboration, and communication. Two additional items to be included are the knowledge and experience of the project manager on APM . Rigor. Rigor was identified to be the value of assessments and has three levels: low ,medium, and high (PMI, 2017c). Low rigor is more casual and involves self or informal assessments while high rigor is a fully documented process meant to be duplicated again (PMI ,2017c). Thus, it includes the assessment by qualified assessors, workshops, focus groups, a centralized archiving system, etc. (PMI, 2017c). Due to low rigor being too simplistic and the high rigor including excessive items outside of a normal agile process such as documentation ,the assessment of this proposed framework will use the medium rigor . The medium rigor requires a knowledgeable assessor in both performing assessments and competency of what is being assessed (PMI, 2017c); in this case, it is APM competency .Therefore, an assessor with APM knowledge and experience will be used to perform assessments. Typical medium rigor assessment items are reviewing the suggested evidence of each competency, full 360-degreefeedback, interviewing the project manager and evaluating their response, recommendations, and reassessment after the development plan is implemented (PMI, 2017c). The assessment of the proposed framework will

1.3 include three different items :

360-degree feedback, an interview of what the project manager knows about APM, and their own experiences with APM

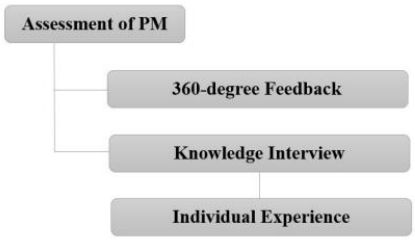

Figure 3. Assessment Phase .

360-degree feedback. The Project Manager Competency Development Framework (3rd ed., 2017c) shared that the objective of the assessment is to meet or exceed the competency baseline already defined before assessment. The 360-degree feedback (see Appendix E for sample) will evaluate the project manager on their servant leadership, collaboration, and communication skills by the assessor. Feedback is provided from the project manager ,colleagues within the same team, and the direct manager. Each assessment question will evaluate the project manager's output performance on below expectations, meets expectations, or exceeds expectations.

1.4 Knowledge interview

The knowledge interview (see Appendix F for sample interview questions) will include questions to assess each project manager's knowledge level on APM. The assessor will perform these interviews. The information gathered from these interviews should be evaluated on both an individual-level and group-level. By doing so, the assessor can view what level of knowledge the project managers have as a team and individually. Also, it was found that teams with a strong culture can find difficulty in the transition to TPM (Jovanović et al., 2017). Being able to catch this element in the project team early on can help the assessor plan the training and coaching accordingly .

1.5 Experience interview

Similar to the knowledge interview process, the experience interview (see Appendix G for sample interview questions) will assess each project manager's experience with APM. This process can be completed with the knowledge interview. However most studies that performed interviews as part of the research process only allocated one hour Therefore, if the total time of the knowledge interview is to exceed the one-hour threshold, the experience interview should be held at a different time. Through this first phase of the proposed framework, the level of training and additional materials needed are determined

1.6 Training sessions and materials

The second phase of the framework is the training courses and materials. The training sessions will cover the basics of APM such as processes , roles, and the APM methodology. The training materials will support the training sessions. This phase provides the project manager an opportunity to gain a perspective on APM in preparation for coaching .Training sessions. The training sessions will take place in two parts. The first part involves a virtual learning

environment to be done individually by each project manager. The content of the virtual training sessions will be informative and build the foundation for APM methodologies and practices. Project managers with no or minimal knowledge and experience with APM found it difficult to transition from TPM to APM (Almeida, 2017; Dikert et al., 2016). By providing the project manager an opportunity to gain an APM perspective, it will help minimize change resistance (Dikert et al., 2016) and enable the project manager to begin developing an understanding of APM. This will allow the project manager to have a greater technical understanding of APM practices in preparation for the coaching phase.

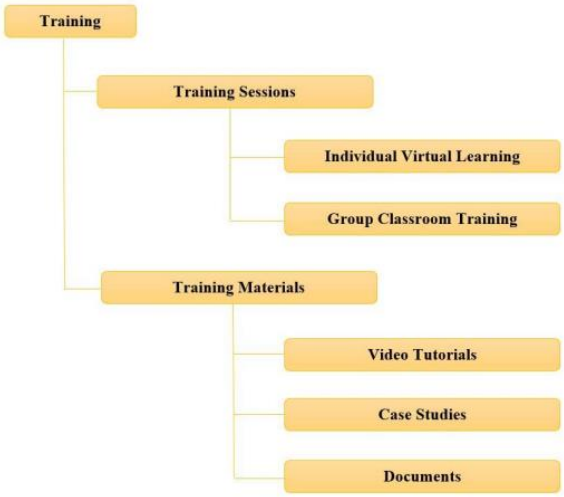

Figure 4. Training Phase.

The second part is classroom training where the project managers will come together to continue their technical learning process with case studies and group activities. Depending on the number of project managers, group members will vary. The purpose of this training activity is to have the project managers connect and share struggles or accomplishments thus far in the transition phase; providing an opportunity to gain the servant leadership skills such as support and communication (PMI, 2017b). The case studies will give project managers the chance to gain insight into APM practices, and the group activities will help build collaboration skills .Training materials. The training materials needed as shown in Figure 6 are video tutorials, case studies, and supporting documents. Video tutorials are only for the individual virtual learning environment. The videos will keep project managers actively engaged while presenting the importance of the transition to APM for the organization and introducing the APM methodology. Because all project managers may not have the capacity to get together on multiple occasions, this is a way to help them start the learning process at their own pace. The PMI also offers introductory courses to APM and is a great resource to utilize when an internal virtual learning environment is not available.

