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"AGAINST ALL ODDS – AN EXAMINATION OF IT PROJECT MANAGEMENT FAILURE IN THE 21ST CENTURY"

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“AGAINST ALL ODDS” – AN EXAMINATION OF IT PROJECT MANAGEMENT

FAILURE IN THE 21ST CENTURY

A Master Thesis

Submitted to the Faculty

of

American Public University

by

Brian Thomas Collins

In Partial Fulfillment of the

Requirements for the Degree

of

Master of Science

September 2015

American Public University

Charles Town, WV
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DEDICATION

I dedicate this thesis to my wife and six children. Without their everlasting love and infinite patience, support, and understanding the completion of this work would have been unattainable.
ACKNOWLEDGMENTS

I wish to thank Dr. Denise Eggersman for her unending patience, encouragement, and support during the entire capstone process. I would also like to thank Dr. Eggersman and the following professors for their outstanding support and guidance during the courses leading up to this capstone event: Dr. James Marion, Dr. Karen Paulet, Dr. Diane Stottlemyer, and Dr. Jimmie Flores. Their professionalism, expertise, and vast knowledge base provided the necessary background information to prepare me for this project and the completion of my Master of Science degree in Information Technology with a concentration in IT Project Management at American Military University.
ABSTRACT OF THE THESIS

“AGAINST ALL ODDS” – AN EXAMINATION OF IT PROJECT MANAGEMENT FAILURE IN THE 21ST CENTURY

by

Brian Thomas Collins

American Public University System, September 10, 2015

Charles Town, West Virginia

Dr. Denise Eggersman, Thesis Professor

The age of technology and the advent of the systems that support it have expanded the capabilities of numerous organizations throughout the world, however, IT projects continue to fail at an alarming rate. The purpose of this study is to determine why IT projects are failing focusing on three key variables that include project leadership, team dynamics, and the processes and procedures that support the project. This study will analyze all three variables to determine which variable has the most significant impact on IT project failure. Understanding the impact leadership, team dynamics, and the processes and procedures that support the project have on a project’s final outcome is critical to the success of future IT related projects. This study will also incorporate theories, concepts, and case studies from a combination of scholarly, peer reviewed articles and other online sources to ultimately draw a viable conclusion as to why IT projects continue to fail even with the monumental advancements in technology over the last ten years.

Keywords: project management, leadership, team dynamics, processes and procedures
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Introduction

For years, the Information Technology (IT) industry has witnessed numerous IT related project failures. Some were not completed on time while others went over the established budget or expanded beyond the original scope of work. Regardless of which element or elements of the triple constraint went astray, the end result was either a significantly challenged or failed project followed by a disappointed sponsor or customer. After all, the IT industry supports the systems that enable all other industries to execute their mission in today’s technologically advanced age of vast information and knowledge transfer. Therefore, the expectation is that the IT industry should have project management down to a science with little or no deviation from success when it comes to anything IT related. However, this is not the case. The IT industry clearly has a problem with consistently completing IT projects on time, on budget, and within the approved scope of work. The question is – why?

A 2012 study conducted by The Standish Group International, Inc. (2013) indicates that only 39% of IT projects were considered successful (delivered on time, on budget, meeting required features and functionality), 43% were considered challenged (late, over budget, and/or less than required features and functionality), and 18% completely failed (cancelled prior to completion or delivery and never used) (See Figure 1). By academic standards, this is a travesty that would clearly send students operating at this level of efficiency to remedial training and trigger and in-depth investigation by school administrators, instructors, and parents alike as to what was causing such a dismal display of success. With such a talented pool of IT professionals around the world today there has to be a reason why IT projects are consistently challenged or failing at such an alarming rate.
Although there can be a myriad of reasons why IT projects fail, the preliminary research indicates that leadership, team dynamics, and the processes and procedures that support the project play a major role in IT project failure. Therefore, this thesis will focus on these three areas of interest to determine their role in project success and failure. Understanding the impact leadership, team dynamics, and the processes and procedures that support the project have on a project’s final outcome is critical to the success of future IT related projects. Today’s project managers need to know what the current research says in regards to these three areas of interest. It is also important for the IT industry as whole to know if leadership is the root cause of the poor success rates or perhaps team dynamics and industry accepted processes and procedures play a greater role in project failure. This should be a concern for the industry considering IT project managers have gained a marked advantage over their predecessors within the last twenty years with vast improvements in project management education, significant contributions to the project management body of knowledge, and monumental advancements in technology.
Statement of the Problem

As the information age continues to evolve – Why do so many IT projects fail while only a select few succeed? The age of technology and the advent of the systems that support it have expanded the capabilities of numerous organizations throughout the world, however, IT projects continue to fail at an alarming rate. This study seeks to determine why these projects are failing and what critical factors are involved in the few projects that do succeed.

Statement of the Purpose

The purpose of this paper is to determine why IT projects are failing focusing on three key variables that include project leadership, team dynamics, and the processes and procedures that support today’s IT projects. This paper will analyze theories, concepts, and case studies from a combination of scholarly, peer reviewed articles and online research to ultimately draw a viable conclusion as to which element has the greatest impact on IT project failure while discussing the way ahead for future IT projects.

Research Questions

This study seeks to explore poor IT project success rates in the midst of the continuously evolving and expanding information age by providing answers to the following five research questions: Why are IT projects are failing at such an alarming rate? What role does poor leadership play in IT project failure? What role does dysfunctional team dynamics play in IT project failure? What role does the implementation of poor IT project management processes and procedures play in project failure? Which of these three variables contributes the most to IT project failure?

The answer to these research questions will equip today’s IT project managers with the knowledge to avoid the pitfalls that are plaguing the IT project management community today. Based on the findings of these research questions further questions will inevitably arise that may
be useful for further study and provide recommendations that could lead to improved performance in future projects. Researchers can also use these findings to develop and expand future research designs that include input from a wide array of IT project management professionals through in-depth interviews and comprehensive surveys.

**Significance of the Study**

The significance of this research cannot be underestimated. Current and future IT project managers will gain a greater understanding of why IT projects are underachieving in an environment filled with the most technologically advanced software and systems the world has ever seen. Although there is viable research on the topic of why IT projects have such a low success rate, there is a significant gap in the research that lies in fusing these three areas together in one comprehensive research project to assess which component has the greatest impact on project success or failure. There also seems to be a gap in research that targets each of these variables of IT project management as the root cause of project failure. Leadership, team dynamics, and processes and procedures are examined by recent, relevant research, but the body of knowledge is lacking a consolidated assessment of the impact poor leadership, dysfunctional team dynamics, and weak processes and procedures can have on today’s IT projects.

**Definitions of Unclear Terms**

Information Technology – The use of any computers, storage, networking and other physical devices, infrastructure and processes to create, process, store, secure and exchange all forms of electronic data (Rouse, 2015, para. 1).

Project Management – The application of knowledge, skills, tools, and techniques to develop activities in order to meet project requirements (Project Management Institute, Inc., 2013, p. 5).
AN EXAMINATION OF IT PROJECT MANAGEMENT FAILURE

Triple Constraint – The triple constraint of project management describes the interdependency between the three cornerstones of a project: Scope (Quality), Schedule (Time), Budget (Cost, Resources).

Scope: the work required to create a clearly specified product.

Schedule: the time required to create that product.

Budget: the total amount of money and resources required to create that product (Stoemmer, 2011, para. 1).

Information Age – The idea that access to and the control of information is the defining characteristic of this current era in human civilization (Rouse, 2015, para. 1).

Team Dynamics – The unconscious, psychological forces that influence the direction of a team’s behavior and performance (Team Technology, 2015, para. 1).

Limitations of the Study

The data collected will be analyzed and assembled to demonstrate the impact leadership, team dynamics, and the processes and procedures that support IT projects have on a project’s final outcome. The accumulated data will then be further synthesized to determine why IT projects are still failing at an alarming rate even with 21st century technologies at their disposal. Based on the research, this paper will assess which element of IT project management has the greatest impact on project failure. This will be assessed by analyzing patterns within the existing research and the statistical information derived from available secondary sources of information. Although there is an abundance of available sources to conduct this research, it is limited by the lack of primary sources such as interviews and surveys conducted with IT professionals. A limitation generated by time constraints and the lack of access to IT project management professionals.
Assumptions

Based on the preliminary research the assumption is that poor leadership will have the greatest impact on IT project failure. Poor and untimely decisions will ultimately lead to project failure. The assumption is that team dynamics will also play a great role in IT project failure, but can be offset and turned around by good leadership. The assumption is also that inefficient processes and procedures will play a critical role in project failure, but effective team leadership and a cohesive unit can offset the limitations of poor organizational policies. It can also be assumed that the reader will gain a greater understanding of why IT projects fail and the researcher will be able to discuss recommendations that will reduce failures in future IT projects.

Theoretical Framework

This paper seeks to construct a theoretical framework based on both qualitative and quantitative data extracted from a collection of peer reviewed and scholarly sources to answer the primary research question: As the information age continues to evolve – Why do so many IT projects fail or face significant challenges while only a select few truly succeed? Data will be collected from current scholarly and peer-reviewed articles on the topics of IT project management leadership, team dynamics, and the processes and procedures that support those projects. This paper will also explore online sources and case studies that focus not only on IT project management, but also best practices and key points of failure from other industries as they pertain to leadership, team dynamics, and the processes and procedures that support projects from various industries.

Expectations

The results of this research will provide a comprehensive examination of why IT projects are extremely challenged or failing at an alarming rate by focusing on the impact leadership,
team dynamics, and the processes and procedures that support those projects have on the final outcome. The research will indicate what is occurring at the leadership and team levels to force projects past deadlines, to go over the established budget, and/or expand beyond the original scope of work. This paper will also shed light on whether the current processes and procedures are the root cause of IT project failure. Ultimately, this study will expose the negative aspects of project failure that continue to set the conditions for poor performance and mediocre results while providing positive recommendations that will contribute to increased IT project management success rates for years to come.

**Literature Review**

There is a problem in the IT project management community and that problem is success. A fact that cannot be denied when only 39 per cent of IT projects are considered successful and completed on time, on budget, and within the approved scope of work (Standish Group International Inc., 2013). Further evidence comes in the form of financial statistics that confirm that the Information Technology (IT) industry is struggling to meet consistent success when it comes to project management. Wright and Capps (2011) indicate that US$150 billion is wasted annually in the United States on information and technology failures in both the public and private sectors with the European Union falling close behind at US$140 billion. Although these numbers are staggering they are not surprising.

The IT industry has been plagued for years with poor performance and low success rates. In fact, Wright and Capps (2011) indicate that a study conducted at the beginning of this millennium of over 8,000 Information System (IS) projects exposed the sad truth that only 16 per cent of those projects were completed on time and within budget. An additional survey conducted by the Standish Group indicated projects experiencing significant problems resulting in budget overruns, falling behind schedule, or delivering an incomplete product were about 46
per cent while 28 per cent completely failed or were cancelled at the time of the study (Wright & Capps, 2011). The bottom line is IT projects have a history of low success rates and poor performance over time.

