ABSTRACT

Recent studies in project management have found that project managers engaging in appropriate organizational and interpersonal behaviors generally achieve more successful outcomes (Highsmith, 2009; Highsmith, 2013). “Agile” project management methodology (APM) was developed initially for software development projects (Conforto, Capaldo, da Silva, Felippo, and Kamikawachi, 2016) to focus project managers on specific behaviors and to encourage PMs to incorporate these into their management styles (Lalsing, Kishnah, & Pudaruth, 2012; Cockburn, & Highsmith, 2001). Traditional project methodology generally places little to no importance on these behaviors. Our research identifies behaviors likely to highly impact both traditional and Agile project outcomes.

KEYWORDS: Project management, Agile, Organizational behaviors

INTRODUCTION

Recent studies in the area of project management have found that project managers (PMs) who engage in appropriate organizational and interpersonal behaviors generally achieve more successful project outcomes (Highsmith, 2009; Highsmith, 2013). We define a project as any type of activity that requires an organization to engage in specific steps to reach a desired outcome. Examples include implementing a new software program/process or developing a new product.

“Agile” project management methodology, or APM, (http://agilemanifesto.org/principles.html) was developed initially for software development projects (Conforto, Capaldo, da Silva, Felippo, and Kamikawachi, 2016) to focus project managers on the importance of specific behaviors and to encourage PMs to incorporate these into their management styles (Lalsing, Kishnah, & Pudaruth, 2012; Cockburn, & Highsmith, 2001). In contrast, traditional project management methodology generally place little to no importance on these specific behaviors. Questions remain, though, as to which behaviors are most important for PMs to focus on and incorporate into their daily activities when using Agile methodology. Also, there may be a subset of Agile behaviors that can improve the outcomes of projects managed via traditional project methodology and should be incorporated into these
traditional projects. The purpose of this research is to identify which behaviors are likely to have the most profound impact on a PM’s outcomes in both the traditional and Agile project management scenarios.

LITERATURE REVIEW

For our purposes, we define three terms: traditional project management, Agile, and behavior. Traditional project management is plan-driven. One creates a plan in as much detail as needed and then executes according to the plan. This typically requires a well-defined change control process as it is often difficult to plan every detail at the start. Agile, on the other hand, is adaptive-driven. The project vision and high-level concept are developed early in the project, but detailed plans and deliverable requirements are developed on an iterative basis. Once detailed plans are agreed upon for an iteration, no change is normally accepted within that time period. Many projects are planned and managed as hybrids, blending traditional and Agile aspects.

A distinct aspect of APM is the importance of project leaders and teams exhibiting specific behaviors that significantly enhance the success of projects. Webster defines a behavior as a “manner of conducting...anything involving action in response to stimulation, the response of an individual or group” [https://www.merriam-webster.com/dictionary/behavior]. The Organizational Behavior track of Decision Sciences Institute looks for behavior at the individual level, such as motivation, decision-making, and action; at the group (project) level, such as group roles, cohesion, communication, leadership, conflict, and resolution; and at the organizational level, such as includes organizational culture and change management [Paraphrased from http://dsi-annualmeeting.org/organizational-behavior].

One example of a key behavior included in APM methodology is the way in which teams conduct themselves. Agile teams are mostly self-managed (Conforto, Salum, Amaral, Da Silva, and de Almeida, 2014) and receive guidance from a scrum manager, who functions as a servant leader to the group. Teams are responsible for determining the tasks necessary to complete iterations with acceptable customer outcomes and then executing them. This is in contrast to more traditional project teams, which often are given a list of tasks and are responsible for plan execution only.

Training PMs to coach Agile teams in all the positive behaviors could prove very costly and time-consuming for organizations. PMs will likely have difficulty executing these flawlessly while performing their other project management duties, and it is unclear whether each of these behaviors is equally important to a project manager’s success. The goal of our research is to derive a list of prioritized and related behaviors that can focus an organization and PM’s resources for maximum project benefit.
METHODS

We began the research process by identifying behaviors and techniques used by Agile practitioners both through literature review and direct input from Agile experts. The literature that proved to be most useful was largely practitioner. (See Appendix A for list of practitioner sources that describe both what the behaviors are and how to apply them.) In building a comprehensive list, we also incorporated behaviors gathered through contact with practitioners while updating a well-known project management textbook. One researcher asked seasoned practitioners how Agile projects might differ from a traditional project. The multiple methods resulted in an extensive and mixed list of behaviors and techniques.

