Planning for Failure: An Exploratory Study of a Proactive IS Project Recovery Team

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ABSTRACT

Despite extensive research on project management over the past several decades, numerous cases of IS project failure continue to surface, undermining organizational performance in almost every industry. The ongoing nature of this issue obliges the IS discipline to consider alternative approaches to avoiding failure before it's too late. In this paper, a *proactive* approach to project recovery is presented – one that involves a full-time recovery team responsible for turning around IS projects in distress. Using the findings gleaned from an in-depth case study inquiry, this paper analyzes the composition and structure of a dedicated project recovery team in a global organization. The investigation revealed (1) a process model of IS project recovery that comprises seven stages of evolution, (2) requisite attributes and skills of project recovery specialists, and (3) the differences between project recovery and project management. The implications arising from this novel study for both research and practice are discussed.

Keywords

Project recovery; proactive; reactive; project success; project failure; qualitative research; case study

INTRODUCTION

On October 1st, 2013, President Obama's administration launched HealthCare.gov, a health insurance website designed for U.S. citizens to compare prices on health insurance policies, enroll in a selected plan, and determine their eligibility for healthcare subsidies. On the eve of the website's go-live, Denis McDonough, the White House chief of staff, declared that the ensuing rollout was going to be an astounding success, "When we turn it on tomorrow morning … we're gonna knock your socks off" (Time Magazine, 2014: p.30). However, within hours of the launch, it was apparent that significant technical problems were resulting in astonishingly poor website performance. Just six people were able to enroll for health insurance on the website's first day, and only 248 by the end of the second (House Oversight and Government Reform Committee, 2013). As a result, the success of this legislative achievement was in jeopardy.

The recovery effort that followed was equally dramatic. The root cause of the performance issues was quickly identified[1]. However, by October 17th the website recovery had made little progress: "they (the recovery team) were, in fact, not making improvements, except by chance" (Time Magazine, 2014: p.28). On October 20th, 2013, President Obama hosted a press conference to advise that a "tech surge" was underway to resolve the website's problems. An ad hoc technology team was recruited: "Some of the very best engineers and troubleshooters in the world willingly put their lives on hold to dedicate their time to this very difficult problem" (The Whitehouse, 2015: p.1). And the work to improve the website's performance continued at a strenuous pace: "staff and contractors … slept in nearby hotels and worked 24-hour shifts" (U.S. Department of Health and Human Services Office of Inspector General, 2016: p.39).

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[1] The website was unable to handle a high volume of simultaneous users due to software and system design issues (U.S. Department of Health and Human Services Office of the Inspector General, 2016)

Due to this exceptional effort, the website was finally deemed 90% operational by the beginning of December 2013 (U.S. Department of Health and Human Services Office of Inspector General, 2016). Notwithstanding the effectiveness of the secondary recovery effort, the final cost for using an ad hoc team to recover and fix the project was estimated at $121 million (Washington Times, April 29th, 2014).

Despite extensive previous analysis into IS project design and recovery, severe examples of IS project failure such as HealthCare.gov abound in almost every industry (Keil, 1995; Brown and Jones, 1998; Nelson, 2006; Shenhar and Dvir, 2007). While this finding is troubling in of itself, of perhaps greater concern is the realization that this infers the ongoing existence of unidentified scenarios that increase the prospect of a failing project. One such scenario not considered previously derives from the implicit belief that the most effective reaction to a failing IS project is an expeditious response. In previous project recovery literature, failing projects are typically recovered from a reactive position – i.e., a project is identified as failing, a project recovery team is formed, and a recovery process is followed. However, an alternative consensus has begun to emerge that moves away from this reactive viewpoint, instead supporting a *proactive* approach to IS project recovery. In using the term "proactive", this article refers to an institutionalized system comprising a full-time project recovery team responsible for the strategic provision of, and the tactical response to, project failure and recovery. Such a system is designed to minimize the threat of project failure before it occurs, while ensuring a highly effective response in the event of a recovery becoming necessary. The team's purpose is thus to be responsible and accountable for tactically identifying and recovering all applicable[2] failing IS projects, all the while strategically managing IS project design to minimize the threat of subsequent IS project failure.