Based on these findings it is clear that IT projects are not just a recent problem. Poor performance has been trending for decades with little improvement even with the latest software tools and information systems available today. Wright and Capps (2011) placed great emphasis on IS project failures over the last two decades with detailed examples of large scale IS project failures such as the U.S. Internal Revenue Service’s long list of unsatisfactory outcomes that cost the taxpayers US$50 billion a year as far back as the mid-1990’s. Clearly, the IT industry in both the public and private sectors is in serious trouble and looking for a way to achieve greater success when it comes to project completion.

Traditional explanations of project failure point to the team’s inability to avoid the pitfalls of the triple constraint or the “iron triangle” (time, budget, scope) to complete the project on time, on budget, and within the approved scope of work. However, there must be a deeper or more refined explanation of why IT professionals are performing so poorly on their own projects within a profession that is so important to every other professional industry in the world. Perhaps the answer lies within the leaders who make the decisions that ultimately put the project on a glide path to glorious success or epic failure. According to Wright and Capps (2011), psychological and sociological causes play a key role in IS project failure. The premise behind their hypothesis is that psychological and sociological factors play a significant role in how project manager’s deal with the current state of the project. A psychological attachment to the project may cause the project manager to believe that the project will eventually turn around and become successful or rely on his or her previous experience to reinforce their belief that the
project will succeed (Wright & Capps, 2011). Their study also indicated that project leadership struggled with project monitoring and had a tendency to exclude preventative measures and early warning trigger points during the early stages of the planning process that would help avoid budget and scheduling issues as the project progressed to completion (Wright & Capps, 2011).

Wright and Capps (2011) also hypothesized that social factors played a role in IS project failure when project managers were compelled to overcommit on projects to compete with industry rivals and competitors. Driven by the desire to succeed and complete the project on time, many project managers may overcommit their assets and resources to reach their goals. The approach-avoidance theory indicates that project managers have a natural tendency to overcommit when it comes to IS projects due to the phenomenon known as the “completion effect” which essentially involves increased motivation to conclude the project as the completion date draws closer (Wright & Capps, 2011, p.90). They also contend that runaway projects can and will get out of control due to social factors and perceived notions of professional failure. Their research unveils an interesting and very rarely discussed point that peer pressure may play a greater role in project failure than previously thought. Is it possible that today’s project managers would rather continue down a path to total failure than admitting they made some mistakes along the way and terminating the project before it becomes a complete failure? Wright and Capps (2011) contend that only 20 per cent of projects are killed before they escalate out of control leading the reader to concur with the researchers that sociological factors can and will sway a project manager’s decision making processes when it comes to terminating struggling projects before additional resources are wasted.

Another interesting outcome of the Wright and Capps (2011) research project is that 68% of the professional IT auditors surveyed selected the formal attributes of the project team (size,
structure, skillsets) as the most likely cause of problematic projects while 75% selected the formal attributes of the project team as the most likely cause of runaway projects. So here we have a research project that directly links the psychological and sociological aspects of project management leadership and team dynamics to problematic and runaway projects. This research project alone sets the conditions to conduct further research on the effects project leadership and team dynamics have on project failure.

While the existing research indicates that sociological and psychological aspects of project leadership and team dynamics may have a direct link to project failure, there are also indications that the current project management processes and procedures are contributing to project failure. Project managers understand that the processes and procedures that support the desired end state of the project are critical to the success of any project. However, the available research indicates that many project managers are failing to adhere to the processes and procedures that will ultimately lead to their success, which may indicate why consistent IT project management success has been so elusive. Historically, IS projects have a pattern of not being completed on time, on budget, or within the approved scope of work. Nicholas and Hidding (2010), two Loyola University professors, indicate that their research uncovered dismal performance statistics in the IS field of work with development projects demonstrating a pattern of running over median cost 33.5 per cent of the time, scheduling overruns occurring at a rate of 22 per cent, software projects culminating late 32.9 percent of the time, and a mere 16.5 per cent of software projects reaching their original budgetary goals.

These types of statistics peeked the curiosity of the Chicago based professors who wondered why IT project success has been so elusive over the years which ultimately led to a research project focusing on how management principles affect the outcome of a project
AN EXAMINATION OF IT PROJECT MANAGEMENT FAILURE

(Nicholas & Hidding, 2010). Based on interviews with IT project managers they wanted to know which project management principles contributed to the success or failure of a project. Their research indicated the principles of managing the project's scope, schedules, and resources, as well as, initiating the project charter, managing risk, and maintaining project sponsorship are critical to project success (Nicholas & Hidding, 2010). Therefore, it is reasonable to include that straying from established and proven processes and procedures will result in project failure.

Caffrey and Medina (2011) contend that one of the top five mistakes project managers can make as they seek to continuously improve their projects is to assume that the metrics and measurements that were initially put in place meet the current needs of the project. Project managers that fail to validate the approved systems and processes run the risk of miscalculating the project data and set the conditions for inaccurate reporting. They also indicate that poor communication, reluctance to adopt change management policies and procedures even when the project leadership acknowledges change is necessary, and poor resourcing decisions play a key role in halting project progression and ultimately contribute to project failure (Caffrey & Medina, 2011). Keil, Smith, Iacovou, and Thompson (2014) indicate that avoiding the pitfalls of poor status reporting can greatly improve the probability of a successful project outcome and significantly reduce reporting inaccuracies that will inevitably lead to project failure and embarrassing revelations in front of the project sponsors and the customer. Clearly, the existing research indicates that the processes and procedures that support IT related projects play a role in project success or failure.

Project Management Leadership

Strong leadership is a key ingredient in just about every aspect of professional life. It doesn’t matter if the industry is IT services, energy, financial services, or consumer products and
services strong leadership emerges as a key contributor to long term success. On the other side of the spectrum, failure can be equally attributed to poor leadership. Poor leadership sets the conditions for projects to fall behind schedule, go over budget, and operate beyond the approved scope of work. In fact, Khan, Long, and Iqbal (2015) support the assessment that 80 per cent of projects fail due to inferior leadership that lack effective project leadership skills. An examination of the existing literature will shed light on the role leadership performance plays in IT project failure and why the study of leadership is critical to the body of knowledge and the IT project management community.

Nixon, Harrington, and Parker (2012) conducted a study in Australia with a focus on the critical success factor of leadership performance within the field of project management. They open up their article with a comprehensive introduction that establishes the debate on leadership’s role in project management success or failure. Just like most industries the measurement of success can be quite ambiguous with very little capability to actually measure leadership’s role in that success. As they openly admit, The Project Management Body of Knowledge (PMBOK) refers to project success, but does not establish a measurable definition of what project management success looks like and simply defers project success criteria and objectives to the individual project charter (Nixon et al., 2012). This is an interesting point and sets the IT project management industry up for a broad and subjective definition of what successful leadership looks like.

Nixon et al. (2012) acknowledge the traditional measurements of success within the parameters of the triple constraint (time, budget, and quality) and presents the notion that the “iron” triangle does not successfully measure the quality of the project management process, leadership performance, and how satisfied the stakeholders are with the project’s final outcome.
Although it is quite clear that leadership performance plays a critical role in project success or failure there seems to be a debate within the industry on how to measure leadership performance throughout the lifecycle of the project. Nixon et al. (2012), suggest that leadership attributes such as managing resources and motivating, empowering, and developing others can be significantly correlated to project success. Although they provide an interesting perspective on the role leadership attributes play in project outcomes, the research lacks concrete examples of how to actually evaluate the impact these attributes have on project success or failure and ultimately leave it up to future research to determine.

Nixon et al. (2012) contend that it is important to understand that there is a difference between project management and project leadership when it comes examining leadership performance within a project. This is an important point when considering that most project oriented professionals assume that project managers have a certain degree of leadership skills to successfully navigate their team through the complexities of today’s projects and get the job done. In this context, Nixon et al. (2012) describe project management as the process of effectively planning and organizing project activities while project leadership is more focused on guiding, motivating, and establishing new ways of thinking and problem solving which ultimately inspires a more cohesive team environment. The authors present an interesting point that ultimately leads the reader to the conclusion that leadership traits can be nurtured and developed in today’s project professionals and that successful project management requires effective and inspiring leadership to fully accomplish the mission. However, the study does not offer the reader universal examples of how organizations can improve leadership skills throughout all levels of leadership.
Leadership behaviors and characteristics play a critical role in developing the project manager’s leadership style. Leadership styles that adversely affect a project’s progression and final outcome are of great concern to the project sponsor and ultimately to the customer that is paying the bills. Obviously, failure is still commonplace in IT project management and many other industries half way through this century’s second decade. However, there is a lesson to learn from arguably the worst leadership example of the previous decade – The Great Recession of 2007 thru 2009. This monumental event exposed the leadership qualities and characteristics of the key players involved with the millennium’s first financial crisis (Falk & Blaylock, 2012).

What’s interesting about these qualities and characteristics is that they all began with the letter H (hubris, hypocrisy, hostility, honor, humility, and honesty) and ultimately formed the behavioral construct known as the “H factor” due to the fact that the financial leaders of the Great Recession manifested the presence or absence of these six key leadership attributes throughout the crisis (Falk & Blaylock, 2012). The researchers contend that history will unveil that the failures of these leaders will not be attributed to their lack of education, skill, experience, or excessive time at the office, but ultimately to the “H factor” characteristics and the technical failings that corresponded with the financial meltdown. (Falk & Blaylock, 2012).

The “H factor” study leads to an understanding that the financial leaders of this crisis did not even realize their leadership style was toxic and contributing to the meltdown itself. Falk and Blaylock (2012) contend that overcoming the “H factor” begins with awareness and recognizing behavioral deficiencies at all levels of leadership beginning with an assessment of the organization’s senior leaders and progressing downward through the remainder of the organizational pyramid. The “H factor” study supports the contention of Nixon et al. (2012) that
leadership style and personal traits are critical success factors in determining whether a project will succeed or fail.

Based on the existing research, there is no doubt that the “H factor” can play a role in project failure and most likely play a role in the 80 per cent of project failures due to leadership (Khan, Long, & Iqbal, 2015). However, what about the other 20 per cent? The research conducted by Sosik and Cameron (2010) indicates that authentic transformational leadership behaviors may be the antithesis of the “H factor” and ultimately set the conditions for project success, not failure. Transformational leadership includes four essential behaviors that include idealized influence (charismatic leadership style to convey performance standards), inspirational motivation (establishes vision and leads by example), intellectual stimulation (engages in meaningful dialogue and accepts the input of others), and individualized consideration (focuses on selfless service, coaching, mentoring, and recognizing the diverse nature of the group) (Sosik & Cameron, 2010). Transformational leadership is therefore inclusionary whereas the toxic leadership of the “H factor” model is purely exclusionary. Authentic transformational leaders utilize their charisma and influence to create a positive, moral culture with high ethical standards (Sosik & Cameron, 2010). They are not driven by selfish motives and personal gain. This form of leadership transcends throughout the entire project and sets the conditions for success.