We then scrubbed the list to delete obvious non-behaviors and split items that were two ideas listed together. However, we kept items that on the surface appeared redundant so they could be evaluated by participants later in the process. Our final list included 106 behaviors that are either unique to Agile or associated with traditional and Agile, but possibly emphasized differently in Agile. This list is shown in Appendix B. We then randomized these items by printing each on a sticky note and arranging them on three large boards, taking special care to keep seemingly similar topics apart from each other on the board. This randomized set is displayed in Exhibit 1.
We then arranged a 2-hour focus group to help us determine which of these items truly are behaviors and which might be most useful to both agile and traditional project management. We invited participants who are currently working as project managers (PMs), including some who have significant Agile experience and some who do not. The PMs receiving the invitation were encouraged to forward it to other local PMs, who were also allowed to join the focus group.

When the experienced project managers arrived, we had them sign a consent form authorizing us to tape the focus group. Then we collected demographics, shown in Exhibit 2. Subsequently, we explained our definitions of traditional project management, Agile project management, and behavior as stated above.
There were 10 expert participants who attended our focus group session. Exhibit 2 demonstrates that our focus group participants had a wide range of skills and experiences with projects. In addition to the information in Exhibit 2, we asked participants to list the types of projects that they had worked on in the past. These ranged from examples such as Enterprise Resource Planning implementation to facility upgrades, building construction, new product development, IT infrastructure, and process improvement.

Focus Group Process

We relied on four main methodologies to guide the focus group portion of our research: Method for Priority Marking, Affinity Diagram, Interrelationship Diagraph, and Multivoting. The Method for Priority Marking "is an effective way to manage language data and reduce statements from the valuable many to the vital few." (Burchill and Brodie, 2005). The Affinity Diagram helps project teams identify natural patterns of information and narrow down the key issues rather than be distracted by large volumes of unstructured information. (Milosevic, 2003). The Interrelationship Diagraph "is a graphical technique used to determine the relationships between a given issue or problem and the factors that might cause it." (Swanson, 1995). Multivoting "further narrows and defines discussion... it allows teams to select the most important or popular items from a list with limited discussion". (Scholtes, Joiner and Streibel, 2003). Below are the process steps described in more detail.

1. We first asked our participants to quickly review the possible behaviors to ensure each item we retained for the remaining analysis satisfied three criteria. Each item retained should, in the opinion of at least one participant, be deemed a behavior that is currently either mainly applied to Agile projects or at least emphasized more or applied differently in Agile projects and has the potential of improving traditional project management. We used the Method for Priority Marking in which each person had a pen and marked items they thought satisfied the criteria. The fourteen items that no one thought satisfied the criteria were dropped from further analysis.

2. Then all of the participants silently grouped the individual behaviors as they saw connections. We did this in silence so that each person could use her own logic and not be swayed by comments from others. Once most of the items were in groups, we allowed discussion to find connections for the remaining few items. The 92 remaining behaviors ended up in 16 groups. Then we had the participants working in pairs or threesomes to create descriptive titles for the groups. Thus, we created an Affinity Diagram. We then had participants tell the remainder of the group why they chose the title they did and what generally the individual items were that constituted it. In the ensuing discussion, several individual items were moved from one group to another and several titles were changed so that most of the participants agreed that the items...
were related and the title was appropriate. The group originally created sixteen categories, but they were encouraged to combine a few of the related groups into super groups. The resulting Affinity Diagram is shown in Exhibit 3.

Exhibit 3: Affinity Diagram of Agile Behaviors
3. We then duplicated the group titles and, by comparing them in a one-on-one fashion, discovered some complex cause and effect relationships. This is shown in the Interrelationship Diagraph displayed as Exhibit 4. Note the topics with the most in arrows (delivery and customer satisfaction) are largely effects and can likely be positively influenced by performing some of the other topics well. On the other hand, the two topics that have mostly out arrows (culture and servant leadership) if performed well, may have indirect benefits in some of the other areas. One of the reasons interrelationship diagraphs are often so helpful is that the most obvious problems are frequently effects and the most impactful things that can be accomplished are the hidden causes.
4. Finally, we used Multivoting by allowing each participant up to 20 votes to prioritize among the remaining 92 specific behaviors. Some participants chose to use fewer than 20 votes. We display the 9 behaviors that received at least 5 votes (essentially half of the 11 voting respondents) in Exhibit 5. These individual items might represent logical points to start improving project management.
Exhibit 5: Behaviors Receiving at Least Five Votes

- Fail forward quickly.
- Face to face communication is used when possible.
- Individuals and interactions are more important than processes.
- Emphasis on enabling teams.
- Risk is discussed in daily stand-up meetings, and in retrospectives at the end of each iteration.
- Project vision is developed and shared early.
- The product is produced at the pace the team can produce.
- Simplicity, the art of maximizing the work not done is essential.
- Agile focuses on delivering value to the customer quickly so feedback can get to the development team quickly.

