A Workaround Model for Competent Project Managers using Agile Development in a Traditional Organization

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Abstract

Agile adoption is gaining popularity in organizations, even those steeped in traditional software development because it has been shown to offer significant benefits. Project managers are often unable to implement agile to its full potential given stakeholder resistance. Project managers find workarounds as a compromise to resistance in certain situations, whether the actions are harmless or essential to resistance. This paper unfolds a case study to examine how project managers’ social intelligence competencies that include working with, persuading, and influencing people plays a pivotal role in working around resistance to agile adoption emanating from stakeholders within and outside the team. Limitations and future research are discussed.

Keywords: Competency model, Agile project management, social intelligence, case study, resistance, workaround

Introduction

Many organizations steeped in traditional waterfall development are increasingly adopting more-responsive agile software development methods to adapt and remain competitive in the marketplace. Using agile methods has been shown to yield quicker return on investment, achieve higher software quality and customer satisfaction, satisfy often ambiguous user requirements, and improve employee morale (Boehm 2002; Cao et al. 2009; Cockburn and Highsmith 2001; Kuppuswami and Vivekanandan 2003; Tarhan and Yilmaz 2014; Williams and Kessler 2000). Agile development is a radical departure from traditional waterfall development. Agile approaches reduce the emphasis on processes, tools, comprehensive documentation, agreed-to contracts, and detailed plans, while they increase the turnaround time of getting a market-ready version of the solution in the customer hands. Traditional companies are typically immersed in following documentation-laden waterfall development methodologies with lengthy stage-gated development phases, complicated reporting and governance...
procedures, and siloed task specializations (Waardenburg and Vliet 2013). Given differences in approaches, complex waterfall development typically inhibits teams from moving quickly to pure agile approaches (Cao et al. 2009; Chan and Thong 2009; McAvoy and Butler 2009). Stakeholders within and outside the team are comfortable with the status quo and often resist change (Boehm and Turner 2003; Cao et al. 2009), begging the question: How do project managers in traditional organizations manage resistance when adopting agile practices?

Managing resistance can be challenging (Ferneley and Sobreperez 2006). Traditional companies making the move to agile methods need project managers with a certain skill set who are willing to take on the challenge and have the competencies to make agile work (Nerur et al. 2005). Project managers often face resistance from stakeholders within the team such as developers, testers, analysts etc. who are used to working alone, and stakeholders outside the team such as top management, customers, users, and those who set development governance policies and procedures who are used to waterfall silos. Waterfall activities follow time-driven step-wise detailed steps of documented accomplishments with large timetables to complete assigned tasks, while agile activities follow fluid constantly-reprioritized team-driven actions with dedicated cross-functional teams who set and work at a steady cadence of clearing backlogs of customer-defined work activities (Balijepally et al. 2009; Mangalaraj et al. 2009; Maruping et al. 2009; Nerur et al. 2009). Resistance from within the team can emanate from those who prefer the status quo of waterfall and come from employees entrenched in a waterfall mindset while resistance from stakeholders outside the team can come from those who enforce waterfall-like documentation rules on agile teams. Conceptually, the literature defines resistance as the opposition, challenge, or disruption of following a process or initiative that is being pursued (Ferneley and Sobreperez 2006; Ford et al. 2008). While the information systems literature offers insights about managing resistance to new technology adoption (Kim and Kankanhalli 2009; Krovi 1993; Lapointe and Rivard 2009; Rivard and Lapointe 2012), little attention has been paid to how project managers mitigate resistance to enable some level of agile adoption in traditional organizations. Based on a review of the literature, one study develops a conceptual framework to suggest agile acceptance may be tied to team members’ motivations, abilities, and opportunities to build their own knowledge, and fails to address resistance specifically in the framework (Chan and Thong 2009). Focused on external stakeholder relationships, another study utilizes interviews from large organizations to illustrate that the agile team’s frequency and timing of communication with the traditional part of the organization is critical to mitigating agile resistance (Waardenburg and Vliet 2013), and fails to address the role of project managers. Given the prevalence of traditional organizations moving to agile methodologies, there is a need then to examine how project managers work around resistance to agile adoption. To define responses to resistance, we utilize the Theory of Workarounds (Alter 2014) and draw on the Compliance-Resistance-Workaround Model (Ferneley and Sobreperez 2006), to show how project managers adopt some level of agile methods by creating workarounds tailored to promote acceptance of agile by stakeholders within and outside the team.