Unfortunately, not all transformational leadership examples are authentic. Sosik and Cameron (2010) describe pseudotransformational leadership as a form of leadership that presents a positive image in the public eye, but clearly presents a different leadership style behind closed doors. This type of fake and inauthentic leadership leads to mistrust and dissension within the project rank and file. Janice Spangenburg (2012) compares the interaction with a pseudotransformational leader to whitewater rafting in a hurricane with gale force winds and
heavy rain. Her point is that dealing with a pseudotransformational leader causes a loss of purpose and meaning which leads to a disorganized, upset, and demoralized team and ultimately to failed project outcomes (Spangenburg, 2012). This form of leadership also leads to despair and a sense of entrapment with no means to escape other than walking off the job and searching for new employment opportunities. This is an important leadership perspective when considering that it is highly unlikely that the traits of pseudotransformational leadership will appear on an IT project managers resume.

Clearly, pseudotransformational leadership creates a moral and ethical dilemma for those operating within this leadership environment. According to Effelsberg, Solga, and Gurt (2014), transformational leaders demonstrate the highest ethical standards and a positive working environment while pseudotransformational leaders tend to be selfish and manipulative. They suggest that tools commonly used to measure transformational leadership such as the Multifactor Leadership Questionnaire (MLQ) and the Transformational Leadership Inventory (TLI) are useful to capture a leader’s patterns of behavior, but offer no way of understanding a leader’s ethical standards or moral compass (Effelsberg et al., 2014). According to Effelsberg et al. (2014), there is a gap in the study of morality and its impact on transformational leadership. Their research led them to the conclusion that transformational leadership was a significant contributor to pro-organizational behaviors, but not necessarily to ethical decisions and behaviors that expose unethical practices within the organization (Effelsberg et al., 2014).

This sets the conditions for an interesting paradox between transformational and pseudotransformational leadership when it comes to ethical and moral decisions that can lead to project success or failure. According to Effelsberg et al. (2014), there is no way to determine if a transformational leader’s behaviors are motivated by ethical standards or purely influenced by
what is best for the organization. Therefore, it is reasonable to conclude that while transformational leadership can set the conditions for a positive working environment fostered by the behaviors of charismatic, selfless service and inspirational leadership it can also be misleading if the true moral intentions of the leader are not revealed. It is also reasonable to conclude that unchecked pseudotransformational leadership will ultimately lead to a toxic working environment and greatly contribute to the failure of the project.

Interestingly, the research of Effelsberg et al. (2014) leads to the question - can a lack of morality play a role in project failure? According to Hannah and Avolio (2010) it does, and contend that the concept of moral potency built around the essential elements of moral courage (converting moral ideals into action when faced with adversity), moral efficacy (possessing the confidence to act when faced with adversity), and moral ownership (a sense of responsibility to act when faced with adversity) play a key role in leadership success. They contend that a leader’s moral compass can direct their decision making process and ultimately lead to sound, moral, and ethical decisions (Hannah & Avolio, 2010). It is therefore reasonable to conclude that many IT professionals lack the three essential components of moral potency to make key decisions at critical points throughout the lifecycle of a project. According to Hannah and Avolio (2010) leader’s that possess higher levels of moral courage, efficacy, and ownership will intervene when they realize projects are not going well or when something has to be done to change the course of the project. Therefore, indicating that the lack of moral fortitude and inaction will ultimately lead to project failure.

Strong leadership has often been associated with a calm, cool, and collected persona void of emotion and the acknowledgement of feelings within the workspace environment. However, this notion of the stoic leader is quickly fading as today’s leaders look for new ways to achieve
success or more importantly avoid failure in the often complex dynamics of the modern day working environment. Today’s leaders are tapping into a fairly new psychological concept known as Emotional Intelligence (EI). Ramesh (2013) describes EI as the ability of the individual to understand and manage not only their own emotions but the emotions of the people around them. Through the mastery of EI, a leader can attain personal growth by recognizing, acknowledging, managing, and handling their emotions which will ultimately improve their leadership capabilities and lead to a greater understanding of the emotions exhibited by their subordinates (Ramesh, 2013). So what does the literature say about EI’s influence on project management and the relationship between EI and transformational leadership?

Clarke (2010) indicates that it is surprising EI has become such a phenomenon in recent years considering successful and high-performing project managers were working on improving their listening and coaching skills, as well as, encouraging openness and emotional expression in the workplace over three decades ago. His study of 67 project managers in the United Kingdom indicated that their EI scores provided a significant correlation to the project management competences of teamwork and managing conflict while the project managers’ empathy scores provided a substantial association with the competence of attentiveness (Clarke, 2010). Project managers that scored higher on their EI assessment are considered High Achievers and more likely to fill the emotional needs of their subordinates and look out for their well-being while the Low Achievers, who scored low on their EI assessment, were more concerned with the themselves and had little care for their subordinates or the organization (Clarke, 2010). Therefore, it is reasonable to conclude that High EI Achievers would naturally lead projects teams to successful outcomes while Low EI achievers would contribute to project failure and multiple friction points throughout the lifecycle of the project.
Perhaps the causes of IT project failures go beyond identifying internal and external emotions and turn towards perceptions of what caused the project to fail. According to Kim (2011) the attribution theory involves the individual’s perceived causes of events and behaviors and the consequences of those perceptions. The attribution theory focuses on how individuals assign causes to their perceived failures whether they be internal or external and create biases to explain their perceptions (Kim, 2011). According to Kim (2011), a fundamental attribution bias is the tendency to displace blame on the perceived cause of the failure without an understanding of the situational causes that may be leading to the project’s struggles such as attributing the team’s inability to meet project milestones to their shortfalls rather than the external forces of the supplier’s delivery system. Therefore, it is reasonable to conclude that today’s IT project leaders are looking in the wrong direction when projects are struggling and therefore cannot achieve effective change management at critical decision points as the project progresses to completion.

According to Khan, Khan, Abbasi, Khan, Farooq, and Ahmad (2014), the transactional and laissez-faire leadership styles pose a threat to project success. Khan et al. (2014) contend that transactional leadership involves motivating subordinates by offering rewards when goals are achieved and punishments when goals are not met. Unfortunately, transactional leaders usually wait until the project is running behind schedule, over budget, or operating beyond the approved scope of work before they act (Khan et al., 2014). The laissez-faire leader allows subordinates to make their own decisions, does very little evaluation of the team’s work performance, delays responses to pressing questions and critical decision points, and ultimately forces subordinates to seek final decisions from other authority figures within the project chain of responsibility (Khan et al., 2014). However, laissez-faire leaders typically develop a good relationship with their subordinates and strive to create a positive working
environment (Khan et al., 2014). Based on the observations of Khan et al. (2014) it is reasonable to conclude that both leadership styles could set the conditions for IT project failure and place the team members in unfortunate and uncomfortable situations.

The existing literature clearly demonstrates that today’s IT project failures may lie much deeper than the external indicators of time, budget, and scope. The evidence suggests that psychological and sociological aspects such as the “H factor”, transformational, pseudotransformational, transactional, and laissez-faire leadership styles, emotional intelligence, and the attribution theory may be playing a greater role in why IT projects are failing at the leadership level. This sets the conditions for a transition from leadership to team dynamics in the discussion of why IT projects are failing at an alarming rate even with 21st century technologies and the latest project management lessons learned and best practices at the project manager’s disposal.

**Project Management Team Dynamics**

Team building is critical to the success of project management teams in today’s fast paced and often complex working environments. Project teams are increasingly made up of personnel with diverse educational backgrounds and various degrees of work experience. Working together to achieve a common goal sets the conditions for project success. However, what happens when team dynamics are not setting the conditions for success and creating a negative working environment? Could dysfunctional team dynamics play key role in project failure? According to Fruchter, Bosch-Sijtsema, and Ruohomäki (2010), viable team dynamics is an important aspect of project success, but that does not necessarily mean that the team has to be in the same location to achieve that success. Their study of how teams operate in high tech global environments across vast geographical barriers demonstrates the potential to break free from
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traditional collaboration methods and achieve a high rate of success (Fruchter et al., 2010). The main take away from their research is that it doesn’t matter if the team is collaborating in person or over IT driven systems, the team still needs to work together and create a positive working environment to achieve success (Fruchter et al., 2010).

According to Sohmen (2013) there is a symbiosis between leadership and team dynamics. Poor leaders cannot pull a highly functional and well-motivated team to success, just as a strong, motivated leader cannot lead a dysfunctional team to a successful outcome (Sohmen, 2013). Healthy team dynamics is people driven and includes effective team building, effective conflict management, effective and positive change management, empowering team members, appropriately delegating authority, and creative problem solving (Sohmen, 2013). Understanding the team culture and the strengths and weaknesses of each member sets the conditions to carry out the organization’s strategic vision and greatly contributes to long term success (Sohmen, 2013). Based on the observations of Sohmen (2013), it is reasonable to conclude that positive team dynamics will lead to successful project outcomes while poor team dynamics will ultimately diminish the team’s effectiveness and set the conditions for project failure.

Reaching goals, attaining milestones, and the meeting the desired end state of the project is important to achieve project success. However, Weijermars (2012) contends that the goal-oriented approach is not the key to long term project success and tends to overlook and create a genuine lack of concern for effective collaboration amongst team members. According to Weijermars (2012), a people-oriented approach is the key to achieve successful project outcomes and notes that team members will work towards project goals as long as people issues and concerns are addressed. Teams that lack a genuine understanding of each other cannot effectively contribute to the collaborative efforts of the team and run the risk of not achieving their goals as
they reach the final stages of the project (Weijermars, 2012). This is a key point when considering the fact that many IT projects are driven by a myriad of goals, milestones, and high customer expectations. Project managers may be overlooking personal relations as an indicator of why so many IT projects are still failing at unacceptable rates throughout the world.

According to Weijermars (2012), fully functional teams must not only depend on their professional expertise to support team goals, but must also align their attitudes and personal behaviors towards the team’s collaborative efforts. Weijermars (2012) indicates that non-alignment leads to inefficiency and a waste of organizational resources, time, and energy. It also leads to a buildup of negative emotions amongst the individual team members such as dependency, apathy, irritation, frustration, anger, mistrust, and the development of a polite facade that will ultimately lead to confrontation when these emotions begin to emerge within the wider team dynamic (Weijermars, 2012). This is an interesting point that closely resembles an all-star sports team dynamic where phenomenally talented athletes are placed on the same team in the hopes of winning a gold medal, but struggle to achieve success due to the fact that they can’t overcome their personality differences and attitudes. Interestingly, Herb Brooks, the late head coach of the 1980 gold medal winning US hockey team, understood this point very well and chose his players based more on personality traits such as willingness to work as a team, unselfishness, reliability, and trust than pure skill (Bass, 2012). However, the fruits of his choices were not realized until the team began to share his vision of teamwork and what success truly looked like. The result was the shocking defeat of the world’s best hockey team at the time, the USSR, and an eventual gold medal (Arnold, 2013).