RESULTS

Results from our interrelationship diagraph identified Culture (G1) and Servant Leadership of Teams (G2) as the two strongest root "causes" of subsequent behaviors (see Exhibit 6 for behaviors in each group). It is important to note here that the term "cause" in our study refers to the direction of impact that focus group participants identified. Of those two groups, G1 had five out-arrows and zero in-arrows. G2 had four out and one in. The one in-arrow for G2 was G1. So, this indicates that the participants found there to be common causes at the group level. Overall, results of our Interrelationship Diagram suggest that there are potentially mediating or moderating relationships that should be taken into consideration when determining where project managers focus their behavioral coaching of teams.

Exhibit 6 - Behaviors with High Votes in “Cause” Groups

Servant Leadership of Teams

- Scrum master serves and leads in facilitating manner. This is more limited, and more empowering than the traditional project manager.
- Conflict must be facilitated, not ignored.
- Reduce distractions.
- The scrum master serves as a guide and coach.

Culture

- Trust teams to get things done
- Fail forward quickly.
- Feeling of safety.
- Build teams around motivated individuals.
- Transparency must be valued within the organizational culture.
- Face to face communication is used when possible.
- Individuals and interactions are more important than processes.

It is not surprising that participants identified culture as a key driver of other Agile behaviors. Our further analysis showed that the behaviors included in this culture group
generally fall under the accepted definition of organizational culture, generally defined as values, beliefs, and assumptions shared in common by the organization (Schein, 1990). Some cultural values identified by participants as important for effectively applying APM concepts in traditional projects included trust, transparency, and emotional safety. Numerous studies have shown that values such as trust (Gruenfeld, Mannix, Williams, and Neale, 1996; Yeatts and Hyten, 1998) are essential to high-performing self-managed teams.

**DISCUSSION AND CONCLUSIONS**

An interesting aspect of our findings is how project management practitioners see behaviors playing out at various organizational levels. For example, culture as a phenomenon can be distinct at multiple levels in an organization, such as team and organizational levels. When pressed to identify which levels of the organization should display the behaviors they identified in their culture grouping, participants stated that the behaviors should be supported in both the team and organizational cultures. Participants strongly agreed that an organizational culture including important Agile values was essential to team and, ultimately, project success in traditional projects as well.

Participants identified servant leadership behaviors as crucial to effective APM. Robert Greenleaf is credited with developing the concept of servant leadership, which he defines as “…servant first. . . . It begins with the natural feeling that one wants to serve, to serve first. Then conscious choice brings one to aspire to lead...The best test, and difficult to administer is this: Do those served grow as persons? Do they, while being served, become healthier, wiser, freer, more autonomous, and more likely themselves to become servants? And, what is the effect on the least privileged in society? Will they benefit, or at least not further be harmed?” (Greenleaf, 1977, p. 7).

Focus group participants realized that both APM and traditional project leaders must be able to coach team members to grow in their skills and abilities. This is particularly important in Agile teams, where teams are self-managed; when work flows to them, they must learn new skills quickly to complete the myriad tasks that are required. APM is often applied to highly-complex projects and servant leadership is ideal in such a context because “The empowering and developmental behaviors shown by servant-leaders, with the right mixture of providing autonomy and direction, are prone to result in a high-quality dyadic relationship, which in turn is associated with higher engagement in challenging tasks” (van Dierendonck, 2011). Here, we see that engagement, or motivation, is positively impacted by servant leadership, which is in line with the observations of our participants. Therefore, results of the focus group supported the incorporation of servant leadership into both Agile and traditional project management.

There was significant discussion about what was meant by leadership. We were able to narrow the meaning down to a level that all of the participants were able to move forward with the IG analysis. We had to add the term servant for context and to focus on the level at team. One of the interesting ideas in current Agile thinking is that all levels of the organization can be thought of as a team of teams. The model remains the same at the highest and lowest level of the organization that a team consists of 7+-2 cross-functional t-skilled individuals. More study is needed to determine the scalability to higher levels of a program or project as we carry the unique Agile ideas of team forward into the traditional project management environment.