According to the Theory of Workarounds, an employee is influenced by the organization’s intentions and her own personal goals, the structure of work systems, and the perceived need for a workaround (Alter 2014). The Compliance-Resistance-Workaround Model supports that resistance can be addressed by different types of workarounds that are a harmless, hindrance, or essential aspect of achieving the outcomes of a process (Ferneley and Sobreperez 2006). Specific to the unique aspects of agile adoption in traditional organizations, project managers must have the competencies to determine when and how acceptable workarounds are needed to address resistance. For example, when an introverted team member refuses to participate in daily scrum meetings, finding an alternative approach may be better than enforcing the agile process. A project manager will need certain competencies to know when and how to provide a workaround for the one team member while managing the rest of the team’s expectations. This study complements previous studies that examine agile adoption by using case study data to support a workaround model for project managers following agile development in a traditional company. The workaround model incorporates project manager competencies such as working with, persuading, and influencing as playing a pivotal role in addressing resistance.

Next, we provide the theoretical background of the study by incorporating perspectives of workarounds, resistance, and project manager competencies from the information systems literature. Then we share the rationale and case study research methods, and proposes a Process Framework for Workaround Responses to Agile Adoption Resistance, followed by a discussion of the results and implications.
Theoretical Framework

New technology implementation in an organization is often met with resistance and is a major challenge for managers to address (Lapointe and Rivard 2005; Polites and Karahanna 2012; Rivard and Lapointe 2012). Resistance is defined as behaviors intended to prevent the implementation or use of a system or to prevent system designers from achieving their objectives (Lapointe and Rivard 2005). The literature provides few theoretical explanations for how and why resistance occurs. For example, using the status quo perspective, Kim and Kankanahalli (2009) showed that resistance can be due to the bias or preference to stay with the current situation together with the switching cost associated with using the new system. Similarly, losses and threats associated with change have been suggested as causes of user resistance in a number of studies (Lapointe and Rivard 2005; Marakus and Hornik 1996). The equity implementation theory explains that net equity i.e. the difference between switching costs and switching benefits associated with the use of the new system is the main determinant of user resistance. Using the psychological contract research, Klaus and Blanton (2005) showed that resistance occurs because the new implementation upsets the psychological contract users have with the old system. Polites and Karahanna (2012) described that habitual use of the old system, perceived transition costs, and psychological commitment due to perceived sunk costs all encourage development of inertia which in turn prevents the users to accept new technology.

Similar to new technology implementation, resistance to agile development method implementation has also received some attention in the literature. Nerur et al. (2005) pointed out bureaucratic organizational culture, lack of teamwork, insufficient training, and inadequate skill sets as important factors leading to agile resistance in a traditional organization. Other challenges such as incompatibility between developers’ skills and agile tasks, perceived threat to career, lack of top management support, and micromanagement by leadership have also been found to be factors leading to agile resistance (Cockburn and Highsmith 2001; Cohn and Ford 2003). Resistance can be destructive and is considered as undesirable and detrimental to the success of new system or method implementation (Kossek et al. 1994). The key objective of management then, is to look for ways to overcome, bypass, or reduce resistance. While substantial research exists on factors leading to agile resistance, only one study to our knowledge has examined what can be done to overcome agile resistance. Chan and Thong (2009) used a knowledge management perspective to theoretically deduce a conceptual framework describing that acceptance of agile method in a traditional organization is facilitated by knowledge management outcomes (i.e., knowledge creation, knowledge retention, and knowledge transfer ) which in turn is facilitated by ability-related factors (i.e., software development method self-efficacy, experience, training and external support), motivation-related factors (i.e., career consequence, top management support, voluntariness, subjective norm, and organizational culture), and opportunity-related factors (i.e., teamwork, communication, shared understanding, and arduous relationship). Our study contributes to research on overcoming resistance to agile adoption by using a different theoretical lens – Theory of Workaround (Alter 2014).

