Identifying Key Agile Behaviors That Enhance Traditional Project Management Methodology

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Recent studies in project management suggest that project managers (PMs) engaging in appropriate organizational and interpersonal behaviors generally achieve more successful project outcomes. Agile project management encourages PMs to incorporate these behaviors into their management styles, but incorporating all of the behaviors simultaneously can be difficult and costly. Using qualitative research methods, our study aims to identify a high-impact subset of Agile behaviors that likely improve outcomes of traditionally managed projects. The study also suggests specific ways that practitioners can incorporate these high-impact behaviors into their projects.

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). It may be helpful to think of 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, Amaral, 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 does not incorporate 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.

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 involves change control 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 concepts are developed at the start, but details are developed on an iterative basis. Once detailed plans are agreed upon for an iteration, no change is normally accepted within that time period (PMI, 2017). Many projects are planned and managed as hybrids – with some traditional and some Agile aspects.

A distinct aspect of Agile PM (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"[1]. The Organizational Behavior track of Decision Sciences Institute looks for behavior at the individual level to include motivation, decision-making, and action; at the group (project) level to include group roles, cohesion, communication, leadership, conflict, and resolution; and at the organizational level includes organizational culture and change management.[2]

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 these. This is in contrast to more traditional project teams, which are often given a list of tasks and are responsible for plan execution.

Training PMs to execute each of these 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's success. The desired outcome of this research effort is to develop a list of prioritized and related behaviors that can focus an organization and PM's resources for maximum project benefit.

RESEARCH METHODOLOGY AND PROCEDURES

This research process began by identifying behaviors and techniques used by Agile practitioners both by literature review and by direct input from Agile experts. The literature that proved to be most useful for this was largely practitioner (see Appendix A for list of practitioner sources that describe both what the behaviors are and how to apply them.) To aim for a comprehensive list, at each A-head (major section) of a 15 chapter project management text being updated, the question was asked, how might this be different in an Agile project versus a traditional project? This formed a very long mixed list of behaviors and techniques.

We then scrubbed the list to delete obvious techniques and split items that were really two ideas listed together. We ended with a list of 106 behaviors that are either unique to Agile or are at least emphasized more or in a different manner in Agile. This list is shown in Appendix B. Since this list was in the order of text coverage, we then randomized these items by printing each on a sticky note and arranging them on three large boards, taking care to not put any two that occur near each other in the book near each other on the board. This randomized set is displayed in Exhibit 1.

EXHIBIT 1
RANDOMIZED AGILE BEHAVIORS
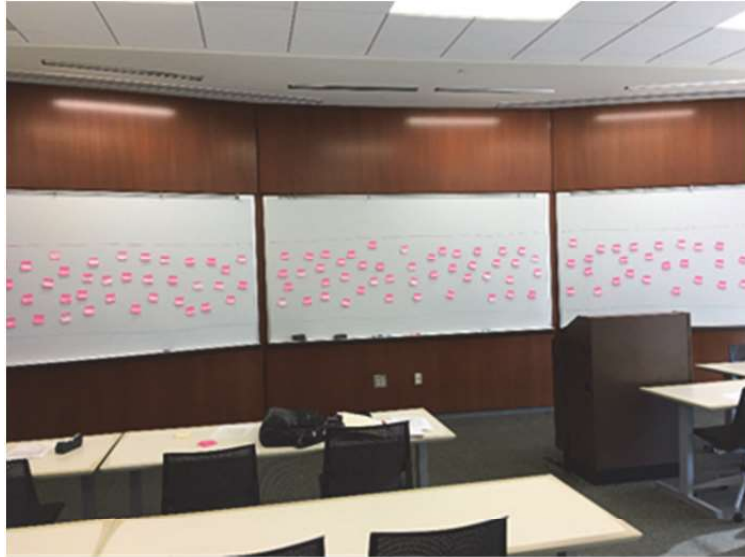
We then arranged a 2-hour focus group to help us determine which of these items truly are behaviors, and which might be most useful to traditional project management. We invited participants who are currently working as project managers (PMs), including some who have significant Agile experience and some who do not. The PMs receiving the invitation were encouraged to forward it to other local PMs, who were also allowed to respond and 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 they filled out a demographics form as shown in Exhibit 2. We followed this by explaining our definitions of traditional project management, Agile, and behavior as stated above.