According to Weijermars (2012), in his study of oil and gas related projects, the net present value (NPV) which is used to determine the profitability of a project, was affected by
poor team dynamics and could be quantified in terms of the probability that the project would succeed (Probability of Success - (POS)). The cumulative POS is divided into three essential components that include culture, skills, and goals (Weijermars, 2012). According to Weijermars (2012), the POS will increase as the team aligns its skill sets and establishes a people-oriented culture that works together towards common goals. He argues that starting a project off with a people-oriented approach rather than a goal-oriented is the key to increasing the project’s POS as it progresses to completion, the loss in NPV is mitigated, and the overall outcome of the project is optimized, therefore, reaching its greatest potential. Based on the observations of Weijermars (2012), it is reasonable to conclude that project teams have a greater risk of failure when they choose a goal-oriented approach over a people-oriented approach and fail to align individual attitudes and personal behaviors with the collective goals of the project.

Aronson, Dominick, and Wang (2014), in their study of 48 new product development (NPD) project teams, sought to study how different and similar personality traits amongst team members influenced the team’s overall effectiveness. They hypothesized that the personality traits of extraversion (more concerned with what is going on with others – talkative, personable, outgoing, assertive) and neuroticism (a negative emotional state supported by feelings of guilt, envy, anger, and anxiety) should be positively correlated to the team processing behaviors within NPD focused project teams (Aronson et al., 2014). They rely on the Similarity-Attraction Effect to support their research, which is grounded in the idea that people will consciously and unconsciously draw closer to those that have similar attitudes and values (Aronson et al., 2014). This is an important component of their research as it emphasizes the need for project managers to understand the personality differences of their team members. It also indicates that not
understanding the differences in team members could result in mismatching team members to tasks and ultimately setting the project up for failure.

Aronson et al. (2014) concluded their research with the assessment that when team members exhibit similar personality traits they tend to trust each other more, communicate better, increase support for one another, advise each other when issues arise, and solve problems more readily. Although the emotional traits of extraversion and neuroticism were chosen for this research design, their model supports the notion that other emotional traits could easily fit into this model. This confirms their findings that suggest team members with similar emotional traits will work more effectively together. Based on the observations of Aronson et al. (2012), it is reasonable to conclude that a greater understanding of each team members emotional and personality traits can improve morale, reduce friction between team members, improve working relationships, and reduce the probability that the project will fail.

Shepherd, Patzelt, Williams, and Warnecke (2014) provided an interesting study on the impact project failure has on project teams when terminated rapidly or terminated slowly over time. This brings up an interesting point on learning from failure. Could it be that IT project failures are still occurring because project managers are not learning from their previous failures and making the appropriate adjustments as they transition to their next project? Shepard et al. (2014) contend that the timing of project termination has an effect on the project team and their emotional well-being as they move on to the next project. According to Shepard et al. (2014), delayed project terminations or “creeping death” as it is sometimes called, tend to be looked on negatively by industry standards. However, it does offer the project team members an opportunity to learn from their mistakes by capturing lessons learned, reflecting on personal mistakes, and analyzing organizational, technical, and industry issues (Shepard et al., 2014).
According to Shepard et al. (2014), the creeping death also allows team members to take the negative emotions of the current failure to process and learn from what went wrong and actually channel that energy to facilitate learning rather than smother it with the negative connotations of their current situation.

Pulling out of a project within the early stages of the lifecycle is never a good sign for the project team. According to Shepard et al. (2014), rapid redeployment does not allow the project team to reflect on what they did wrong, capture and codify lessons learned, or articulate the failed experience amongst the group. This negative effect is compounded by the fact that rapidly redeployed teams are usually pulled back quickly and reassigned to other projects without the necessary time to make the appropriate adjustments, which sets the conditions for future project failures. Shepard et al. (2014) report that unlike the project teams that experienced delayed project terminations and reported a positive learning experience from an otherwise negative event, the rapidly redeployed teams reported that they did not have adequate time to reset their teams for the next mission and learned very little from the whole experience. Based on the observations of Shepard et al. (2014), it is reasonable to conclude that project teams learn more from protracted project terminations than those that are rapidly terminated and allowing teams to reflect on their failures and codify lessons learned could be an important element of the project management experience to mitigate future failures at the team level.

The existing literature clearly demonstrates that today’s IT project failures may lie with poor and dysfunctional team dynamics. The existing literature suggests that teamwork and positive working conditions set the conditions for an effective and collaborative team experience. The existing literature also indicates that a person-oriented approach to achieving the desired end state of the project, gaining a greater understanding of the personality traits exhibited within each
individual team member, and capturing lessons learned during and after a project failure are critical to improving project team dynamics anywhere in the world. This sets the conditions for a transition from team dynamics to project management processes and procedures in the discussion of why IT projects are continuing to fail at an unacceptable rate.

**Project Management Processes and Procedures**

The Project Management Institute (PMI), Inc. (2013) created the PMBOK guide to consolidate the best practices utilized throughout the project management body of knowledge and to standardize the vocabulary used by project managers around the world. The PMBOK provides guidance on the processes necessary to influence key project management elements that include: integration management, scope management, time management, cost management, quality management, human resources management, communications management, risk management, procurement management, and stakeholder management (PMI, 2013). However, the PMI does acknowledge that the PMBOK guide is just that, a guide designed to provide standardized information to project managers on various processes accepted within the project management body of knowledge and to assist project managers in achieving success throughout the lifecycle of the project (PMI, 2013). Whether or not project managers and their teams rely on the PMBOK is their decision.

Based on the guidance provided by the Project Management Institute Inc. and the project management body of knowledge at large, it is clear that there are standardized processes in place to guide novice and experienced project managers alike to achieve success in projects of all sizes. However, McCafferty (2015) indicates that a report from The Boston Consulting Group (BCG) highlights that large IT projects ($10 million or more) are delivered on time, on budget, and meeting all necessary objectives just 10 per cent of the time. A staggeringly low percentage
when you consider the amount of money invested in the project. According to McCafferty (2015), there are several reasons why large IT projects are failing, but one of the key failure points occurs when projects begin without clearly defined requirements that are often ambiguous and complex, resulting in the time consuming and costly process of redefining those requirements in the later stages of the project.

Large IT projects also struggled with risk management processes across multiple locations, lacked product testing throughout the lifecycle of the project, suffered from inadequate processes to manage key stakeholders, and demonstrated inadequate processes to define and clarify the project scope and other business requirements (McCafferty, 2015). Clearly, large IT projects struggle with some of the same issues that smaller projects experience, however, the financial losses of large projects are significantly greater. According to McCafferty (2015), the cost of failing to manage the processes and procedures that support large IT projects can be from 100 to 170 per cent of the original investment cost. Based on the observations of McCafferty (2015), it is reasonable to conclude that a breakdown in the processes and procedures within large IT projects can ultimately lead to dramatic financial losses and project failure.

According to Allen, Alleyne, Farmer, McRae, and Turner (2014) success is the intent of just about every project manager, however, it is the projects that fail that gain the most attention. With that understanding it is no surprise that when a 123-foot United States (U.S.) Coast Guard boat project fails people take notice. According to Allen et al. (2014), the U.S. Coast Guard planned to convert their 110-foot boats into the more capable 123-foot cutters, but terminated the project when the boats developed hull cracks, engine troubles, and were ultimately deemed not seaworthy. Fortunately, lessons learned were captured to help prevent future failures that inevitably caused the parent company and the taxpayer large amounts of money. According to
Allen et al. (2014), the parent company, Deepwater, struggled to create a competitive acquisition process, with the process to renegotiate existing contracts to ensure contracted companies honored their commitments, with the delegation process that would have allowed the Coast Guard to monitor contracted work, and with the overall procurement and maintenance processes. These shortcomings set the conditions for the project to fail and ultimately forced the company to adjust their project management processes and procedures.

Developing and implementing the processes and procedures that are consistently producing successful projects is critical to long term success. Conversely, not developing and implementing effective processes and procedures will lead to consistent project failure. History has shown that capturing and codifying lessons learned and best practices is critical to improving long term performance. However, what if an organization is not learning from previous mistakes and not utilizing the processes and procedures that have proven successful over time? Söderlund and Geraldi (2012) understand the importance of capturing lessons learned and understanding the history of previous projects. The Norwegian and British researchers, respectively, sought to conduct an in-depth and thorough study of project management history in order to understand and draw from the literature of the past (Söderlund & Geraldi, 2012).

Interestingly, they discovered that the Program Evaluation and Review Technique (PERT) tool, analyzed extensively by Harvey Sapolski back in the early 1970’s, and a staple of the project management community, went virtually ignored by the predecessors of the same community for many years despite the strength of Sapolski’s findings (Söderlund & Geraldi, 2012). According to Söderlund and Geraldi (2012), the same can be said of the famous Ghantt Chart, which was designed by Henry L. Gantt with the intention of improving the management of a vast production facility network during World War I, but was not considered to be a
powerful project management tool at the time and essentially became an accidental classic within
the project management community.

According to Söderlund and Geraldi (2012) it is important to understand that the tools
used within our current processes and procedures were not always appreciated by the community
that has benefitted from them the most. They also emphasize that it is important to understand
the contributions made by today’s important and popular tools such as the work breakdown
structure (WBS), innovative planning techniques, and other widely accepted project management
methods. This opens up an interesting discussion that may lead to why IT projects are failing
even with latest project management innovations and technologies available in the history of the
industry. Perhaps project managers are simply not recognizing the potential of the tools,
techniques, processes, and procedures that are readily available to them.

Söderlund and Geraldi (2012) stress that one of the main goals of their lengthy and
exhaustive work was to call today’s project management professionals into action to avoid the
pitfalls that their predecessors struggled to overcome. One of the greatest benefits of studying
history is to learn from its mistakes and to ultimately avoid making those same mistakes. Based
on the observations of Allen et al. (2014) and Söderlund and Geraldi (2012), it is reasonable to
conclude that lessons learned and best practices are a significant factor in avoiding project failure
while not learning from the past may be one of the greatest contributors to the extraordinary lack
of success within the IT industry.

Glenn Ferrell (2010), project management professional and former Director of
Automation for the RR Donnelley Technology Center, emphasizes the importance of utilizing
the tools and mechanisms within IT project management to plan and monitor the all-important
project schedule. Since time is a precious commodity and resource that the project manager can
never get back, it is important to know and employ these tools accordingly throughout the lifecycle of the project. Ferrell (2010) indicates that tools such as the Gantt, PERT, Critical Chain Project Management (CCPM), and Critical Path Method (CPM) charts are reliable project management tools that have proven their worth in now famous projects such as the Hoover Dam (Gantt), Interstate Highway Project (Gantt), and a multitude of DuPont (CPM) projects that led to a 25 per cent reduction in project terminations.

His concern is that these and other viable project management tools may be neglected by today’s managers simply due to a bad experience such as a managerial change during a critical point of the project or the application of the wrong tool at the wrong time during the lifecycle of the project (Ferrell, 2010). He raises an interesting point here which may indicate that a change in leadership style, a shift in managerial preferences, or a bad experience with a certain project management tool could lead to the abandonment of very useful tools and processes at a critical point in the project timeline and ultimately change the project outcome for the worse. According to Ferrell (2010), the statistics indicate that only 40 per cent of the IT projects are succeeding at his level of visibility, leaving an abysmal 60 per cent in the failure category. Statistics that cannot be ignored by the IT project management community.