Given the need for an alternative approach to IS project recovery management, this explorative study will examine the tactical and strategic components of this proactive recovery team. In so doing, this innovative study will seek to answer the following research questions:

- What is a proactive project recovery team, and how does it evolve?
- What are the skills and attributes required of an IS project recovery specialist, and how do these differ to those of a typical IS project manager?

To examine these questions, this study will analyze the composition and structure of a dedicated technology system in a global organization using the findings arising from an intensive case study investigation. This paper will subsequently reveal a proactive institutionalized team that has evolved in an environment previously subjected to widespread and damaging project failure. This paper's aim is therefore to explore a novel approach to project recovery that seeks to project failure by proactively preparing for project recovery. The purpose of this article is thus to provide the IS discipline and IS practitioners with an alternative perspective on project recovery and design that ameliorates existing approaches to IS project delivery.

BACKGROUND

Despite the overwhelmingly negative outcomes arising from IS project failure, the extant project recovery literature has failed to consider alternative outlooks that potentially improve existing IS project design, delivery, and recovery techniques. The de facto standard for IS project recovery has remained a reactive response. This being the case, organizations have therefore necessarily prioritized identifying the best quality resources capable of swiftly managing and implementing the recovery as quickly as possible. However, two potentially negative consequences arise as a result:

- The over-riding priority for a project remediation becomes speed of recovery to reduce the overall time needed to mitigate the cause of failure and implement a recovery. And therefore, the costs to achieve a sufficiently speedy response are less important than attaining the speed itself.
- That responding tactically to project failure using any means possible is more important to the organization than mitigating the frequency with which such project failures occur as a result of strategic learning.

Because ongoing types of tactical response use a best efforts approach for identifying resources capable of resolving a failing project, so the consequences of this decision become sub-optimal when viewed strategically. This is because

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[2] IS projects chosen for recovery by a dedicated team typically occur in three scenarios: 1) The project cost is outside of a pre-defined financial threshold, 2) The project schedule is outside of a pre-defined threshold, and/or 3) The project is considered to be of sufficient importance that its failure would have a detrimental financial or reputational impact on the organization.

these short-term assets typically disband quickly upon project completion, meaning that the opportunity to identify and leverage lessons learned via a project retrospective becomes less likely (Kasi et al., 2008). As a result, not only does the temporary nature of the recovery team make it difficult for a given response to be replicated throughout the organization, but it also makes the ability to influence future project design more challenging. But given that IS project failures continue to be mitigated reactively albeit inefficiently, then how and why does a proactive attitude provide a more effective response versus current reactive approaches? To answer this question, the next section will explore the concept of "proactivity", and consider the different components that define the IS project recovery response from reactive and proactive perspectives.

What is proactivity, and how does it differ from a reactive response?

To understand why a proactive recovery approach provides a more effective rejoinder to a failing IS project than a reactive response, it is first necessary to investigate what is meant by "proactivity". Proactivity is considered a "self-directed and future-focused action in an organization, in which the individual [or team] aims to bring about change, including change to a situation" (Bindl and Parker, 2010, p.568). Central to this definition are the elements of anticipation, action and change, in that each description is predicated on an anticipatory action to create changes in how jobs, roles, and/or tasks are executed (Frese and Fay, 2001; Grant and Ashford, 2008; Parker et al., 2006). Correspondingly, rather than passively reacting to a given scenario, employees plan, calculate and act in advance of future events[3]. With interdependence and uncertainty continuing to flourish across organizations, it has thus become increasingly important to develop relational and proactive perspectives on work design (Griffin et al., 2007). However, notwithstanding the potential benefits arising from adopting a proactive approach to IS project recovery, the question remains: how to ensure such an approach works in practice? To answer this question, an investigative analysis is required that produces relevant recommendations for action that are grounded in a robust evidence base (Panda, 2014). Accordingly, evidence presented from the background review is combined with data gathered as a result of semi-structured qualitative interviews with members of an IS recovery team within a global technology organization.