**Next Steps**

Turning to what can be done with the insights gathered and how to apply these Agile priorities to more traditional projects, we suggest additions to traditional PM because there is a misconception within the Agile and traditional communities of practice indicating that an either-or
approach must be taken with project management processes. We do not agree with that approach and there is ample evidence in both communities that there is a common linage. The behavior and language from practitioners and academics on both ends of the spectrum have hindered a common understanding. That was seen in our workshop by the communication gap that was obvious when we began organizing the affinity diagrams. There had to be discussion and alignment across participants based on their level of understanding of Agile principles. Once the terms were sufficiently negotiated, there was an ability to quickly move to consensus. This pre-amble is required to understand the types of projects that benefit most from the application of these techniques. The first level of filtering must be “what type of project is this”? The approach with projects in the traditional space is more of a one-size-fits-all approach to project management. This approach tends to be ineffective when faced with projects of high complexity and high uncertainly (HC/HU). In such situations, we need to engage knowledge workers to help solve the problems and be more involved in the creation process. The customary reason for project failure is that the customer was unrealistic, changed his mind, etc. In reality, the feedback loops between project team and customer were likely not fast enough to allow the customer to discover the best possible product.

Having discussed some general characteristics of projects that make them ideal candidates for applying these behaviors, we turn to a deeper discussion of why and how these Agile behaviors will yield better outcomes for traditional projects. That is not to say that they will not benefit all projects if the organizational structures are correct; however improvements may be smaller if the project is, for example, low complexity and high certainty.

Suggestions for Practitioners

The following are concepts that the participants believed will have the greatest benefits in the traditional project environment:

1. Fail forward quickly is a concept that comes from the lean community and has been embraced by Agile (Cooper, 2014) to get rapid feedback. This means no long cycles and batching things in smaller chunks. It is becoming popular in R&D type projects and some suggest the Agile approach originated in the product development space. When thinking about applying it to projects, ask what can be done to get something in front of the customer quickly for feedback. It is not the requirements specifications that will have a significant impact, but instead the working product. The Wizard of Oz approach could be used here, where a shell is created to help customers visualize the end product. In one project example, the project team actually mocked up a patient room for a new hospital wing to understand how it would be used. The feedback loop must be as short as possible in order to demonstrate a thin slice of the product. This will allow the customer to see the value being delivered and they will be in a better position to support the effort. This concept embraces the notion that with a working model of an application, one can get feedback in near real time from the actual user or customer and continue to make corrections in order to be directionally correct and avoid surprises for both the producers and customers at the final stage.

2. Face-to-face (FTF) communication with visualization should be used when possible. Research shows that the FTF communication medium provides the richest exchange of information (Webster & Hackley, 1997). Having a whiteboard or other types of drawing medium available can even enhance this; all conversations should be facilitated with these tools. This contrasts with many traditional project roles, where a person’s sole responsibility is to coordinate communication. In the team setting, communication can be defined by those individuals that are involved with and committed to producing the product. As we make
Effective communication is the responsibility of the entire team and allow everyone to own that goal, the desired outcome is more likely to be realized. When a person is in the midst of a conversation, they may not be aware of the disconnects that exist. If all parties see communication as a key to the successful execution of project endeavors, they will focus more on the interactions that bring clarity. This applies regardless of the contractual relationship, geographical constraints, or any other hindrance to the stated objective of FTF.

3. Individuals and interactions are more important than processes. Traditional projects tend to be more process and plan-driven and less adaptive in the approach. When project teams suspend some of the process and engage people in a facilitated conversation, they are more likely to get to the answer more quickly. The key here is that this will happen over time with skilled support and coaching. There is a need for the people enabling the process be trained in the disciplines of coaching and facilitation. Predetermined outcome should be suspended to ensure the team is able to self-manage and achieve the best possible solution.

4. Emphasis should be on enabling teams. Traditional project management has focused on process and plan-driven approaches to project management. The idea of team focus and the servant leader (project manager) in traditional environments has an opportunity to shift to a more people focused approach. Being people-focused leads to successful project teams, whether they are traditional or Agile. This approach does have its challenges and must be introduced over time. Project managers must prioritize people over timelines and status reports to be effective. This concept again comes from the lean community. When building teams to get things done becomes part of the culture, risks are surfaced more quickly. The teams begin to own commitments made and are more likely to express concern sooner if they lack the support needed to be successful. This is a delicate journey and if leaders do not practice the behavior when the team is struggling, the team will revert to a less engaged existence. When we focus more on how the team is developing as a long lived asset for creating complex products and step away from the traditional approach of trying to optimize limited resources, the team is enabled to create the desired product. The more people are seen as a project resource and something to be optimized, the less likely the team members will be allowed to grow and develop as a high performing team that is cross-functional with less external dependencies.