According to Ferrell (2010) there will be a shift from primarily planning tools to tools focused on monitoring and controlling the project. He emphasizes that there will be a greater need to standardize tracking and reporting processes along with the implementation of web-enabled project management systems to distribute critical information to all levels of the project as it progresses to completion (Ferrell, 2010). This makes sense considering the advent of cloud computing over the last few years and the recent advances in project management collaboration and reporting tools. Based on the input from Ferrell (2010) it is reasonable to conclude that
today’s project managers must not only remain aware of the project management tools available to them, but must also gain a greater understanding of which tools are the best fit for the project at hand. His observations provide valuable insight and may explain why IT projects are failing at the rate they are despite the fact that they have the most technologically advanced systems and proven processes and procedures at their disposal.

The existing literature clearly demonstrates that today’s IT project failures may lie with the lack of use or misuse of project management processes and procedures that are designed to enable success, not hinder it. The existing literature points to well established processes and procedures within the PMBOK guide that can set project managers up for success if they choose to take this valuable advice to avoid the consequences of a failed project. The existing literature suggests that a breakdown in a project’s current processes and procedures will ultimately lead to project failure and significant financial losses. The existing literature also suggests that capturing valuable lessons learned and the best practices of valuable project management processes and procedures and learning from history set the project team up for success as they prepare for and transition to their next project.

**Research Design**

The purpose of this section is to provide the research design that will test the hypothesis of this thesis while providing a comprehensive plan of action to conduct and carry out the analysis of why IT projects are still failing in today’s technologically savvy and modern working environments. This section will include the primary and secondary research questions, primary and secondary hypotheses, identification and operationalization of three key variables, data collection, a sampling plan, a justification of case studies used, a summary of the analysis procedures, and the limitations of the study with a discussion on potential bias. This research
design is devised to thoroughly analyze why IT projects are still failing in the 21st century and shed light on the research questions that have emerged from the preliminary and subsequent study of the literature on this topic.

The identification and operationalization of the three key variables of leadership, team dynamics, and project management processes and procedures sets the conditions for a refined and focused study on the topic of IT project failure. Extensive and thorough data collection provides the necessary background information to address the identified research questions and hypotheses within this study. Although this thesis is limited by the lack of primary sources of information, there are substantial amounts of information provided by legitimate, secondary sources of literature to make valid and viable conclusions concerning the topic at hand. In the end, this research design sets the conditions for the reader to replicate and execute the research on their own if necessary and provides a foundation for future research designs.

**Research Questions**

The following list includes both the primary and secondary research questions:

Primary Research question: As the information age continues to evolve – Why do so many IT projects fail or face significant challenges while only a select few truly succeed?

Secondary Research Questions:

1) Why are IT projects failing at such an alarming rate?

2) What role does poor leadership play in IT project failure?

3) What role does dysfunctional team dynamics play in IT project failure?

4) What role does the implementation of poor IT project management processes and procedures play in project failure?

5) Which of these three variables contributes the most to IT project failure?
These research questions are designed to explore why IT projects continue to fail at an alarming rate despite the advances in modern technology and the vast improvement information dissemination over the last twenty years. These research questions will be examined through a mixed method research approach that includes both qualitative and quantitative data derived from secondary sources such as scholarly, peer-reviewed articles, case studies, and other project management related literature.

**Hypothesis**

H1: Despite advances in technology and access to large amounts of data IT projects will continue to fail at an alarming rate.

H2: Poor leadership plays a significant role in IT project failure.

H3: Dysfunctional team dynamics play a significant role in IT project failure.

H4: The implementation of poor IT project management processes and procedures play a significant role in IT project failure.

H5: Poor leadership plays the most significant role in IT project failure.

The analysis of the literature provided by secondary sources that includes both qualitative and quantitative research will set the conditions to either prove or disprove these hypotheses while expanding the body of knowledge within the field of IT project management.

**Identification and operationalization of variables**

The preliminary and subsequent analysis of the existing literature contributed to the emergence of three key variables within this research study. Those variables include project leadership, team dynamics, and the processes and procedures that support IT project management. The research conducted on the topic of IT project failure revealed significant data on the contribution of these three variables in negative project outcomes. Therefore, project
leadership, team dynamics, and the processes and procedures that support IT project management became the focal point of this study and the variables by which the causes of IT project management failure could be measured.

Project leadership - A key variable in determining whether or not IT projects will succeed at the leadership level. A variable that leads to 80 per cent of project failures must be included within this study (Khan, Long, & Iqbal, 2015). This variable was ultimately chosen due to the large amount of qualitative and quantitative research data available and the value added by including this variable within the construct of the research design.

Team Dynamics – A key variable in determining whether or not IT projects will succeed at the team level. Weijermars (2012) indicates that poorly functioning teams can significantly decrease a project’s net present value (NPV) and ultimately influences the probability of success (POS) making team dynamics an absolute necessity for this research design. This variable was ultimately chosen due to the large amount of qualitative and quantitative research data available and the value of contrasting team dynamics with the leadership variable.

Processes and Procedures – A key variable in determining whether or not IT project management procedures are contributing to project failure. McCafferty (2015) indicates that a report from The Boston Consulting Group (BCG) reveals large IT projects ($10 million or more) are delivered on time, on budget, and meeting all necessary objectives just 10 per cent of the time. This variable was ultimately chosen to examine why IT projects are failing at the procedural level and the large amount of qualitative and quantitative research data available on the subject.

These key variables set the conditions to measure why IT projects are failing and provide parameters by which this study can evaluate the level of impact each variable has on IT project
failure. Each of the variables also contributes to answering the thesis’s primary and secondary research questions and the data necessary to prove or disprove the primary and secondary hypotheses.

Data collection

The data collected for this research was extracted from scholarly and peer-reviewed articles dating back five years or less on the topics of leadership, team dynamics, and the processes and procedures that support project management. The articles cited are secondary sources provided by a wide array of researchers and authors from around the world. The scholarly and peer-reviewed articles were accessed on the Proquest and EBSCO Database Suites through the American Public University System (APUS) online library platform. All of the information and research material collected throughout this thesis was properly annotated and cited in accordance with the American Psychological Association (APA) standards.

Additional secondary and non-scholarly online periodicals, journals, and magazines were also utilized to support this research topic. Although these sources are not scholarly or peer-reviewed informational sources they provide current and relevant viewpoints on leadership, team dynamics, and project management processes and procedures that ultimately add to the value and richness of this academic study. Data was also collected from additional online sources outside the project management industry that offer best practices and key points of failure as they pertain to leadership, team dynamics, and the processes and procedures within those various industries.

The data collection process provides the means to conduct a thorough and in-depth comparative analysis of the information and research material discovered throughout this study. The information and research material led to the identification and recognition of trends that demonstrated where the project management field is failing in the areas of leadership, team
dynamics, and project management processes and procedures. These secondary sources provided a combination of both qualitative and quantitative data that was analyzed and synthesized during and leading up to the literature review development process and ultimately provided the necessary data to formulate the findings and discussions in the subsequent chapters of this thesis.

**Sampling plan**

Samples for this research project were collected from both qualitative and quantitative data discovered within secondary sources to analyze the three variables of leadership, team dynamics, and project management processes and procedures. Information and data was gathered to further refine the research process and included samples on topics such as the attribution theory, the “H factor”, transformational and pseudotransformational leadership, emotional intelligence, team atmospherics, and current project management tools and procedures. Scholarly and peer-reviewed samples were gathered from research projects and case studies in the United States, Australia, Europe, and other locations throughout the world. The data samples used throughout this thesis are primarily derived from research conducted over the last ten years in the IT project management field of work with additional contributions from various other industries such as construction and finance.

The validity of the samples is confirmed by verifying that the sources were extracted either through the APUS library or through legitimate and trusted online websites. Peer reviewed and scholarly samples were extracted from the APUS online library and validated through Proquest and EBSCO databases while non-scholarly and non-peer reviewed data was validated through the authenticity of the online website. All samples were strategically placed throughout the thesis to support the literature review, the results of the research, and the discussion that follows. Ultimately, research samples were carefully chosen to support the three key variables,
answer the primary and secondary research questions, and prove or disprove the primary and secondary hypotheses.

**Justification of case studies used**

The case studies used for this thesis are provided through scholarly, peer reviewed literature that capture the issues and concerns within the project management field of study on a case by case basis. These case studies provide data and information that is useful in the study of leadership, team dynamics, and project management processes and procedures and their contributions to project success or failure. The case studies also provide detailed information and quantitative data on the sample populations chosen by the researchers of the study that is useful to determine the impact the three key variables of this thesis have on a project’s outcome. The case studies chosen for this thesis are further justified by the research data they provide to prove or disprove the hypotheses of this thesis.

**Summary of analysis procedures**

The analysis of the literature provided by secondary sources that include both qualitative and quantitative data will answer the primary and secondary research questions and either prove or disprove the primary and secondary hypotheses in order to expand the body of knowledge within the field of IT project management. The identification and operationalization of the three key variables of leadership, team dynamics, and the processes and procedures that support IT project management will set the conditions to measure why IT projects are failing while also providing the parameters by which this study can evaluate the level of impact each variable has on IT project failure. The data collection process and sampling procedures provide the means to properly analyze and evaluate the available data to formulate the literature review, compile the
results of the research, and justify the follow on discussion that will ultimately bring this thesis to a successful conclusion.

Limitations of the study and potential bias

Although there is an abundance of available secondary sources to conduct research on all three key variables outlined in this research design, the study itself is limited by the lack of primary sources such as in-depth interviews with IT professionals and comprehensive surveys administered to a wide array of IT professionals in various regions of the United States and around the world. A limitation generated by time constraints and the lack of access to IT project management professionals. The study is also limited by a clear definition of what success and failure ultimately look like in the field of IT project management. A point for further debate in the discussion portion of this thesis.

The heightened awareness of leadership’s impact on just about every industry and governmental agency in the world creates the potential for the researcher to demonstrate a certain degree of bias towards the key variable of leadership throughout this research project. However, through careful review and analysis of both the qualitative and quantitative data presented throughout this study, the researcher will provide an unbiased interpretation of the data collected on all three key variables. This will set the conditions to present unbiased, scholarly results along with a detailed discussion of what those results ultimately reveal to the IT project management body of knowledge.

Results

The results obtained for this thesis are derived from a combination of both qualitative and quantitative data and information from secondary sources. These sources include peer reviewed and scholarly articles from the APUS library and various other internet based sources such as the
AN EXAMINATION OF IT PROJECT MANAGEMENT FAILURE

Project Management Institute. This thesis set out to discover why nearly two-thirds of IT projects are failing or significantly challenged (Standish Group, 2013). The study focused on three key variables of project leadership, team dynamics, and the processes and procedures that support IT project management. Although only 39% of IT projects were completed successfully, the surprising find was that this was actually an increase from eight years earlier when the Standish Group (2013) reported that 29% of IT projects were completed successfully. Interestingly, failure rates were at 18% (the same rate in 2004) after rising to 24% in 2008 (see Figure 2).