Case studies and supporting documents are for group classroom training. What differentiates the training step from the coaching and live work step is the depth of information. Training will cover mostly introductory information on what APM practices are while coaching and live work will present how to apply those APM practices in a project . Build with coaching. Coaching is an essential part of the framework because it enables project managers to see real work in a live environment. Dikert et al. (2016) stated that the ability to learn with live work allows the individual to build a proper mindset versus just attending training sessions. Organizations must incorporate coaching into the APM development of their project managers. Coaching sessions will be structured where the coach will schedule a time for discussion, side-by-side observations, and answer questions around the APM process .In an organization with no APM project managers, the organization will need to search outside resources that can be brought in to provide support for this phase. The coach will be responsible for scheduling coaching sessions to give project managers a first look into how to apply APM in an active environment. Project managers will be partnered with one other project manager to observe the coach work through an example project. The number of example projects will depend on the needs of the project managers and time availability. As long as the coaching sessions are structured to allow the project manager to do side-by-side observations and continue building an understanding of APM best practices, the concern on what example projects are in-use is minimal.

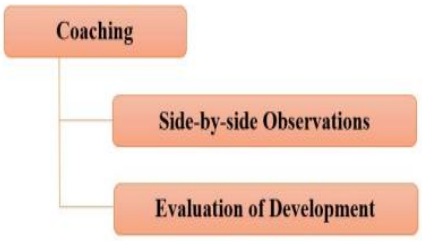

Figure 5. Coaching Phase

learning process is dependent on the current knowledge of the project manager and their learning abilities. Therefore, reevaluating coaching sessions at a predetermined milestone should be done before making any adjustments. The skills and information to be gained from coaching sessions combined with development from the individual virtual learning will enable the project manager to begin live work .Live work to test. The main focus of the fourth phase is to provide the opportunity for live work. During this phase, it is crucial that the project manager maintains communication with their coach and utilize what they have learned as supporting tools for this phase. Project managers start with small projects using APM methodology and practices before incorporating bigger projects. Creating small wins will boost the morale of project managers and offset resistance of change (Carilli, 2013), a common challenge when organizations adopt APM. The hands-on workshop will enable the project manager to gain experience and continue learning in a live environment. The length of this phase is dependent on the transition pace of the organization, but it is important to note that delay can negatively affect the overall effectiveness of the preparation, training, and coaching, that has taken place so far. Research showed that some organizations took too long during the transition to APM and found themselves starting over again (Zainal Abidin, Jawawi, & Ghani, 2017 .(Reevaluation. The final phase of the proposed framework is reevaluating the development of the project manager

. Using the 360-degree feedback process again, the assessor will evaluate each project manager, their team, and direct manager. It is important to use the same evaluation to ensure there is an improvement and validate the effectiveness of the proposed framework. If the level of improvement is not satisfactory, the project manager will need to repeat the process as shown in Figure 4. Once the project manager meets satisfactory improvement, they will become a project manager with APM competencies. The proposed framework follows the Traditional/Predictive Life Cycle. If the project manager were found not to meet satisfactory improvement in the final phase, the next round of the proposed framework would need to have adjustments. By doing so, it will ensure the project manager is moving towards gaining the APM competencies they lack versus repeating what they have already learned. Also, because project managers will be at a different level with APM competencies, the training experience is tailored to each project manager. The assessor and management will determine the adjustments based on the project manager's evaluations.

1.7 Evaluation of the Solution

This solution can be used to train and coach project managers in a TPM environment to gain the right competencies to work effectively in an APM environment. The ultimate goal of this proposed framework is to help organizations and project managers address items often causing change resistance when the organization wants to transition to APM practices. The proposed framework can be used in any organization looking to transition from TPM to APM The ultimate goal of this proposed framework is to train and coach project managers currently using TPM methodology to gain APM competencies, thus allowing for a smoother organizational change from TPM to APM.

2. SUMMARY

It is common to see organizations transition from TPM practices to APM practices to keep up with the fast-changing and demanding business world today. Many organizations switching from TPM to APM has brought on multiple studies on organizational practices when transitioning to APM. The same level of preparedness is not being done at the project manager level, especially training and coaching the project manager to have APM competencies. By using this proposed solution, organizations can lessen the challenges identified when transitioning from TPM to APM. They will also be able to train and coach their project managers to gain agile competencies through the use of the training cycle mimicking the Traditional Predictive Life Cycle. Furthermore, it will provide an overall better learning experience for project managers who are only familiar with TPM methodology and practices and get them through the transition phase faster.

3. CONCLUSION

The literature provided numerous methods on how organizations could adopt APM practices but minimal on how project managers could develop the APM competencies needed when their organizations transitioned to APM. The development of project managers to gain APM competencies can be the differentiating factor between an agile adoption failure or success .Also, projects require the work of project managers. The literature identified the need for a training and coaching process for project managers to gain APM competencies as a gap. The first part of implementing the proposed framework required the hiring of an experienced AC. The AC would provide the organization and project managers with APM expertise and guidance, and was a vital resource for the training and coaching process. The AC would also perform the initial and post assessments of the project managers, an essential part of evaluating the effectiveness of the project manager's development. Alongside the AC, a lot of responsibility was placed on project managers to gain APM competencies through the proposed implementation plan .Other requirements of the implementation plan were assessments, training resources. duration, and schedule. Initial assessments were necessary to capture what training resources were needed based on the organization and project managers while post assessments would help determine if the project manager did gain APM competencies. Duration and schedule were crucial to keeping the implementation plan disciplined and on task to avoid a failed development of project managers .There is limited literature on the development of project managers when their organizations transition from TPM to APM. But through the proposed implementation plan ,organizations that elect to adopt APM can provide a way for their project managers to gain APMcompetencies. Although the implementation plan was developed solely from literature, future studies and research can help validate and improve the process as needed.

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