5. Risk is discussed in daily stand-up meetings and in retrospectives at the end of each iteration. Risk Visibility was one of the categories on the Interrelationship Diagraph and as we stated in Behavior 4, risks are surfaced and discussed earlier when there is a culture of trust. Teams discuss the daily risks that are coming into focus and then discuss what they discovered over the last iteration. "The Japanese term for continuous improvement is Kaizen and it is the process of making incremental improvements, no matter how small, and achieving the lean goal of eliminating waste that adds cost without adding value. (4) Kaizen teaches individuals skills for working effectively in small groups, solving problems, documenting and improving processes, collecting and analyzing data, and self-managing within a peer group. It pushes the decision making (or proposal making) down to the workers and requires open discussion and a group consensus before implementing any decisions. Kaizen is a total philosophy that strives for perfection and sustains TPS (Toyota Production System) on a daily basis" (Liker, 2004, p.24). And an even more nuanced meaning of kaizen is found in the Footnote: (4): of Liker’s work “Actually kaizen means "change for the better" and can refer to very large changes or small, incremental changes. Because Western firms tend to focus on breakthrough innovation and are weak at continuously improving in small amounts, this has been the focus of teaching kaizen to Western firms. Sometimes kaikaiku is used to refer to major, revolutionary changes” (Liker, 2004, p.24). Maintain focus on small incremental change that is easily absorbed by a high
performing team without the loss of momentum. The team needs to maintain speed and incrementally adjust to changes that they implement in order to get results over shorter iterations of time.

6. Project vision is developed and shared early. Again, this comes from the idea of Hansei, which is a partner of Kaizen. In traditional projects, we tend to want to control and not improve because we created a plan. In more adaptive Agile projects, the idea of Hansei is "...learning and growing. A key to learning and growing...is Hansei, which roughly means "reflection". "... everything is included, spirit and attitude...." "Without Hansei, it is impossible to have Kaizen; when one does something wrong, at first he must feel really sad. Then he must create a future plan to solve the problem and must sincerely believe he will never make this type of mistake again. Hansei is a mindset, an attitude. Hansei and Kaizen go hand in hand" (Liker, 2004, p.257). Again, this is lean being applied to HC/HU products, which in traditional project management is defined as the output of a project. This gives another insight into how traditional PMs can begin to exhibit some of these behaviors by allowing more focus on the product and people. The vision of every project is to deliver the product. Organizations do not run projects for the sake of projects; they have a vision for a product, a building, a software application, etc. The first step for applying this principle is to recognize that leaders need to keep in mind the vision of the product. Also, understand that there is no certainty the project plan that they have laid out at the beginning is going to get us to the realization of that vision, if in fact that vision stays intact for the duration of the project. The cone of uncertainty of a product’s end state is never larger than when the realization of the product begins. If there is not this uncertainty, then the benefits of being agile are unlikely to be realized. With this awareness of where the product is within the cone of uncertainty, the ability to receive feedback and pivot without mercy becomes more likely for all invested in the success of the product of the project.

7. The product is produced at the pace the team can produce. When we begin to focus on the team as the engine of the project and not the plan, we need to realize how difficult it is for people to estimate what they have not done. There is a rich body of literature in estimating HC/HU type products. Estimating is a guess at best and likely wrong; however, organizations still hold people accountable for not meeting a guess. Asking the team what they can commit to and explaining what commitment looks like makes outcomes more predictable and delivers more value to the customer sooner. The more often the team gets to see a feature or function before they need to build it, the more likely they will be to have a better estimate to commit to. The model is to keep estimating and keep trusting the team to be the best people to estimate and build at a sustainable pace. This means you will not have the level of certainty that a project has when it is run in a traditional manner; however, that certainty is often misleading and turns out to be terribly wrong in the end. And because we had that expectation of certainty in the first place, poor practices are used to get something delivered. By contrast, if we begin to deliver incremental value at the team’s pace to produce a product, it is more likely for the customer to keep investing knowing that usable product is being produced.