![Figure 2: 2012 Project resolution results from CHAOS research – 2004 to 2012](image)

Note. Adapted from the *Chaos Manifesto* 2013, The Standish Group Inc., 2013.

Clearly, successful IT projects are hard to come by even in the second decade of the millennium. Even with advancements in technology over this eight year period that included the advent of sophisticated smartphones, tablets, and cloud computing, IT project managers still failed to consistently meet the customers’ expectations at an unacceptable rate.

**Project Leadership**

Leadership issues are a key contributor to project failure. Leadership failures set the conditions for the project to not be completed on time, on budget, or within the approved scope of work. There are 10 major causes of failure in leadership that ultimately lead to a project’s
demise that include an inability to organize effectively, a genuine fear of competition, and a lack of imagination (See Figure 3). These leadership deficiencies ultimately contribute to a negative working environment, loss of productivity, and project failure. Psychological and sociological factors play a role in project leadership failure. A greater understanding of the “H Factor” construct leads to the early identification of a leader’s behavioral shortcomings and potentially negative leadership style that could adversely affect the entire project. Leaders with high “H Factor” scores (18 being the highest) tend to be the most effective while leaders with lower scores (6 being the lowest) tend to be ineffective and possess a toxic leadership style (See Table 1). Identifying and understanding the “H Factor” scoring can set the conditions to not task a low scoring leader for a project that he or she will most assuredly cause friction with the project team or the sponsors. The negative leadership qualities of hubris, hypocrisy, and hostility creates a confrontational and/or submissive working environment that will ultimately cause the project to fail.

<table>
<thead>
<tr>
<th>10 major causes of leadership failure</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Inability to organize details</td>
</tr>
<tr>
<td>2. Unwillingness to do that which you ask of others</td>
</tr>
<tr>
<td>3. Expectation of pay for what you know rather than what you do</td>
</tr>
<tr>
<td>4. Fear of competition</td>
</tr>
<tr>
<td>5. Lack of imagination</td>
</tr>
<tr>
<td>6. Selfishness</td>
</tr>
<tr>
<td>7. Intemperance, over indulgence</td>
</tr>
<tr>
<td>8. Disloyalty</td>
</tr>
<tr>
<td>9. Emphasis on the &quot;authority&quot; of leadership</td>
</tr>
<tr>
<td>10. Emphasis on title</td>
</tr>
</tbody>
</table>

Figure 3: 10 major causes of leadership failure. Note. Adapted from The Key Causes of Failure in Leadership, Ellis, 2015.
Transformational leadership seeks to inspire everyone involved in the project, enhances esprit de corps, and rallies the team around the values and vision of the project leader. Transformational leaders have a genuine concern for those that follow them and foster an atmosphere of mutual trust and cooperation, which ultimately leads to the sharing of ideas, achieving established goals and milestones, and reaching the desired end state of the project (Mattus, 2012). On the contrary, pseudo-transformational leadership is not authentic leadership and revolves around the goals of the leader rather than the collective good. This form of leadership ultimately leads to mistrust and a lack of cohesion within the team dynamic and may spread throughout the organization if not recognized and dealt with accordingly.

Transformational leadership sets the conditions for success while preventing failure. This form of unselfish and genuine leadership has evolved over time. Over the years, observers have identified certain attributes and characteristics of transformational leaders. From these observations emerged the 10 tenets of transformational leadership such as leaders must maintain high moral and ethical values, leaders must express a genuine interest in those they lead, are

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**CONTRIBUTORS TO THE “H FACTOR” IN ORGANIZATIONAL LEADERSHIP EFFECTIVENESS**

<table>
<thead>
<tr>
<th>Positive Qualities or Characteristics</th>
<th>Limited = 1 pt.</th>
<th>Average = 2 pts.</th>
<th>High = 3 pts.</th>
<th>Individual Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Honor</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Humility</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Honesty</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Hubris</td>
<td></td>
<td></td>
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<td>3</td>
</tr>
<tr>
<td>Hypocrisy</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Hostility</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>“H Factor” Score</td>
<td></td>
<td></td>
<td></td>
<td>18 = the “best” 6 = the “worst”</td>
</tr>
</tbody>
</table>

Table 1: *Contributors to the “H factor” in organizational leadership effectiveness*, Falk & Blaylock, 2013.
motivated to do what is right, and provide consistent mentorship throughout the lifecycle of the project and beyond (See Figure 4). These tenets set the conditions for project leaders’ to

<table>
<thead>
<tr>
<th>The 10 tenets of transformational leadership</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Leaders have high moral and ethical values</td>
</tr>
<tr>
<td>2. Leaders express genuine interest in followers</td>
</tr>
<tr>
<td>3. Leaders have an inspirational vision</td>
</tr>
<tr>
<td>4. Genuine trust exists between leaders and the led</td>
</tr>
<tr>
<td>5. Followers share leader's values and vision</td>
</tr>
</tbody>
</table>

Figure 4: The 10 tenants of transformational leadership. Note. Adapted from Transformational leadership for project managers, Mattus, 2012.

inspire their subordinates with authentic and genuine leadership while avoiding the pitfalls of a self-serving and demoralizing leadership styles that plague so many of today’s failing IT projects.

Emotional intelligence (EI) was found to be another essential component of successful leadership. Leaders that understand and acknowledge not only their own their emotions, but also the emotions of those they work with are more effective leaders than those that do not. Leaders with higher EI scores are High achievers while lower EI scores are indicative of Low Achievers and poor project management performance (Clarke, 2010). Emotionally intelligent leaders tend to have a greater understanding of the morale and emotional well-being of their organization or team. They sense when decisions within the organization are affecting the emotional climate and know when something is adversely affecting a project’s productivity and performance. Lower scoring EI leaders will miss these key indicators and ultimately get caught off guard by emotional and social issues that are affecting their overall project performance. They will not
realize that these issues are the driving force behind the team’s poor performance and why the project is failing.

There is a direct correlation to transformational leadership behaviors and the concept of EI (see Table 2). Within their study, Cao et al. (2011) assess four variables of EI that include; EI1 (Self-Emotion Appraisal), EI2 (Other’s Emotion Appraisal), EI3 (Regulation of Emotion), and EI4 (Use of Emotion) (p.329). Understanding the emotional well-being of the project team is critical to realizing the leader’s vision and taking care of subordinates. The findings indicate that while it is important for transformational leaders to understand their own emotions, it is even more important to properly assess the emotions of the team and harness those emotions for the betterment of the project. Regression analyses demonstrates that compared to EI1 and EI3, EI2 (Appraising the emotions of others) and EI4 (making use of emotions by directing them towards productive activities and improving personal performance) were the EI variables that related the most to transformational leadership behaviors (See Table 3). Therefore, understanding the

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
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<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Family</td>
<td></td>
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<tr>
<td>2 Gender</td>
<td>.091</td>
<td>1</td>
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<td></td>
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<tr>
<td>3 Age</td>
<td>-.031</td>
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<td>1</td>
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<td></td>
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</tr>
<tr>
<td>4 Education</td>
<td>-.049</td>
<td>.137**</td>
<td>-.197**</td>
<td>1</td>
<td></td>
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<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>5 Career age</td>
<td>-.019</td>
<td>.400**</td>
<td>.217**</td>
<td>.199**</td>
<td>-.037</td>
<td>1</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>6 Position</td>
<td>.012</td>
<td>.133</td>
<td></td>
<td>-.129</td>
<td>-.135**</td>
<td>1</td>
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<td>7 Firmsize</td>
<td>-.049</td>
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<td>.217**</td>
<td>.199**</td>
<td>-.037</td>
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<td>8 EI1</td>
<td>.000</td>
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<td>9 EI2</td>
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<td>.049</td>
<td>.019</td>
<td>.088</td>
<td>-.002</td>
<td>.031</td>
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<td>.046</td>
</tr>
<tr>
<td>10 EI3</td>
<td>-.041</td>
<td>-.044</td>
<td>-.026</td>
<td>.067</td>
<td>-.041</td>
<td>.082</td>
<td>.082</td>
<td>.082</td>
<td>.082</td>
<td>.082</td>
<td>.082</td>
<td>.082</td>
<td>.082</td>
</tr>
<tr>
<td>11 EI4</td>
<td>-.136**</td>
<td>.046</td>
<td>.020</td>
<td>-.015</td>
<td>-.021</td>
<td>-.008</td>
<td>.120</td>
<td>.470**</td>
<td>.450**</td>
<td>.548**</td>
<td>.548**</td>
<td>.548**</td>
<td>.548**</td>
</tr>
<tr>
<td>12 EI</td>
<td>-.077</td>
<td>.011</td>
<td>.010</td>
<td>.038</td>
<td>.030</td>
<td>.030</td>
<td>.035</td>
<td>.126</td>
<td>.783**</td>
<td>.754**</td>
<td>.754**</td>
<td>.754**</td>
<td>.754**</td>
</tr>
<tr>
<td>13 TFL</td>
<td>-.073</td>
<td>-.002</td>
<td>.141**</td>
<td>.101</td>
<td>.124</td>
<td>.077</td>
<td>.097</td>
<td>.117</td>
<td>.550**</td>
<td>.511**</td>
<td>.511**</td>
<td>.511**</td>
<td>.511**</td>
</tr>
</tbody>
</table>

Notes: EI= Emotion intelligence. TFL= Transformational leadership behavior. EI1, EI2, EI3, and EI4 = the four dimensions of the Wong and Law Emotional Intelligence Scale. Sample size (N) is 210.

* P < .05 ** P < .01

Table 2: Correlations between EI and Transformational leadership behaviors, Cao et al., 2011.
emotions of others and using emotions effectively greatly contributes to transformational leadership and project success.

**Hierarchical regression analyses predicting transformational leadership behavior**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Step 1</th>
<th>Step 2</th>
<th>Step 3</th>
<th>Step 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>E1</td>
<td>.550***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E2</td>
<td>.404***</td>
<td>.333***</td>
<td>.302***</td>
<td>.199**</td>
</tr>
<tr>
<td>E3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>90.801</td>
<td>67.272</td>
<td>50.806</td>
<td>54.185</td>
</tr>
<tr>
<td></td>
<td>.303</td>
<td>.393</td>
<td>.424</td>
<td>.513</td>
</tr>
<tr>
<td>ΔF</td>
<td>90.801***</td>
<td>30.798***</td>
<td>11.247***</td>
<td>37.469***</td>
</tr>
<tr>
<td></td>
<td>.303</td>
<td>.090</td>
<td>.031</td>
<td>.089</td>
</tr>
</tbody>
</table>

Notes: E1= Emotion intelligence. TFL=Transformational leadership behavior. E1, E2, E3, and E4 = the four dimensions of the Wong and Law Emotional Intelligence Scale. Sample size (N) is 210.