EXHIBIT 2
DEMOGRAPHICS OF FOCUS GROUP PARTICIPANTS

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Professional Certifications held by participants	PMP, PMI-ACP, CBCP, CPM. CPIM, PSM. PSPO, ICP-ACC, ICP-AFT, CSM, CLP, SA, CCP, CSP, CEC, DA, ICP-CP, JMT, SPC
Average # of years working on traditional projects	17 (team member) 2 (project manager)
Average # of years working on Agile projects	11 (team member) 2 (project manager)

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 the Exhibit, we asked participants to list the types of projects they had worked on in the past, which 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 section 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). Mulitvoting "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).

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 either only in Agile projects or at least emphasized more or differently in Agile projects, and it has the potential of improving traditional project management. We use the Method for Priority Marking in which each person had a pen and marked items they thought satisfied the criteria. Fourteen items received no marks and 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 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. Sixteen categories were too many for the next part of our focus group, so the participants then combined a few of the related groups into super groups. The resulting affinity diagram is shown in Exhibit 3.

EXHIBIT 3
AFFINITY DIAGRAM EXAMPLE OF AGILE BEHAVIORS
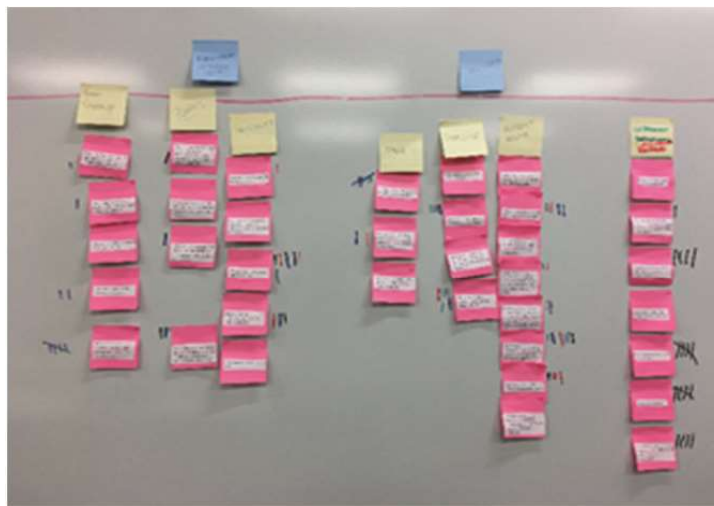
3. We then duplicated the group titles and by comparing them in a one-on-one fashion discovered some complex cause and effect relationships. This is shown in the Interrelationship Diagraph

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.

EXHIBIT 4
COMPLEX CAUSE AND EFFECT RELATIONSHIPS SHOWN IN INTERRELATIONSHIP DIAGRAPH
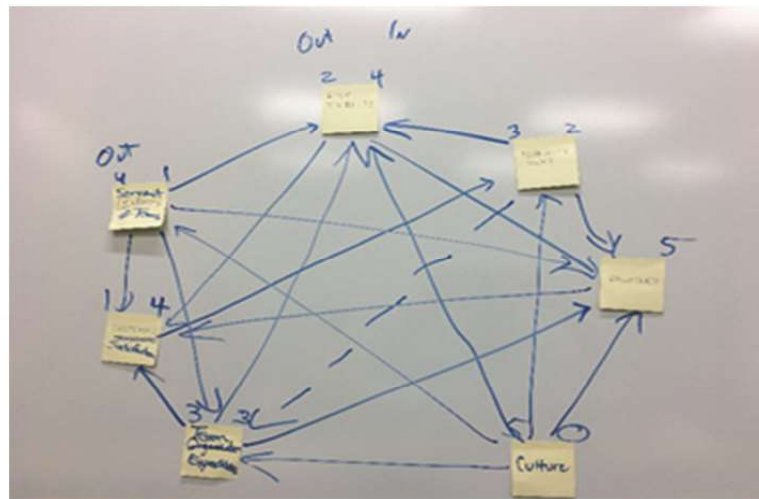
4. Finally, we used Multivoting by allowing each participant up to 20 votes to prioritize among the remaining 92 specific behaviors. Some participants chose to use fewer than 20 votes. We display the 9 behaviors that received at least 5 votes (essentially half of the 11 voting respondents) in Exhibit 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.