A workaround is a goal-driven adaptation, improvisation, or other change to one or more aspects of an existing work system in order to overcome, bypass, or minimize the impact of resistance that are perceived as preventing the work system or its participants from achieving a desired level of efficiency, effectiveness, or other organizational or personal goals (Alter 2014). Workaround behaviors arise from the tension between the needs of the top management in an organization and bottom constraints from day-to-day operational work of the team (Azad and King 2011). Ferneley and Sobreperrez (2006) identify two workaround behaviors relevant to our study: harmless and essential. Harmless workarounds occur when users do not use the system in the prescribed manner, but their workarounds do not affect workflow or the accuracy of captured data (Ferneley and Sobreperrez). Examples include processing a job for others for reasons of friendship or returning a favor. Essential workarounds are those behaviors that are regarded as critical or vital by the workforce, even though they do not follow prescribed procedures. Examples include workarounds enacted to satisfy the intent if not the letter of the law or behaviors that are enacted when what is being practiced doesn’t fit at all with the new system (Azad and King 2011). Another example of essential workarounds can be seen in the agile method tailoring literature (Bass 2016; Bass et al. 2015; Campanelli and Parreiras 2015; Fitzgerald et al. 2003). For example, Bass (2016) showed that portions of agile artefacts were linked with plan-based method to deliver a governance process that could oversee an agile project in a large scale offshore project. This hybrid approach was necessary because it met the
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intent of the governance process while simultaneously allowing the project team to execute agile method. Similarly, in the context of new electronic health record implementation, Safadi and Faraj (2010) showed that new workarounds evolved to match the electronic health records to the medical work being performed by physicians. These workarounds were necessary to mitigate resistance and enable the technology’s adoption by physicians.

While majority of the literature has focused on understanding workaround behaviors, little research has tried to understand how employees identify the need to enact workarounds. Roder et al. (2014) showed that employees calculate the potential benefits and the situational risks involved in enacting a workaround and depending on the results of this calculation, employees either conduct workarounds (when benefits outweigh risks) or follow the defined process (when risks outweigh benefits). However, there may be situations in which the employee may find it beneficial to conduct workaround but cannot do so because the workaround involves the buy in of a resister. For example, the project manager finds it beneficial to hold daily standup meetings with the team, however, she cannot do so successfully because one of the team member shows resistance towards interacting with others in daily meetings. In such cases, the question still remains on how project managers create workarounds to mitigate or overcome resistance. Previous research has indicated that in addition to general project management skills, managers also need to possess the ability to be aware of relevant social situational contexts; to deal with the contexts or challenges effectively; to understand others’ concerns, feelings and emotional states; and to speak in a clear and convincing manner that involves knowing what to say, when to say it, and how to say it and to build and maintain positive relationships with others (Araujo and Pedron 2014; Keil et al. 2013; Rahim 2014; Skulmoski and Hartman 2010). These competencies, collectively known as social intelligence have been found to be associated with higher creative performance (Rahim 2014), lower job stress and higher job performance (Krishnakumar et al. 2016). Previous research has found that social and emotional intelligence is associated with leadership emergence over and above cognitive intelligence, personality traits, and gender. Social intelligence competences provide managers with the ability to recognize resistance and act upon it appropriately to overcome or mitigate resistance (Thorndike and Stein 1937). To address the aforementioned gaps in the literature, we next describe a case study to explore the relationships between resistance, work around behaviours and social intelligence competencies needed by a project manager to create workarounds to mitigate resistance to agile adoption in large traditional organizations.

Research Methodology

The research context to investigate the process of how project managers design workarounds to enable agile adoption lacks a strong systematic process framework in the literature. Thus, we take an exploratory case study approach given there is limited understanding of agile adoption workarounds. The case study method is a suitable approach (Eisenhardt 1989; Yin 1994) as it allows us to incorporate participants’ viewpoints and interpretations into a conceptual model, while providing detailed behavioral insights which otherwise may not be discovered (Whitley 1995).