***p<.001, **p<.01, *p<.05

Table 3: Hierarchical regression analyses predicting transformational leadership behavior, Cao et al., 2011.

This is important since transformational leaders desire to inspire and motivate their subordinates to avoid a negative working environment and project failure (Cao et al., 2011).

The results of this study have revealed a key finding and a new project management leadership model that combines the attributes of transformational leadership, emotional intelligence, and a sense of discernment associated with identifying the behavioral shortfalls of the “H Factor”. This new, exploratory leadership approach is known as Dynamic Sensory Leadership (See Figure 5). Dynamic Sensory Leadership focuses on the visionary leadership traits of transformational leadership, emotional acuity associated with emotional intelligence, and a sense of discernment that allows the leader to identify their own negative and positive qualities and behaviors associated with the “H Factor”, as well as, the qualities and behaviors of their team members. Dynamic Sensory Leadership will ultimately equip today’s project managers with the capabilities necessary to lead their project team with vision and passion, identify with
and leverage their emotions and the emotions of the team, and identify the qualities and behaviors that are contributing to the success or failure of today’s IT projects.

**Dynamic Sensory Leadership**

![Dynamic Sensory Leadership diagram](image)

Figure 5: *Dynamic Sensory Leadership*, Collins, 2015.

The findings indicate that leaders lacking the three key attributes of the Dynamic Sensory Leadership model will be ineffective leaders and ultimately set the conditions for poor leadership across all levels of the team and a potentially hostile working environment. However, the findings also indicate that leaders who possess all three attributes of this leadership model will set the conditions for success and create a positive working environment at all levels of the team and organization.

**Team Dynamics**

Dysfunctional team dynamics play a role in IT project failure. Project teams operating within a dysfunctional environment will suffer from diminished productivity and a decrease in morale. Dysfunctional teams will lack a clear understanding of their roles, responsibilities, and objectives, lack the appropriate training, over commitment to tasks that they are not equipped to handle, lack subject matter expertise, and partake in practices that undermine team motivation and productivity (See Figure 6). Fully functional teams operating within a positive working...
The top 11 team issues that cause project failure

1. Lack of clear roles and responsibilities result in confusion, errors and omissions
2. There are insufficient team members to complete the work that has been committed to
3. Projects are done “off the side of the desk” (i.e. team members are expected to perform full time operational jobs while also meeting project milestones)
4. The team lacks the Subject Matter Expertise needed to complete the project successfully
5. Selecting the first available person to fill a role rather than waiting for the person who is best qualified
6. Failure to provide team with appropriate training in either the technology in use, the processes the team will be using or the business domain in which the system will function
7. Lack of feedback processes allows discontent in the team to simmer under the surface
8. The Project Manager’s failure to address poor team dynamics or obvious non-performance of an individual team member results in the rest of the team becoming disengaged
9. Practices that undermine team motivation
10. Pushing a team that is already exhausted into doing even more overtime
11. Adding more resources to an already late project causes additional strain on the leadership team resulting in even lower team performance (Brooks law)

Figure 6: The top 11 team issues that cause project failure, Calleam Consulting Ltd., 2015, para 6.

environment are more productive and tend to reach key objectives and milestones on time, on budget, and stay within the original scope of work than their dysfunctional counterparts. Strong and productive team dynamics are driven by the people within the team that are focused and committed to effective team building, resolving and managing conflicts quickly and efficiently, instilling positive change management, empowering their fellow team members, delegating authority when necessary, and solving problems (Sohmen, 2013).

Clearly, dysfunctional teams play a role in project failure. However, in a study of 519 IT project managers, the participants identified specific leadership (project and upper management) related factors, not team related factors, as four of the eight most important critical success factors affecting IT projects (See Table 4). Three of the four critical success factors focused on project related requirements such as clearly stated goals and objectives, a detailed and realistic schedule, and clearly articulated initial system requirements (See Table 4). In fact, the number
Table 4: Distribution of Participant Rankings: Most Important Critical Success Factors, Doherty, 2011, p. 11.

One success factor, the one most important to 280 survey participants, was related to clearly stated goals and objectives. Not surprisingly, the one team specific critical success factor that did make the top eight was focused on team members possessing the required skills, training, and knowledge necessary to be effective team members (See Table 4). The findings indicate that

<table>
<thead>
<tr>
<th>Success Factor</th>
<th>Important</th>
<th>Moderately Important</th>
<th>Low or Little Importance</th>
<th>Moderately Unimportant</th>
<th>Unimportant</th>
</tr>
</thead>
<tbody>
<tr>
<td>36. The project has clearly stated and measurable goals and objectives</td>
<td>280</td>
<td>78</td>
<td>141</td>
<td>13</td>
<td>7</td>
</tr>
<tr>
<td>7. There is a sustained commitment from upper management to provide resources, authority, and influence for project</td>
<td>237</td>
<td>94</td>
<td>164</td>
<td>15</td>
<td>9</td>
</tr>
<tr>
<td>26. The project manager possesses the interpersonal skills necessary to build trust, motivate people, and resolve conflict</td>
<td>178</td>
<td>131</td>
<td>192</td>
<td>16</td>
<td>2</td>
</tr>
<tr>
<td>27. Project manager has good project management skills including ability to monitor and track project scope, time, cost and quality</td>
<td>143</td>
<td>139</td>
<td>209</td>
<td>20</td>
<td>8</td>
</tr>
<tr>
<td>29. Project team members possess the required technical skill, expertise, and knowledge</td>
<td>139</td>
<td>116</td>
<td>233</td>
<td>25</td>
<td>6</td>
</tr>
<tr>
<td>9. The project manager and project team are given the authority over the resources necessary to carry out the strategy for project</td>
<td>136</td>
<td>87</td>
<td>231</td>
<td>40</td>
<td>25</td>
</tr>
<tr>
<td>38. The schedule for project completion is detailed and realistic</td>
<td>118</td>
<td>88</td>
<td>257</td>
<td>27</td>
<td>29</td>
</tr>
<tr>
<td>37. Initial system requirements for the project are clear, unambiguous, and obtainable</td>
<td>136</td>
<td>66</td>
<td>223</td>
<td>46</td>
<td>48</td>
</tr>
</tbody>
</table>

Note: Participant Ranking of +4 or +3 = Important  
Participant Ranking of +2 = Moderately Important  
Participant Ranking of +1 to -1 = Little or No Importance  
Participant Ranking of -2 = Moderately Unimportant  
Participant Ranking of -3 or -4 = Unimportant
leadership issues and concerns were a higher priority for the study’s participants than team related issues and concerns.

The results of the most unimportant critical success factors support the earlier findings that team dynamics, although a concern, are of lower importance to the studies participants (see Table 5). In fact, five of the eight most unimportant critical success factors were related

<table>
<thead>
<tr>
<th>Success Factor</th>
<th>Important</th>
<th>Moderately Important</th>
<th>Low or Little Importance</th>
<th>Moderately Unimportant</th>
<th>Unimportant</th>
</tr>
</thead>
<tbody>
<tr>
<td>15. Project team, users, and project customers are co-located and have easy and regular access to one another</td>
<td>12</td>
<td>13</td>
<td>171</td>
<td>94</td>
<td>229</td>
</tr>
<tr>
<td>4. The client organization has a cooperative horizontal business culture</td>
<td>5</td>
<td>15</td>
<td>182</td>
<td>105</td>
<td>212</td>
</tr>
<tr>
<td>5. The organizational culture is people-centric and places a high value on face-to-face communication</td>
<td>5</td>
<td>12</td>
<td>197</td>
<td>110</td>
<td>195</td>
</tr>
<tr>
<td>3. Organization embraces a loosely controlled adaptive view focused on continuous learning, improvement, and the inevitability of change</td>
<td>17</td>
<td>13</td>
<td>206</td>
<td>113</td>
<td>170</td>
</tr>
<tr>
<td>12. Project execution and organization delivers the most important features early in the project life cycle</td>
<td>12</td>
<td>23</td>
<td>214</td>
<td>125</td>
<td>145</td>
</tr>
<tr>
<td>31. The focus of the project is to develop early business value.</td>
<td>25</td>
<td>24</td>
<td>204</td>
<td>86</td>
<td>180</td>
</tr>
<tr>
<td>35. Project focus is on the continuous delivery of incremental business value throughout</td>
<td>21</td>
<td>30</td>
<td>252</td>
<td>106</td>
<td>110</td>
</tr>
<tr>
<td>22. The project team is self-organizing changing configuration and work patterns as the project progresses</td>
<td>17</td>
<td>35</td>
<td>245</td>
<td>106</td>
<td>116</td>
</tr>
</tbody>
</table>


to either team dynamics or the organizational culture that participants were operating within (see Table 5). Interestingly, over 200 survey participants did not consider project execution and
delivering the most important features of the project early in the project lifecycle or the organizational initiatives that focus on continuous learning, improvement, and inevitability of change as important aspects of project management (see Table 5). The majority of the project managers surveyed clearly see leadership and management issues as a greater concern than team dynamics and organizational culture.

Processes and Procedures

The implementation of poor IT project management processes and procedures play a role, but not a significant role in IT project success or failure. The PMBOK guide provides standardized information on various processes accepted within the project management body of knowledge (PMI, 2013). Project managers have been using this guide as a standard to organize their processes and procedures for years, but even the PMI acknowledges that this guide is deliberately crafted as a general framework to set the conditions for success, not a complete solution for the myriad of projects spanning the globe. However, it is widely accepted by all industries that utilize project management practices as the guide by which today’s project managers should look to for guidance and direction.

To be clear, the PMBOK guide offers invaluable and very useful information on the processes and procedures necessary for the project management community to be successful. The problem is the guide is generic and doesn’t provide a model with the details and specifics necessary to complete a project from start to finish. In fact, the PMBOK lacks four key elements that would greatly aid today’s project managers as they set out to complete a project. These four elements include a methodology, an organizational system, custom applications, and project classification (See Figure 7). A key finding is that the project management community needs an
organizational system that transcends all industries and can be used to provide viable project management processes and procedures (Ajam, 2012). Since the PMBOK guide assumes that

<table>
<thead>
<tr>
<th>Key Elements missing from the PMBOK Guide</th>
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<tbody>
<tr>
<td><strong>Methodology:</strong> The PMBOK Guide design is a generic guide – not industry or application area specific – it does not offer a methodology. PMBOK advises the readers that they can use other standards or internally developed methodologies to use with it.</td>
</tr>
<tr>
<td><strong>Organizational system:</strong> The PMBOK Guide assumes that a project management organizational system already exists. This includes tools and templates, organizational assets, processes and procedures, governance and control policies, etc.</td>
</tr>
<tr>
<td><strong>Custom applications:</strong> The PMBOK Guide does not include industry/application area specific processes or knowledge areas. This is why there are a few supplement to the PMBOK Guide that are industry specific, such as for government projects, defense projects, or construction projects.</td>
</tr>
<tr>
<td><strong>Project classification:</strong> The PMBOK guide is generic in regard to project classification, how to rank projects or classify them in term of size, complexity, or other factors. This is important since we should treat small projects differently than large projects; simple projects are also different from complex projects, etc.</td>
</tr>
</tbody>
</table>

Figure 7: *Key Elements missing from the PMBOK Guide*, Note. Adapted from *What is good and what is missing from PMBOK® Guide?*, Ajam, 2012, para 14-17.

every industry has developed its own organizational system that includes tools, templates, processes, procedures, and control policies, there is no project management standard by which all industries can pull from (Ajam, 2012). This leads to a lack of standards and what a successful project management plan of action should look like.