8. Simplicity, the art of maximizing the work not done, is essential. This is an early opportunity in the product life-cycle to practice lean. We ask business owners or users to tell us what they want and we get a wish list that is enormous. We lay out a plan and begin executing. If we would instead just ask what is the next most important thing to build, we would be in a better place. In traditional project management, this is known as progressive elaboration; unfortunately, it is misused as another name for decomposition, which is not the same thing. Decomposition occurs once during a planning stage, while progressive elaboration occurs repeatedly as more is learned during the project, so that by project end, the elaboration is complete. We need to progressively elaborate the product as we accelerate the feedback
cycle so we know we are building the next best thing to deliver business value. The business user or customer is more quickly able to see the benefits of the product, hence the project. This accelerates the return on investment (ROI). It is likely at some point before the entire feature list is completed that the customer will have been given enough value and will choose to not pay for more. By not doing everything on the list and making sure we are not over-doing or under-doing, we optimize business value of the product, hence the concept of work not done.

9. Agile focuses on delivering value to the customer swiftly so feedback can get to the development team quickly. Behavior 8 naturally leads to this behavior; as we shorten the feedback cycle, we begin to course correct as we progressively elaborate the product. If the plan is constraining us from doing that, we will not be able to optimize the business value. Quick feedback loops allow for the prioritization of what to do next when we have a more product focused approach vs. the plan-driven based approach. The feedback should inform our next steps. If the feedback does not, we have most likely specified too much work and there is an opportunity to reduce the batch size of the unit of work to drive the need for feedback every iteration. The feedback becomes critical for the team to continue to produce value at its sustainable pace.

If any of the above approaches are used in isolation, it is unlikely that the benefit will be what it could be if they are used together. The priority of their implementation is as outlined; however, the more approaches that are implemented, the more likely the compounding benefits are to be realized in traditional projects.

Suggestions for Researchers

This preliminary research included literature searches and a focus group. It yielded basic ideas of how various behaviors might be related, which groups of behaviors might influence others, and lists of behaviors the participants think might be most impactful to traditional projects. Survey-based research could be conducted to validate or refute these preliminary findings based upon the opinions of many experts, both experienced practitioners and researchers. Path models could be developed to establish with greater certainty the relationships not only between groups of behaviors, but also between individual behaviors and project success. If sample sizes would be large enough, respondents from various types of projects could be compared to ascertain which behaviors make the most difference for various types of projects or for projects in various industries or of various sizes.
APPENDIX A – PRACTITIONER SOURCES DESCRIBING AGILE BEHAVIORS

https://www.atlassian.com/agile/wip-limits
https://www.atlassian.com/agile/ceremonies
http://www.romanpichler.com/blog/personas-epics-user-stories/
https://www.sitepoint.com/3-powerful-estimation-techniques-for-agile-teams/
https://www.atlassian.com/wallboards/information-radiators
https://4squareviews.com/2016/01/22/agile-pm-process-grid-6-6-agile-tooling-1/
https://weblogs.asp.net/wallen/throughput-vs-velocity
https://www.atlassian.com/agile/kanban
https://nearsoft.com/blog/are-you-ready-for-a-self-managed-agile-team/
https://www.infoq.com/articles/what-are-self-organising-teams
http://innovategov.org/2016/02/05/project-scheduling-best-practices-in-an-agile-environment/
http://repository.cmu.edu/cgi/viewcontent.cgi?article=1761&context=sei
http://innovategov.org/2013/07/03/six-best-practices-for-agile-strategic-planning/
https://resources.sei.cmu.edu/asset_files/TechnicalNote/2013_004_001_62918.pdf
http://stateofagile.versionone.com
APPENDIX B – LESSONS TRADITIONAL PM CAN LEARN FROM AGILE