METHOD

Data Collection

Adopting a qualitative investigation approach provides opportunity to apply different qualitative research designs (Robson, 2002). Gill et al. (2008) suggest that interviews are the most appropriate qualitative research approach where little is known about the study phenomenon or where detailed insights are required from individual participants. Given that this explorative research is in a new research area, so the data collection technique chosen is the semi-structured interview. Moreover, because this research is not testing an established theory but instead exploring a new research area, rather than stipulate a precise sample size in advance, the authors employed purposive sampling recommended for this type of explorative research (Keil and Robey, 1999).

For this in-depth organizational study, the authors interacted with IS project recovery stakeholders in a global technology organization over a period of 18 months. This pioneering corporation employs 120,000 personnel in more than 170 countries where it focuses on the development and implementation of software used in technology solutions for desktop computers, servers and the World Wide Web among others. The authors gained access to the project recovery team using a snowball approach, whereby the initial interviewee was introduced to the authors via a colleague. Thereafter, the first interviewee engaged fellow team members to be interviewed, leading to 8[4] in-depth interviews being undertaken in total. Informed by the background review and the research questions, the interviews were structured around initial open-ended questions that examined the different components that define the proactive project recovery response.

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[3] Seminal papers that investigate the construct of reactivity and/or proactivity include Emerson (1962), Blau (1964), Salancik and Pfeffer (1978), Powell and DiMaggio (1991), and Grant and Ashford (2008)

[4] The 8 interviewees are all experienced project managers (i.e., > 12 years project management experience) who, at time of writing, remain employed by the organization. Two interviewees are female, with all eight employees being located within different client sites in different countries globally.

Data Analysis

The objective of qualitative data analysis is to identify, examine, compare and interpret patterns or themes (Hair et al., 2007). This research study therefore used an inductive content analysis approach that enables particular instances to be observed and combined to make a larger, general statement (Chinn and Kramer, 1999). The first author subsequently coded the interview data to simplify and focus on meaningful characteristics. Once the coding were transferred to coding sheets, the findings were categorized and grouped by relationship (Burnard, 1991; Dey, 1993) creating three broad themes: project recovery evolution, team attributes and skills, and the differences between project recovery and project management. These themes and their respective findings are discussed in the next section.

FINDINGS

This study investigates the factors that define the project recovery team, how this proactive response to IS project failure differentiates to a reactive response, and the conditions under which an organization may consider implementing a new proactive IS project recovery system. To tie the outcomes of this investigation into the study aims, the discovered themes are organized around the research questions (Kasi et al., 2008).

The Evolution of the Proactive Project Recovery System

This section begins by investigating how the team has matured from its initial conception into its current form. In adopting this approach, the system's evolution is able to be employed as a framework around which the IS project recovery system evaluation is organized. Using this structure, the authors investigate how the proactive team utilizes processes and techniques for undertaking a recovery, and explore the system's governance responsibilities that include project monitoring and proactive IS project design.

Phase 1: The antecedent project conditions leading to negative reputational and financial impact

The proactive IS project recovery system was envisioned in 2006 in the organization being studied due to high numbers of IS project failures and legal requirements that were resulting in negative financial and reputational outcomes:

> *I think there were some very specific projects that had gone red, and were to the point where the customer was bashing the (company) name in the industry. What we were trying to address ... was an alarming pattern of projects that weren't being managed effectively.*

Prior to 2006, IS project recoveries were typically undertaken reactively, whereby an ad hoc team was formed when required. However, this approach was considered unstructured and inefficient due to the organization not following a defined recovery process and resources being allocated on a best efforts basis:

> *It was ad hoc, and (done by) whoever was around that was a bit more senior and it was abysmal in how we did it. There was no process, no methodology, just go in and sort it out.*

As a result, IS management determined the need for a dedicated IS project recovery team. However, for this team to be actualized, they also recognized the need for executive support to sponsor the team's creation.