FINDINGS, ANALYSIS, AND DISCUSSION

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.

EXHIBIT 6
BEHAVIORS WITH HIGH VOTES IN "CAUSE" GROUPS

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.

Servant Leadership of Teams
- Scrum master serves and leads in a 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.

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 utilizing APM 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.

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.

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 APM leaders, although they defer much of their leadership power to self-managed teams, still must be able to coach team members to grow in their skills and abilities. This is particularly important in Agile teams, where work flows to them and 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.

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 research is needed to see if what is being suggested here can scale to any level of a program or project as we carry the idea 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 that it is an either-or approach to solving problems for organizations. We do not agree with this approach and there is ample evidence in both communities that there is a common linage. The behavior and language from 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 is 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. What we find is that when we have high complexity and high uncertainly we need to engage knowledge workers to help solve the problem and be a greater part of the creation process. In this upper right quadrant is where these types of Agile compatible behaviors yield the most impact (Exhibit 7).

EXHIBIT 7
2 BY 2 MATRIX OF COMPLEXITY AND UNCERTAINTY
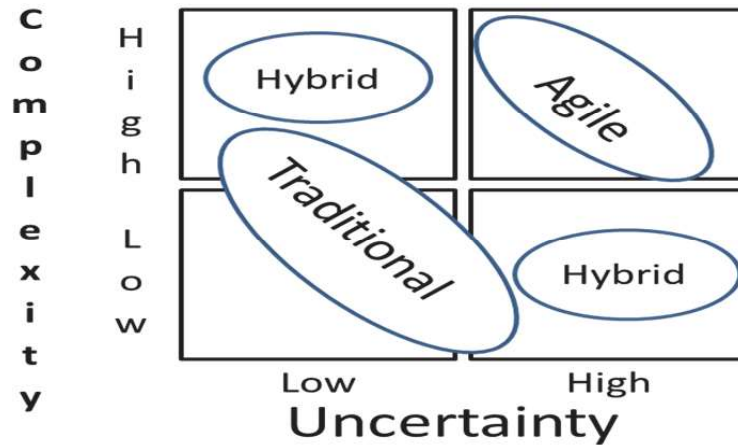
In the lower left corner, a traditional (predictive) approach to planning and managing projects works well as with more certainty and less complexity, the project team can have confidence that their plan will be implemented with lower risk. In the upper right and lower left quadrants, a hybrid approach of some sort may be appropriate (PMI, 2015). There is still great benefit from detailed early planning, but parts of the project may be too complex to fully understand at the outset or the client may simply not know enough to make all needed decisions early. Therefore, in each of these quadrants, projects may benefit from some aspects of predictive and agile approaches. The traditional reason for projects not being as successful is that the customer was unrealistic, changed their minds, etc. In reality, the feedback loops were likely not fast enough to allow the customer to discover the best possible product.

Now that we have a description of an ideal project, the benefits of these Agile behaviors will yield better outcomes. That is not to say that they will not benefit all projects if the organizational structures are correct; however there may not be a step-wise change if the project is of low complexity and high certainty.

SUGGESTIONS FOR PRACTITIONERS

The participants picked things that will benefit the High-Complexity/High Uncertainty (HC/HU) project environment the most.

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. This can be used in almost any HC/HU initiative. 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. It is the working product. One approach could be creating a shell 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.

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 type of drawing medium available can even enhance this; all conversations should be facilitated with these tools. This is in contrast to many traditional

project roles, where a person's sole responsibility is to coordinate communication. The concept returns to 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 be directionally correct.

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 facilitated conversation, they are likely to get to the answer more quickly in HC/HU endeavors. The creative process is happening near real-time so how we organize the team and the environment becomes critical to success.

4. Emphasis on enabling teams. Again, traditional project management has focused on process and a plan-driven approach 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 will be something that can be introduced over time. It will take the project manager prioritizing people over timelines and status reports. This again comes from the lean community. When beginning to build team to get things done becomes part of the culture, risks are surfaced more quickly. This is a very delicate journey and if a leader does not practice the behavior when the team is struggling, the team will revert to a less-engaged existence.

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 that a natural and valuable behavior is that risks are surfaced and discussed earlier when there is a culture of trust. Teams should discuss 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): 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).