We selected a Fortune 500 multinational service organization, ParentCo (a pseudonym), headquartered in the United States, because the systems development group had been following a traditional waterfall process for several decades and was attempting to move toward greater agile adoption. Since its inception over 40 years ago, ParentCo’s global operations comprise over 4,000 technology employees in more than 200 countries supporting over $10 billion in revenues. Our data collection began approximately one year after the initial adoption of agile when only about 8% of the projects were successfully following agile approaches. The need to adopt agile (Scrum approach) was a bottom-up decision made by project managers who were looking for an alternative method for increasing customer satisfaction and timely completion of software projects. Upon the request of these project managers, the division hired a national training and consulting firm to mentor and coach employees on how to implement scrum practices. The training provided project managers with basic knowledge about what Scrum is and how the method is executed, however the training did not provide them information on how they could execute Scrum in an organization driven by a waterfall culture. As a result, project managers acted as change agents who had to extract particular behaviors and communications from people preferring the waterfall approach, make sense of these communications and behaviors to give them meaning, and then act appropriately on the resulting interpretation.
Data Collection and Analysis

We collected qualitative data over a three-month period from January 2013 to March 2013. First, four background interviews with project managers expert in practicing scrum methodologies were conducted to help us develop an interview protocol. Using the protocol, we gathered data using semi-structured and structured face-to-face interviews with 12 project managers, 3 developers, 3 testers, and 1 analyst at ParentCo to understand how agile was being adopted and used. We chose these interviewees as they had reported success in adopting agile and releasing software with fewer defects than they had in any of their other projects. Project managers were internal team members serving as scrum masters and their main job was to guide the team when doing agile, ensure the team had the needed resources, remove any impediments from being able to successfully execute agile and provide leadership to the team. Each interview was taped and lasted about 45-75 minutes. Hand written notes were added to the transcribed tapes used during the interviews to generate a total of 278 pages of notes. The interviews focused on several dimensions of agile development including the characteristics of activities, factors that influence the decision to adopt a new approach, and the project management issues. We also examined software development process documentation to gain an in-depth understanding of ParentCo.’s existing development processes.

We started analyzing the data as data was being collected. Initially, we used open coding techniques (Strauss and Corbin 1990) to analyze the major themes emerging from the data. These themes were then used to guide subsequent interviews. This method allowed us to refine our protocol as interviews progressed and probe relevant questions that could provide deeper insights for our research. Open coding generated 142 interview text segments that produced 104 concepts reflecting concerns of resistance to agile adoption, agile adoption approaches, project management competencies, governance processes, and others. We next sorted and clustered the concepts to determine commonalities and differences to generate broader categories (Miles and Huberman 1994). Three main themes emerged by the time open coding was completed. The first theme reflected the resistance observed by the project managers from stakeholders within the team as well as those outside the team. The second theme reflected the competencies of project managers needed to address resistance with agile adoption. The third theme reflected the workaround behaviors that enabled some level of agile adoption to occur.

Once these themes were generated, subsequent interviews were focused to probe relevant questions for the project manager competencies and workaround behaviors. In particular, we asked interviewees to recall a critical incident related to resistance to agile adoption and asked them subsequent questions to probe the particular actions they took to create workarounds to overcome the resistance. Certain project manager competencies and workaround behaviors started emerging from the data. We used the Universal Competency Framework (Bartram, 2005) to code critical competencies (Koch et al. 2009) of project managers for two main reasons. First, it is evidence-based and has been found to be psychometrically meaningful in several studies (Bartram 2005; Kurz et al. 2004; Klendauer et al. 2012). Second, the Universal Competency Framework consists of eight competencies disaggregated into 20 components and 112 sub-components. The detailed breakdown of the framework provided us with the granularity needed to code our data. To code workarounds, we used Ferneley and Sobreperez (2006) composite-resistance-workaround taxonomy to classify the behaviors into either harmless or essential. We chose this taxonomy as it is the only classification tool that helped us make theoretical linkages from resistance to work around behaviors. Upon the identification of the coding tools, all interview data were coded by multiple raters. In cases of disagreement, an objective rater was consulted and all discrepancies discussed until mutual agreement was reached. Although the taxonomy included three types of workaround behaviors (harmless, essential and hindrance), we did not find sufficient evidence in data to support existence of hindrance behaviors. We therefore chose to eliminate that category from our analysis. Next, we discuss the results of our study.