Phase 2: Demonstrating the need for a proactive IS project recovery team to executive management

Once mid-level management had acknowledged the severity of the IS project failure problem, they brought the issue back to the attention of the corporate vice president responsible for worldwide consulting. She had originally agreed the need to address the high levels of IS project failure, with her concerns focusing on the financial impact over the reputational, and the need for project management excellence as well as effective project recovery:

> *Our corporate vice president for consulting worldwide basically expressed her unhappiness, she said, "Look, how we can we be doing such a bad job managing our projects?" We're losing through project issues and not being able to recover projects.*

As a result of executive support, the team was finally established in October 2008. The initial team structure was based on a similar team seen at another organization:

> *It was really based on the thinking around the (recovery) teams from another organization…. but then we put our own organizational slant around methodology, process and everything else.*

And subsequent to its formation in 2008, the team's remit has changed little:

> *I'm in a specialized role that deals with the project recovery of complex deals for the organization. These project recoveries can happen anywhere in the world and could mean pretty well six to eight months that you could be at a different place in the world where you're basically sitting there and trying to recover projects.*

However, as the team has matured, so the process for engaging the recovery team has become tougher:

> *I guess the only thing that's really changed is we've been a little bit tougher on what we take on. If a mandate or a charter comes through to engage us, we'll generally look at it and say, "Hey, are we really required?"*

The recovery process used by the organization follows the recommendations in "The Rapid Assessment and Recovery of Troubled Projects", a white paper created by the project management performance education consultancy ESI International[5].

Phase 3: Meeting the need for a proactive IS project recovery team

Once the structure of the failing project recovery team had been defined, the initial members of the team were identified and failing projects assigned. The process for identifying team members was principally premised on the nature of previous experience. Further to specific business experience, potential team members were also expected to have advanced communication and negotiation styles that enabled interaction with executive level management both within and external to the organization:

> *It was a new group and they were searching around for people that had experience in the business, not only just pure project management, because the job description for this role was much broader.*

Other desirable experience included exposure to particular technologies common to the organization. This subsequently provided the foundation for team members to be mapped to specific technological strengths to ensure that the appropriate project recovery skill sets were available globally:

> *If you haven't had the experience working and recovering an ERP project and don't understand the methodology, then it's a bit harder for you as a project recovery services guy to recover that type of project.*

The final requirement for team membership that tied into previous experience was to have endured a certain amount of pain to better appreciate the impact of a failing project:

> *I've been through a couple of very painful experiences I certainly wouldn't want to repeat, and it took two years out of my life. You can't be a good project recovery specialist (PRS) manager without knowing that a certain level of pain is endurable.*

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[5] ESI International was formed in 1981, subsequently merging with "IPS Learning" to become "Strategy Execution" in October 2015 (PR Newswire, 2015). Strategy Execution is a member of the "Twenty Eighty" group of companies, a workforce development company that seeks to help companies improve business results in leadership, sales and credit performance, and strategic execution (PR Newswire, 2015).

Phase 4: Managing the need for project recovery and monitoring business health

As a result of team members being in place and having the requisite skills and training to recover failing projects, all "open" failing projects were assigned and managed. As a result, the team was subsequently able to provide a more proactive approach to strategic project recovery by also undertaking the function of business health monitoring:

> *We would have a monthly health check, which is where you would initially raise a concern. We have status reports they bring to it and we look at the 7 errors of quality. Customers, partner, financials, business, budget and risks, those sorts of things.*

Except when undertaking a project recovery, this proactive business health check has over time become established as a main requirement for the team. However, in the event of health monitoring clashing with the need for project recovery, project recovery has always taken precedence:

> *Some of these project recovery guys are actually doing governance as well. That's part of our remit when we're not engaged in a recovery, we do governance and project health checks.*

More recently, an element of triage has also been incorporated into the team that enables a pre-project recovery assessment to be undertaken prior to the decision being made whether to request the project recovery team's involvement:

> *There's a whole team of people that review projects on a monthly basis, and so they're the ones that see the first red flag, and go, "Wait a minute, this isn't right."*

Phase 5: Transitioning the need to enable the project recovery team to be involved in project design