6. Project vision is developed and shared early. Again, this comes from the idea of Hanzei which is a partner of Kaizan. In traditional projects teams tend to want to control and not improve because they created a plan. In more adaptive, Agile projects the idea of Hanzei 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, 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 project vision is an interesting way to state what the product vision really is. 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 they 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 them to the realization of that vision, if in fact that vision stays intact for the duration 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 on which commit. The model is to keep estimating, and keep trusting the team as the best people to estimate and build at a sustainable pace.

8. Simplicity, the art of maximizing the *work not done*, is essential. This is a very early opportunity in the product life-cycle of a product development model. 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, it is not the same thing. Decomposition occurs at 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. Teams need to progressively elaborate on the product, as they accelerate the feedback cycle so they know they 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 and hence the project. Teams are able to accelerate the ROI. By not doing everything on the list and making sure they are not over-doing or under-doing, they optimize business value of the product, hence the concept of work not done.

9. Agile focuses on delivering value to the customer quickly so feedback can get to the development team quickly. Behavior 8 leads naturally to this behavior as teams shorten the feedback cycle they begin to course correct as they progressively elaborate on the product. If the plan is constraining them from doing that, they will not be able to optimize the business value. Quick feedback loops allow for the prioritization of what to do next when they have a more product-focused approach vs. the plan-driven based approach.

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 that participants think might be most impactful. 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 behavior groups 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.

ENDNOTES

1. https://www.merriam-webster.com/dictionary/behavior accessed May 11, 2017.
2. Paraphrased from http://dsi-annualmeeting.org/organizational-behavior/ accessed May 11, 2017.

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APPENDIX A – PRACTITIONER SOURCES DESCRIBING AGILE BEHAVIORS

http://www.romanpichler.com/blog/10-tips-creating-agile-product-roadmap/
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
http://www.methodsandtools.com/archive/archive.php?id=61
https://www.atlassian.com/agile/kanban
http://www.telerik.com/blogs/the-importance-of-timeboxing-and-iterations-for-agile-planning
https://www.congress.gov/bill/114th-congress/senate-bill/1550
https://scrumalliance.org/community/articles/2013/january/self-organizing-teams-what-and-how
http://blogs.agilefaqs.com/2014/10/29/self-organised-vs-self-managed-vs-self-directed-whats-the-difference/
https://nearsoft.com/blog/are-you-ready-for-a-self-managed-agile-team/
http://www.cio.com/article/3031685/data-warehousing/how-to-create-and-lead-self-managing-teams.html
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.
76. The customer and project team can collaborate to reduce the impact of interdependency of activities.
77. Schedules are limited to the amount of work the assigned people commit to.
78. The team assigned to an Agile team should remain on the product for the entire duration.
79. An agile team is a cross-functional team with general expertise and together on a long-term basis.
80. The budget is set at the people level and then the product is produced at the pace the team can produce.
81. The team members on an agile project decide among themselves who will do each work activity.

82. Team members pick up the next highest priority story when they finish what they have been working on.
83. If a team member needs help he will ask, if he needs to learn he learns.
84. 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.
85. The team self-manages conflict with the help of the scrum master.
86. The fundamental ideas behind Agile project planning is to use a collaborative approach with the team and product owner.
87. 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.
88. Teams may use rolling wave planning to estimate costs.
89. Dummy tasks are often used to summarize the work for future project iterations that have not yet been defined.
90. Since the number of team members is often known and the length of the iteration is known, the amount of cost can be established.
91. Minimize regulatory and other costs of doing business.
92. Agile projects develop early risk planning, assessment, and response planning at a high level.
93. More detailed and timely risk management occurs in planning each iteration
94. In daily stand-up meetings, and in retrospectives at the end of each iteration risk is discussed.
95. The product owner is involved with the team on a daily basis.
96. 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.
97. On Agile projects communicate often (maybe daily) with the owner and other stakeholders.
98. The better a team is able to plan a sustainable pace and cadence, the better the quality of the product.
99. Teams plan for continuous improvement and reflection rather than optimizing a process.
100. Customer collaboration is preferable to contract negotiation.
101. Agile projects often use a burn down chart to show the amount of work remaining.
102. Working product is the primary measure of progress.
103. Maintain a visible, monitored, prioritized risk list.
104. Maintain highly visible information registers
105. Have appropriate team members resolve issues.
106. We need directionally correct indicators that are often not as polished to guide us.