1. Emphasis on enabling teams.
2. Collaborative effort and communication specifically with the client are common features.
3. The essential role is the customer representative – sometimes called the product owner.
4. The Product Owner does much of what a sponsor might in traditional projects.
5. There may be a designated sponsor (sometimes known as a product manager).
6. The scrum master serves and leads in a facilitating in a collaborative manner. This is a more limited, yet more empowering role than the traditional project manager.
7. The Scrum Master ensures the team is growing as a team.
8. Many organizations using Agile have coaches – acting as a facilitator and trainer.
9. Project vision is developed and shared early. Align project and team goals through vision sharing.
10. Simplicity, the art of maximizing the work not done is essential.
11. The primary value (working product) will be delivered at each iteration.
12. An agreement is reached during planning on the “definition of done”. These are often called the Conditions of Acceptance.
13. Ensure common understanding of success criteria and value.
14. Determine minimum acceptable output to fulfill project vision and have a working output.
15. Documentation is evaluated against business value delivered and is not the primary deliverable.
16. Project teams plan in short bursts (generally 2 to 4 weeks) often-called sprints or iterations.
17. The details are planned for the upcoming iteration and very little change is allowed during it.
18. Satisfy the customer by placing emphasis on outputs that fulfill their needs.
19. Engage all participants through engagement, cooperation, and knowledge sharing.
20. Facilitate that engagement through servant leadership and visible and continual communication.
21. Keep things simple with a sustainable pace or cadence and emphasis on continued process improvement.
22. All Agile roles are more collaborative.
23. The teams are self-organizing.
24. The team accomplishes many of the planning and coordinating activities a project manager would typically perform.
25. The first iteration is used to determine the product to be built and prioritize the most valuable work for the next iteration.
26. Iteration planning meetings have the product owner share the highest value added output he or she would like the team to work on next along with a definition of “done”.
27. Daily stand-ups are often held for 15 minutes early in the morning and each team member shares the previous day’s accomplishments, the plans for the current day, and any issues.
28. Demonstration meetings are held at the end of each iteration where the team demonstrates usable product and receives feedback from the stakeholders.
29. Retrospective meetings are held at the end of each iteration where the project team, scrum master, product owner openly share what worked well and what could work better.
30. Trust between the client and contractor (or user and developer) is needed because the details of the requirements and scope change based on the fast feedback cycle.
31. The scrum master practices servant leadership acting as guides and coach.
32. Transparency must be valued within the organizational culture.
33. Light-weight processes are created and used.
34. Build teams around motivated individuals.
35. Agile project teams Question everything
36. Fail forward quickly
37. The Agile project team members are responsible to check for deviations regularly
38. The Agile project team should be capable of detecting product that does not meet the conditions of acceptance.
39. Trust teams to get things done.
40. The best solutions arise from self-organizing teams.
41. The team cooperatively devise ground rules known as ways of working (WoW).
42. Co-locate teams
43. Use collaborative tools.
44. Reduce distractions.
45. Team members break down barriers.
46. Team members become experts on the product they are creating.
47. Team members must develop a sense of ownership of the product.
48. Team members must develop a commitment to the team.
49. All team members act as leaders.
50. Satisfy the customer.
51. Individuals and interactions are more important than processes.
52. Stakeholders need to be educated about their roles
53. Stakeholders need to be alerted in advance concerning changes
54. Face to face communication is used when possible with visualization.
55. Change is harnessed to the customer’s competitive advantage.
56. Solicit stakeholder feedback early and often.
57. Conflict must be facilitated, not ignored.
58. Agile leverages the progressive elaboration mindset.
59. The Product Owner is the interface to the product stakeholders and is responsible for aligning stakeholders to priorities and capabilities.
60. Agile focuses on delivering value to the customer quickly so feedback can get to the development team quickly.
61. Product features are captured in a product backlog.
62. The product owner prioritizes the backlog on an ongoing basis.
63. The team is challenged with conflicting aspirations between finalizing the scope specifications and maintaining flexibility.
64. The product owner creates “personas,” which are fictional people who represent user types.
65. User stories define scope and functionality.
66. The customer representative prioritizes the scope based upon business need, value, cost, and risk.
67. The team commits to the amount of work they can perform in an iteration.
68. Minimal Viable Product (MVP) features by asking what are the three to five most important things needed for our customer to use our product.
69. Engage an empowered business stakeholder.
70. Promote knowledge sharing.
71. Prioritize collaboratively.
72. The overall product schedule is developed at a high level.
73. Sequencing is performed at a high level for the entire project or for the product release (often 3 to 6 months).
74. Then for each iteration, the team develops the sequence by which the detailed activities of that iteration needs to be completed.
75. Teams can use velocity of progress to estimate how much work will be accomplished in each iteration.
The customer and project team can collaborate to reduce the impact of interdependency of activities. Schedules are limited to the amount of work the assigned people commit to. The team assigned to an Agile team should remain on the product for the entire duration. An agile team is a cross-functional team with general expertise and together on a long-term basis. The budget is set at the people level and then the product is produced at the pace the team can produce. The team members on an agile project decide among themselves who will do each work activity. Team members pick up the next highest priority story when they finish what they have been working on. If a team member needs help he will ask, if he needs to learn he learns. People being overloaded are not a serious problem in Agile since the team is cross-functional and the team commits to get the work done in the iteration. The team self-manages conflict with the help of the scrum master. The fundamental ideas behind Agile project planning is to use a collaborative approach with the team and product owner. Teams recognize that while it may be difficult to scope the entire project at the outset, stakeholders do want to have a ballpark idea of total cost, schedule, and functionality before approving a project. Teams may use rolling wave planning to estimate costs. Dummy tasks are often used to summarize the work for future project iterations that have not yet been defined. Since the number of team members is often known and the length of the iteration is known, the amount of cost can be established. Minimize regulatory and other costs of doing business. Agile projects develop early risk planning, assessment, and response planning at a high level. More detailed and timely risk management occurs in planning each iteration. In daily stand-up meetings, and in retrospectives at the end of each iteration risk is discussed. The product owner is involved with the team on a daily basis. Something of value needs to be delivered at each iteration with a test to confirm it works so risks tend to be uncovered quickly, before they become large. On Agile projects communicate often (maybe daily) with the owner and other stakeholders. The better a team is able to plan a sustainable pace and cadence, the better the quality of the product. Teams plan for continuous improvement and reflection rather than optimizing a process. Customer collaboration is preferable to contract negotiation. Agile projects often use a burn down chart to show the amount of work remaining. Working product is the primary measure of progress. Maintain a visible, monitored, prioritized risk list. Maintain highly visible information registers. Have appropriate team members resolve issues. We need directionally correct indicators that are often not as polished to guide us.
APPENDIX C - DEMOGRAPHICS SHEET TO BE COMPLETED BY PARTICIPANTS