The team has since evolved whereby IS project design has been incorporated into the team's requirements with the intention of the project recovery specialists using their experience and skills to address project design issues that might facilitate a subsequent project failure. Interestingly, this review process includes areas outside of the technological and project design arenas such as sales expectation setting and legal requirements:

> *What we've focused on for years is avoiding the troubled projects. Partly at a time of deal to make sure the statements of work are good, customer expectations get set where they need to be set as part of the sales cycle, all that kind of stuff, as well as in delivery.*

Further to undertaking project recoveries, monitoring business health, and being involved in project design, team members also undertake other activities including root cause analysis, governance, compliance, training project managers in project recovery, coaching in advanced project management skills, and financial tracking:

> *We have a quarterly get together as a team worldwide so we all fly in. We meet and we go over where we're going with things.*

Phase 6: Part-timing the need and disbanding the project recovery team

As a result of all historical failing projects being recovered, and with the project recovery experts being involved in project design to reduce the potential for a project to start failing, the number of failing projects subsequently dropped dramatically. The decision was thus made in late 2016 to move the team from full-time to part-time as part of a complex project management group function. Consequently, the full-time project recovery team began to be disbanded as of 2017:

> *What we are now saying is that in our new operating model with global domains and a whole different structure, we need somewhere to put the project recovery function. I know we'll put it in the complex project managers group. Those complex project managers, when they are managing a complex project, if there's a disaster somewhere else we'll pick them up and move them and back-fill them.*

Phase 7: Institutionalizing the need for project recovery across the organization

As of early 2017, the complex project management team began considering whether to allow all project managers across the organization, i.e., not just project recovery specialists but to also allow individuals authorized to lead a project delivery, to recover a failing IS project. The caveat was given that individuals are not allowed to recover their own projects, but would be allowed to recover those belonging to their peers:

> *That's kind of our plan for the future. Is that we will train project managers to do recoveries, but definitely not encourage them to try and recover their own projects, but to do peer recoveries.*

The skills and attributes necessary to be a project recovery specialist

As highlighted previously, team membership requires team members to manage the differing components of the project recovery team using specific attributes typically not seen in a project manager's skillset. In this regard, two similar and important attributes identified are the ability to improvise and be creative:

> *Improvisation and creativity are the other things that you look for. Where there is a problem, project managers can't necessarily work their way around it and decide what to do differently.*

Further key attributes identified include skills in politics and diplomacy:

> *You have to have a lot of self confidence in front of the customer, and you have to know enough not to give away your position in terms of listening, because you're listening to your customer.*

Project recovery specialists are also identified as needing excellent negotiation and communication skills both at the client and executive levels:

> *It was negotiations and communications, networking, leveraging the larger organization. You really had to understand who to pull in worldwide to get things to happen and have that ability to face any sort of issues and be put into a room with CEOs and adversity to some degree and be able to stand your ground.*

The interviewees were also asked to identify specifically those skills and attributes that differentiate the project recovery specialist from the typical experienced project manager. The initial skill sets identified by, and inherent to, the project recovery team but missing from a typical project manager's "attribute arsenal", include negotiation proficiency, advanced relationship management skills, business knowledge, arbitration, and knowledge of the project recovery methodology:

> *The other skills of negotiation and relationship are what differentiate your function from the standard senior project manager. A lot of project managers don't quite get the business side and how to negotiate, to leverage, and to influence activities to get the outcomes for the project recovery services.*

How a proactive project recovery team benefits the organization

The interviewees were asked to provide explicit examples of how a proactive IS project recovery team benefitted their organization. One interviewee attested to the long-term client relationship building that occurred through resolving an issue above and beyond client expectations. By ensuring that a given recovery was seen to be prioritized, efficient, and client focused, so further business followed for the organization:

> *We need to keep the customer to partner experiences high. For example, I recovered one project in a big bank in China. When I engaged the project, we had almost announced that we had failed. I subsequently recovered the project and put the system online. After that, we have got about three million dollars of service revenue every year for seven years.*