Workarounds as a Response to Agile Resistance

We summarize in Figure 1 the facets of resistance to agile development and the process of how project managers ascertain the need for and their ability to enable workarounds. Figure 1 shows various concepts that emerged as prominent in our analysis and their relationships to influence workaround use. The proposed process framework offered herein is not exhaustive, but highlight the findings of our case study
work at ParentCo. Next, we describe the process of project managers’ workaround responses to resistance to agile adoption. Using empathy, group management skills, persuasiveness and negotiation, project managers were able to take actions to bypass and overcome the resistance to agile adoption experienced from stakeholders outside the development team and members within the team.

Experiencing stakeholder resistance from outside the team

**Misaligned governance structure.** As a global, multi-division, company with regulatory compliance requirements, ParentCo established a formal linear governance process that oversaw the traditional software development process. All employees were required to strictly comply with the governance process that locked in the budget, resources, and scope in the beginning of project until project completion. However, agile development practices encourage short-term planning in budgets, resources, and other activities that are open to refinements and adjustments in short iterations. These results are similar to those found in Vlietland and Vlient (2013) and Waardenburg and Vliet (2013). At ParentCo project managers explained how complying with this misaligned governance processes made agile development challenging to achieve:

“The biggest risk we have with that is again, dealing with linear interface of the governance people and you know the folks are doing agile and are saying governance is getting in our way, the governance people are saying, you guys are bunch of range cowboys.” Project Manager

**Lack of resource availability.** ParentCo has a hierarchal structure where employees worked in relatively siloed functional units. Due to a recent downsizing, most employees were assigned to multiple projects. In contrast, agile development requires teams to consist of members with cross-functional roles (i.e., customer, analyst, designer, developer, tester, etc.) who can fully dedicate their time and effort to a
single project. At ParentCo the lack of dedicated cross-functional resources was cited as one of the largest roadblocks to adopting agile:

“The other challenge we have that keeps us from being purely agile is the resources on the project are not 100% dedicated to this project. They have to divide their time, and oddly enough they divide their time with another project, which is waterfall.” Project Manager 11

**Lack of top management trust.** At ParentCo, top management often required high-level business requirements, budgets, and resources to be fully specified at the start of a project in order to use it like a contract. However, with agile methods, requirements are not known up front and change and are reprioritized continuously. Project managers struggled with their superiors to find the trust that enabled the flexibility to make changes (Nerur et al. 2005; Waardenburg and Vliet 2013). Yet, top management often felt agile was too open for changes, and there was a need for a locked definition of work to operate as a contract to hold project managers and their teams accountable:

“It’s just so unfortunate we can’t have that trust...And you feel there’s no reason for them [top management] to not trust us because we aren’t stupid.” Project Manager 1

**Experiencing stakeholder resistance from within the team**

**Commitment to a legacy mind set.** At ParentCo, all system development stakeholders were indoctrinated and trained into following the waterfall development process. The standardized process worked, it was reliable, and it was universally accepted. Using agile required team members to deviate from the norm, to let go of their traditional software development practices, and find a way to embrace new agile approaches, e.g., working in cross-functional teams, constantly reprioritizing task backlogs, regularly testing prototypes, and participating in regular stand-up meetings. However, some newcomers were sceptical of these practices and had no desire to move away from the status quo (Mangalraj et al. 2009).

“They’ve [team members] demonstrated success using that [waterfall] methodology in the past and they’re comfortable with what they know and they’re somewhat risk-averse, so there’s no desire to change the status quo.” Project Manager 3

**Discomfort with agile interactions.** At ParentCo, we heard how some software developers were introverts and preferred isolated, non-collaborative working environments. Yet agile methodologies require team members to actively collaborate with other team members on a day-to-day basis. Those preferring to work alone resisted the bull-pen working configuration and highly-interactive setting that was established for working with the rest of the team.