Please take a few minutes and answer the following questions.

1. Which professional certifications do you hold?
   ______________________________________________________________________
   ______________________________________________________________________
   ______________________________________________________________________
   ______

2. How many years of experience do you have working on projects? ______________
   a. How many of those years were on Agile projects? ______________

3. How many years of experience do you have working as a project manager?
   ______________
   a. How many of those years were on Agile projects? ______________

4. If you work or have worked on traditional projects, which types of projects were these?
   ______________________________________________________________________
   ______________________________________________________________________
   ______________________________________________________________________
   ______

5. If you work or have worked on Agile projects, which types of projects were these?
   ______________________________________________________________________
   ______________________________________________________________________
   ______________________________________________________________________
   ______
APPENDIX D – PARTICIPANT INFORMED CONSENT DOCUMENT

INFORMED CONSENT FORM

PROJECT: AGILE PROJECT MANAGEMENT BEHAVIORS CLUSTERING

My name is XX and you are being given the opportunity to volunteer to participate in a research project conducted through YY University. The purpose of this research is to advance understanding of the behaviors associated with Agile project management. You were selected because you have experience in Agile or traditional project management. You will be asked to engage in a focus group discussion to validate and cluster behaviors that are important to Agile and traditional project management methodology.

This focus group will take approximately 2 hours and will be audio taped so that I can analyze the tape for any important insights that I may have missed during the session. There are no known risks associated with your participation in this research. You will not receive any direct benefits from participating, but your knowledge of project management may be enhanced. The project management community may also benefit from this research by better understanding the importance of specific behaviors to both Agile and traditional project management.

All data collected will become anonymous during the data analysis process and your name or identifying information will not be associated with any analysis or results of this research. To do this, all participants will be assigned a number when analyzing the data electronically. Demographics sheets will be destroyed after the data are entered into an electronic medium. Any other data and identifying information will be stored in locked drawers in my office.

Refusal to participate in this study will have NO EFFECT ON ANY FUTURE SERVICES you may be entitled to from the University. You are FREE TO WITHDRAW FROM THE STUDY AT ANY TIME WITHOUT PENALTY.

If you have any questions at any time during the study, you may contact XX. Questions about your rights as a research subject should be directed to XX’s Institutional Review Board at (513) 745-2870. You will be given a copy of this consent form for your records.

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I have been given information about this research study and its risks and benefits and have had the opportunity to ask questions and to have my questions answered to my satisfaction. I freely give my consent to participate in this research project.

___________________________________________                      ______________
Signature Date

Please initial:
________ I agree to be audio taped as part of this research.
________ I do NOT agree to be audio taped as part of this research.

If you do not agree to be audio taped, you will be contacted to take part in a separate but similar focus group session that will not be taped.

THE DATE APPROVAL STAMP ON THIS CONSENT FORM INDICATES THAT THIS PROJECT HAS BEEN REVIEWED AND APPROVED BY XX INSTITUTIONAL REVIEW BOARD.

129164120
REFERENCES