DISCUSSION

Underpinning this study is the proposition that a failing IS project can be more effectively recovered from a proactive position versus a reactive response. The alternative perspective presented in this paper countenances a more holistic view that enables best practices to be replicated strategically throughout the organization while also allowing a tactical response as required. By embracing a longer-term perspective of project recovery, the specialist skills distributed throughout the organization subsequently provide a foundation for project excellence, insofar as skills and attributes required for project recovery exist at a level higher than seen in a typical project manager. Moreover, such an approach facilitates institutional learning due to a broader body of permanent resources remaining to disseminate IS project recovery knowledge across the organization.

Insofar as negative brand reputation and financial loss remain key executive concerns (Herbig and Milewicz, 1995), the growth of a culture that reduces the potential for these types of negative consequences is desirable. However, this requires organizations to be cognizant of the differing factors that both cause and counter such damaging outcomes. These elements are best captured by considering the team's evolution within the organization. In this regard, the authors contend that it is insufficient for an organization to create a dedicated project recovery team without considering fully the dynamics that influence its existence, because understanding the events that lead to the team's creation reduces the threat of previous mistakes being replicated. Accordingly, from the data collected via the interviews, the team's evolutionary process model is visualized as shown in Figure 1.
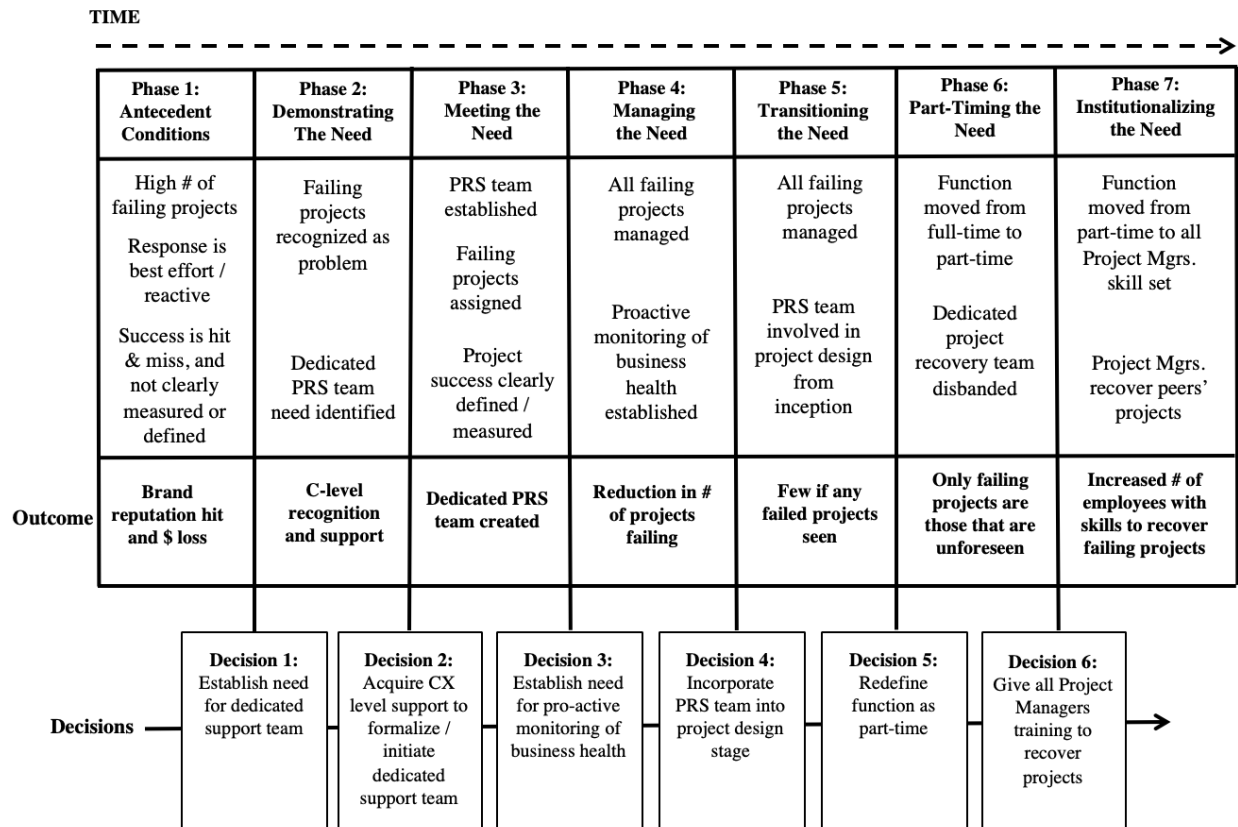