“You need normally the more mature people to deal with because you are in close proximity [with your team]. You need people who communicate well with others. I mean there are those brilliant development types who have to be given exactly what to do, then they do it by themselves and they come back ask for a candy. That won’t work in agile” Project Manager 5
Creating harmless workarounds

In spite of resistance from stakeholders within and outside the team, project managers did not stop using agile or switch to traditional development approaches. Instead, they used resistance as an input to inform their approach to moving forward. From our interviews at ParentoCo we observed project managers implementing workarounds, both harmless and essential. Harmless workaround behaviours are those that do not significantly affect workflow or data accuracy (Lankshear & Mason, 2001; Kobayashi et al., 2005). At ParentCo, project managers modified some agile practices to manage the resistance from the within and outside the teams.

**Agile reporting software elimination.** A number of supporting online tools are available for agile development process, such as Pivotal Tracker, Active Collab, JIRA, etc. At ParentCo, like other organizations, the company standard is to follow governance processes and use company-supported tools to enable productivity. However, with the advent of agile adoption, new tools may not be as useful as teams visualizing their progress.

“You have to understand why and that’s why I have a really strong dislike of teams using tools. Because the tools obfuscate what they’re trying to do. They can just go in and fill up some boxes and fill in some time and do this and do that but they don’t really understand why. It’s like you use Microsoft project, I can go in and fill out Microsoft project all day, but I still may not understand what I’m trying to, ya know, control. I’m going to be just as unsuccessful as I was if I didn’t have [Microsoft project] at all. You know you have to understand what the process is that you’re trying to do.” Project Manager 10

**Stand up meeting adjustments.** Daily stand up meetings are a core practice of many agile methodologies. The purpose of daily stand up meetings is to enhance team member communication and enable within team support for those dealing with difficult challenges. Stand up meetings give team members who are not necessarily involved one area of the project a chance to offer help. These meetings engage everyone in giving and receiving their collective wisdom. Daily stand ups also unify the team so folks have a chance to talk about what they are involved with, share ideas, and learn from each other. This exchange of information can result in impromptu collective problem solving. However, at ParentCo we observed resistance to the daily stand up meetings, especially from those used to waterfall approaches. One project manager implemented the workaround of moving to non-daily but bi-weekly stand ups to ensure the team communicated while addressing team member dislike of the everyday approach.

“Some of the team members, they don’t like it [daily stand up meetings]. Every day it is wasting their time, it is a waste of time or something like that. So, now we are doing [stand up meetings] twice weekly. We discuss it with our Project Manager, who liked that we came up with a solution. Instead of having it every day we can have it twice a week.” Software developer 1
Creating essential workarounds

Essential workaround behaviours are those that are necessary to complete the task at hand (Lankshear and Mason, 2001; Kobayashi et al. 2005). At ParentCo, it was crucial for project managers to find a way to satisfy the needs of the waterfall governance team yet continue practicing agile iterations. This was done by creatively using a hybrid form of governance which we describe below.

Hybrid governance process. Waterfall governance rules dictated that at the beginning of each stage of the development process, specific documentation should be provided with signatures from important project stakeholders. The same rules dictated that well documented budget and project plans should be submitted by the end of that process stage, detailed business and systems requirements should be provided by the end of that stage, thorough design and architecture models of the software should be turned in by the end of that stage. Agile processes do not allow for pre-determined sets of detailed documentation prior to work beginning meaning adherence to waterfall governance rules is not possible. At ParentCo, some project managers found workarounds to meet the intent of the linear waterfall governance rules without having all documents signed-off. This happens when at the end of an iteration all documentation from requirements, design, to testing are created and signed then submitted together in the appropriate staged order (Lindvall et al. 2004).