Figure 1: A grounded evolutionary proactive IS project recovery process model

As presented, this model displays the decisions that need to be made to traverse through each of the different phases for institutionalizing a proactive project recovery team. By understanding the pre-requisites of each stage, so organizations creating such a team can determine the phase of project failure and recovery that they are experiencing.

There are multiple skills and attributes necessary to be a project recovery specialist. To create an effective project recovery team, an organization must therefore identify and utilize specialist resources that have this wide-ranging skillset. It is insufficient for an experienced project manager to be an automatic selection for such a team, as they typically do not have all of the required attributes. The skills identified by project recovery specialists were contrasted against the most critical skills for managing IT projects (Keil et al., 2013). As shown in Table 1, only negotiation and relationship management are identified as key skills required of both parties:

Critical Skills for IT Project Management (Keil et al., 2013) (ranked in order of criticality)	Critical Skills for IS Project Recovery Specialists (unranked but when matched, in bold)
1. Leadership	Improvisation
2. Verbal Communication	Communication with clients, colleagues, and C-level Executives
3. Scope Management	Creativity
4. Listening	Sales
5. Project Planning	Persuasion
6. Written Communication	Politics
7. Good people skills	Diplomacy
8. Ability to motivate team members	Business Knowledge
9. Negotiation	**Negotiation**
10. Organization skills	Experience of Project Recovery
11. Time Management	Arbitration
12. Relationship Building	**Relationship Management**
13. Resource Utilization	Knowledge of Project Recovery Methodology
14. Conflict Management	Decision-making with incomplete information / uncertainty
15. Risk Management	
16. Attention to Detail	
17. Cost Management	
18. Multi-tasking	
19. Analytical Skills	

Table 1: Differences between ranked critical project management skills (Keil et al., 2013) and non-ranked project recovery specialist skills

Insofar as the required skill levels differ to those seen in a typical project management role, organizations must therefore remain cognizant of the team's specialized requirements should they either wish to create a new recovery team, or if they wish to disseminate these functional elements across existing groups.

CONCLUSION

In conclusion, because this is the first instance of a proactive project recovery team being researched within the IS project domain, the authors believe that this in-depth approach provides an effective investigation of this explorative subject. However, in this context the paper does have limitations that need to be acknowledged. Firstly, the question of generalizability from a single setting may arise insofar as members of one team within a single organization were interviewed for this study. However, any such argument is addressed by acknowledging Lee and Baskerville's (2003) finding that, "a typical and legitimate endeavor in interpretive research is the study of a single setting." (p. 231). Secondly, there is a lack of research studies on proactive IS project recovery. As a result, this paper has been forced to use an exploratory rather than explanatory research design. And thirdly, the sample size may appear too small on which to base an investigation of this type. However, a qualitative inquiry sample may only appear small when compared to a representative sample size used for generalizing from a sample to the population of which it is part. Given that the sample for this research constitutes 60% of the population, this concern is thus alleviated.

Notwithstanding these limitations, this paper provides the IS community with a foundation on which to evaluate the team's efficacy in diverse settings including different industries, organizations, organizational sizes, and cultures. This article is but the first empirical discourse of (hopefully) many in the area of proactive IS project recovery. For future research, the challenge becomes to investigate further the link between proactive behavior and favorable IS project

outcomes, including how to improve extant project recovery processes, the impact of agile versus waterfall projects on proactive project recovery, and how best to train future project recovery teams.

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