“He [project manager] updates the [requirements] documents. But during the iteration we’re finalizing those requirements. At the end of the iteration we receive sign off because [waterfall governance] says that it’s a finish-to-finish progression. So we can sign off on requirements then sign off on unit test cases and all the walkthroughs we have to do, design walkthroughs and everything. Then we sign off on the launch, the go or the no go. But we finish the requirements at the end of the iteration along with all the walkthroughs and stuff. We build requirements as a living thing because they change during the iteration. They come up on things that are not possible that we didn’t foresee when we started building these things. So they’ll change, and finally when it’s all done, the requirements are finalized and signed off on and submitted along with all the other documents.” Project Manager 11

Using project manager competencies

In order to create the workarounds, project managers needed to be adept at identifying resistance and its source, determine what actions were needed to address it. At ParentCo we observed that certain project managers had special competencies that enabled them to find workarounds that would work. At ParentCo, we found that project managers had the ability to identify and use emotional information about others and used this information create workarounds by intervening and working with stakeholders within and outside the team to resolve personal issues. These abilities, (also known as social intelligence) include empathy, group management i.e. building team spirit and supporting team members, persuasiveness, and negotiation (Boyatzis and Ratti, 2009).

Empathy. Empathy enables people to understand others’ emotions and their point of view. At ParentCo, we found project managers were able to identify when software developers with a legacy mindset felt uncomfortable with moving toward agile approaches. For example, one project manager identified that it was the case of a team member’s personality as an introvert that was causing his resistance to close interactions with others on the team. To obtain this introverted team member’s cooperation, the empathetic project manager created a workaround allowing the person to work alone.

“It try to fit that process with the kind of resources who are going to be really good at that kind of work anyway and get the most out of your best people and allow them to work in a way that probably they’re more suited to work....Look at your work force and try to help them understand, like, well you’re here for this purpose, so we’re going to put you over here to suit your goal and your personality better.” Project Manager 4

“It kind of depends on the personal project manager you know, “Are you coming from a project manager background or you come from a developer background? And do you really understand what they [team members] are going through or do you kind of have to go to them to help you understand what they are going through?” Project Manager 4
Group management. Building team spirit and supporting the needs of team members was important to project managers leading agile teams at ParentCo, since it not only affected team performance, but also enhanced team creativity. As a couple of project managers at ParentCo put it:

“...and then just to keep that cadence up over and over and over again until we found our sweet spot I guess is what took us... I don’t really know how to explain it, but the team just kind of fell together. And I tell you, a lot of times it comes down to building great teams” Project Manager 5

“...you need to make sure that people are given different features and they are not doing the same thing over a period of time...you need to plan in such a way that you are changing resources from time to time and getting fresh air and at the same time keeping the knowledge base within the project team and making sure everyone understands the end result or end goal of this project, as well as the timelines and making sure their activities are aligned to meet the end result is important.” Project Manger 8

Persuasiveness. Persuasiveness helps people to convince others and obtain their buy-in. At ParentCo, we found that project managers had the ability to reason and discuss legitimate options with the linear governance stakeholders in order to obtain their support for agile.

“I guess I pushed it a lot. Management bought into it. And once they bought into it, they were skeptical but they still supported me in it. And then once they saw the amount of work that could be done.” Project Manager 6

Negotiating. Negotiation helps people to arrive at a common ground or produce a solution to a conflict by engaging in a dialogue that creates shared understanding between two parties. At ParentCo, we found project managers constantly negotiated with the stakeholders outside the team to help them see the value in adopting agile.

“And I did it over and over and over and over again until they listened... then we started doing it. They paid for training, we started doing it, and then it was more of an okay, we’re going to try this because we do see there might be some value in it. So we tried it and then the more we got better at it.” Project Manager 2

Process for Workaround Responses to Agile Adoption Resistance

Relationships between resistance experienced and workarounds created

At ParentCo, resistance to agile adoption from stakeholders outside the team mainly stemmed from the mismatch between the project managers’ needs to follow agile practices and administrational needs to govern a waterfall project. To satisfy these opposing needs, project managers were forced to use alternative strategies to work around the resistance. These results are in line with those of Huuskonen and Vakkari (2013) and Azaad and King (2011) who also found that workarounds were created due to a mismatch between root level and administrational needs. The results of our study further show that workarounds can also be implemented due to a mismatch between the past working habits of the stakeholders within the team and the actual practices involved in completing the current work. When such a mismatch occurs, Azaad and King (2011) found that workarounds are enacted to overcome the obstacle.

Relationship between project manager competencies, resistance and workarounds

Given the successful ability of project managers to sense value in resistance and respond accordingly, we explored how these managers enabled agile adoption. We find that managers who exhibited social intelligence i.e. empathy, persuasiveness, group management skills, and negotiation skills, were able to work around resistance from stakeholders outside and within the team in ways that led to greater agile adoption. For example, at ParentCo, project managers with the desire to follow the standard practice of having daily morning stand-up meetings saw through the stakeholder’s resistive comments of not wanting to be a part of the stand-up meetings due to the introvert personality and discomfort with social interactions. This understanding helped project managers to work around the situation by changing the frequency of stand-up meeting from every day to once every two or three days. In general, social intelligence competencies provided managers with the ability to perceive when resistance stemmed from misaligned governance structure, lack of resources, lack of trust, high switching costs to agile, and
uncomfortable close agile interactions. This understanding in turn provided an opportunity to project managers to understand when to adopt essential or harmless workarounds to resistance.

**Contributions, Implications, Limitations and Future Research**

Our study adopted the theory of workarounds to examine how project managers in traditional organizations manage resistance when adopting agile practices. The results of our study indicate that project managers use their social intelligence competencies to find harmless or essential workarounds as a compromise to resistance in certain situations.

We believe that our work makes several contributions to the field of research and practice on resistance to agile adoption and project manager competencies, yet the contributions of the study need to be viewed in the light of its limitations. First, our findings are based on a single case study, limiting the generalizability of our results. The work around behaviours and manager competencies used to identify and respond to resistance are not exhaustive, but are based on those that emerged at ParentCo. Second, our data did not provide us with enough evidence to report on the existence of hindrance workarounds. Future research needs to refine and validate our framework in other organizational settings to increase the generalizability of our research and examine whether and how hindrance workaround behaviours affect successful adoption of agile methods. Future research could also theoretically examine the specific competencies and prevalent organizational and social conditions that need to exist before and during the enactment of harmless and essential workaround behaviours. Project managers may need to use different competencies at different stages of the project (Skulmoski and Hartman 2010), making it vital to delineate which social intelligence skills are used during different phases of agile adoption in traditional organizations.

Notwithstanding its limitations, the current study generates significant contribution to both theory and practice. For theory, the results of our research not only provide empirical validation to portion of the compliance-resistance-workaround model proposed by Ferneley and Sobrepererez (2006), but they also extend the model by relating the enactment of essential workaround behaviours in the presence of negative resistance. This paper is the first to elaborate on specific competencies for managers wanting to run agile method in organizations seeped in a waterfall environment, thus contributing to theory in a critical area of agile project management. Our results show that it will take a special person with social intelligence skills to make sense of resistance to agile and formulate harmless and essential work arounds to resistance to successfully enable some level agile adoption.

For practice, our results help project managers understand when to follow agile practices and when to allow, use, or tolerate workarounds. In particular, our results help senior management and team members become cognizant about the challenges project managers face when trying to adopt agile in an environment where waterfall software development is the norm. Given that social intelligence emerged as a requisite skill in creating workarounds, senior management could train existing and newly hired project managers in the development of this skill. Furthermore, all members of agile teams should be aware of these findings and the need to develop their own social intelligence skills to help their project managers identify when and where resistance is taking place, when and where workarounds are needed, and what skills are needed to implement workarounds to mitigate resistance to agile adoption.

**Conclusion**

Our research was motivated by the primary research question: “How do project managers in traditional organizations manage resistance when adopting agile practices?” Our results show that project managers face resistance from stakeholders both within and outside the team when trying to implement agile in a large traditional organization. These challenges indicate that agile development adoption entails a significant investment of time and effort on a project manager’s behalf, and they should not assume that resistance is fostering unreasonable obstacle or barriers intended to inhibit adoption. Instead, our results indicate the project managers use social intelligence to use harmless and essential types of workarounds to mitigate these challenges to enable some level of agile development adoption. To do this, project managers will need to empathize, persuade, and negotiate with resisters outside and within the team to support their resistance as well as well as manage their team in ways that build a team spirit in spite of the resistance.
References