The findings indicate that project managers are not equipped with the tools and standards necessary to avoid project failure and need something more than the PMBOK guide to set the conditions for success. The SUKAD Group (2015) offers the SUKAD Way as a possible solution to overcome the generic shortfalls of the PMBOK guide that inevitably leaves gaps in standardized project management processes and procedures (SUKAD Group, 2015).
The Seven Elements of Project Management Maturity™ (The 7Es™)

Figure 8: The Seven Elements of Project Management Maturity™ (The 7Es™), SUKAD Group, 2015.

The SUKAD Group offers the Seven Elements of Project Management Maturity as a possible solution to fill the current gaps in project management processes and procedures that include the “fundamental elements” of tools and technology, processes and functions, professional development methods, the “differentiating elements” of strategic and organizational aspects, a leadership and competence framework, and knowledge management and organizational learning (SUKAD Group, 2015, para 2.).

The SUKAD Way also offers the CAM2P™ (The Customizable and Adaptable Methodology for Managing Projects™) that includes a methodology for managing individual projects and holistic view of the project life cycle from conception to completion (SUKAD Group, 2015). Although the SUKAD Group offers possible solutions to supplement the PMBOK Guide, the mainstream project management community is still lacking a viable alternative to offset poor processes and procedures that are plaguing today’s projects and ultimately contributing to project failures in the IT industry and others around the world.
Discussion

This section of the thesis highlights the significance of the results while also providing an interpretation of the data collected. This study set out to answer the primary research question - As the information age continues to evolve – Why do so many IT projects fail or face significant challenges while only a select few truly succeed? The data and information gathered through a mixed method research approach that included both qualitative and quantitative data derived from secondary sources such as scholarly, peer-reviewed articles, case studies, and other project management related literature shed light on this question. The bottom line is that IT projects are failing for a myriad reasons that include, but definitely not limited to, a lack of good governance throughout the project lifecycle, poor communication, unclear expectations, lack of input from the users, scope creep, changes in key personnel, schedule overruns, and inadequate skillsets across the project team (IT Business Edge, 2015). Even more alarming is that the project management community cannot come to a consensus as to what is causing the dismal 39% success rate (Standish Group, 2013).

After examining dozens of scholarly, peer-reviewed articles and various other sources it became clear that the project management community agrees that there is a problem, but cannot agree on what the top issues are concerning project success or failure. It also became clear that the most common denominator in project failure and the reason that projects are failing at an alarming rate is people. The actions, and sometimes the inaction of people are causing projects to fail. This answers the first secondary research question - Why are IT projects failing at such an alarming rate? Simply stated, people at all levels of the project are the driving force behind IT project failure and based on the analysis of the Standish this fact is not changing anytime soon (see Figure 2).
Based on the eight year trend established by the Standish Group analysis and the supporting evidence the hypothesis that stated “despite advances in technology and access to large amounts of data IT projects will continue to fail at an alarming rate” (H1) was proven to be true. From 2004 to 2012 the IT project success rate only improved from 29% to 39% over that time period while the failure rate remained at 18% and the challenged rate dropped only 10 percentage points to 43%. In academics, improving from a grade of 29% to 39% would hardly be considered an improvement and the student’s grades would be alarmingly low for the teachers and faculty members. These numbers should be no less of an indicator that IT project failures will continue at an alarming rate for years to come.

This study focused on three key variables related to project failure that included leadership, team dynamics, and the processes and procedures that support project management. The second secondary research question asked what role poor leadership plays in IT Project failure. The findings indicate that poor leadership does play a significant role in IT project failure. In fact, the existing literature confirms that 8 out of 10 projects fail due to the inferior leadership skills of those tasked with leading the team to a successful conclusion (Khan, Long, & Iqbal, 2015). Based on the existing literature and the results of this study the hypothesis stating that “poor leadership plays a significant role in IT project failure” (H2) was proven to be true. The results confirm that the leadership problems are caused by the actions or lack of action of the people in charge of the project. Whether its disorganization, insecurity, selfishness, disloyalty, or a myriad of other causes the results are the same – projects are failing due to weak leadership.

As bleak as the future looks for IT project management leadership, the results of the study introduces a new leadership model that can set the conditions for future research on the topic of leadership failure within IT project management. The leadership model known as
Dynamic Sensory Leadership combines the attributes embedded within the concepts of transformational leadership and emotional intelligence with a sense of discernment to accurately assess the leader’s current situation. Leaders that possess the positive attributes of all three sides of the triangular leadership model (see Figure 5) increase their odds of achieving their vision for the project’s outcome, accurately assessing their emotions and the emotions of their team members, and fine tuning their sense of discernment to accurately determine when their behavior or the behavior of other team members is positively or negatively affecting the team dynamics.

In the end, the existing literature and the results of this study make it quite clear that improvements to IT project management leadership are critical to the future and long term success of this critical, technology driven industry.

The third secondary research question asked what role dysfunctional team dynamics plays in IT project failure. The findings of this study indicate that team dynamics plays a role in IT project management failure, but not as significant of a role as poor leadership. Even the leading causes of team dysfunction can be remedied by strong and effective leadership. Based on the existing literature and the results of this study the hypothesis stating that “dysfunctional team dynamics play a significant role in IT project failure” (H3) was proven to be false. The results indicate that in a study involving over 500 project managers, half of the most important critical success factors were leadership related while 5 of the 8 most unimportant critical success factors were team related (see Table 4).

Nearly half of the respondents felt that the leadership and influence of upper management was important, making this the most important leadership related critical success factor (see Table 4). On the contrary, nearly 250 respondents felt that the team’s ability to self-organize and make adjustments to the project configuration and work patterns as the project progresses was of
little or no importance leading to the conclusion that the project managers felt this was leadership’s responsibility (see Table 4). In other words, if changes were going to take effect than it is leadership’s responsibility to make those decisions and be held accountable not the team. Ultimately, when a project is failing and the team is dysfunctional it is leadership’s responsibility to find solutions that bring the project back on track to avoid failure and a disappointed customer.

The fourth secondary research question asked what role the implementation of poor IT project management processes and procedures play in project failure. The implementation of poor IT project management processes and procedures play a role, but not a significant role in IT project success or failure. Based on the existing literature and the results of this study the hypothesis stating that “the implementation of poor IT project management processes and procedures play a significant role in IT project failure” (H4) was proven to be false. The results of this study indicate that the PMBOK guide provides the information and framework necessary to establish the processes and procedures required to get a project started. Although PMI driven guidance lacks a precise methodology, a detailed organizational system, customized industry specific applications and knowledge areas, or an advanced classification system to rank and classify projects by size and complexity, it does, however, provide enough information to set the conditions for initial success (see Figure 7). However, the PMBOK guide is not tailored for industry specific considerations and this is becoming a problem for the IT industry and others.

The generic nature of the PMBOK guide leads to the second key finding of this study. The PMBOK guide just doesn’t have enough detail to carry today’s project managers through the complexity of modern day projects. Organizations like the SUKAD Group offer supplemental solutions such as the Seven Elements of Project Management Maturity™ (The 7Es™) and
CAM²P™ (The Customizable and Adaptable Methodology for Managing Projects™) to offset the generic nature of the PMBOK Guide (SUKAD Group, 2015). The findings indicate that project managers from all industries require more detailed process and procedures to accomplish their industry specific objectives. Vague and generic guidance just does not provide the details today’s project leaders and teams need to overcome the challenges of a project management environment that continues to grow more complex year after year. New, innovative processes and procedures along with industry specific tools and standards will be required to meet the demands of today’s quickly evolving project management environments.

The fifth and final secondary research question asked which of the three key variables contributes the most to IT project failure. Clearly, poor leadership plays the most significant role in IT project management failure. Just as strong leadership can propel a project to a monumentally successful project outcome, poor leadership can hurl a project towards catastrophic results and epic failure. The findings undoubtedly indicate that strong leadership sets the tone for project success while also confirming that there is a genuine lack of leadership within the project management community to control and offset the numerous amount of factors contributing to the 61 per cent of projects that are significantly challenged or failing (Standish Group, 2013). Based on the existing literature and the results of this study the hypothesis stating that “poor leadership plays the most significant role in IT project failure” (H5) is proven to be true.

Summary

The information and data collected within the literature review and the results sections of this study indicate that today’s IT project managers are truly fighting against the odds to successfully complete a project on time, on budget, and within the original scope of work. The study focused on three key variables (leadership, team dynamics, and processes and procedures)
that proved to be factors in IT project failure. However, the study proved that poor leadership plays a significantly greater role in why today’s IT projects are failing at an alarming rate. Conversely, the evidence confirms that strong leadership sets the conditions for project success. While team dynamics and the processes and procedures within project management play a role in IT project failure, these shortfalls can be overcome by strong and effective leadership.

The study confirmed that the human dynamic anchored by authentic and genuine leadership is necessary to overcome the challenges of today’s demanding and often complex IT projects. From the study emerged a new, innovative leadership model known as Dynamic Sensory Leadership that may lead to more visionary leaders with greater emotional and situational awareness throughout the lifecycle of a project. The study also confirmed that the PMBOK guide is simply not enough guidance to set the conditions for long term success. Today’s project managers are looking for industry specific methodologies, products, and organizational systems to enhance their processes, procedures, and capabilities. In the end, this study provided detailed information on why IT projects are failing at an alarming rate in the 21st century while setting the conditions for future research on the topic of leadership failure within IT project management community.

**Recommendations**

Based on the literature review and the results of this study it is clear that the IT project management community needs to do some in-depth analysis of why their projects are failing. Future research on this topic should be conducted at the ground level with IT project managers and their teams from various geographic regions around the world. Recommend the development of a comprehensive survey or questionnaire distributed to a large sample size of at least 500 or more IT project management professionals per region to not only acquire a large amount of data, but to also gain a vast perspective of what the community feels is causing projects to fail, even
with the advancements in technology over the last ten years.

Also recommend future research to study the validity of the Dynamic Sensory Leadership model as it pertains to IT project management. The research should include embedded teams of researchers to study and access the value and worth of the visionary leadership traits of transformational leadership, the level of emotional acuity associated with emotional intelligence, and the sense of discernment that allows the leader to identify their negative and positive qualities and behaviors associated with the “H Factor”. The research would confirm or deny the validity of the Dynamic Sensory Leadership model and whether or not possessing all three attributes within the model sets the conditions for success and creates a positive working environment.

The last recommendation is for each industry to conduct an in-depth study of their specific processes and procedures to develop viable methodologies, detailed and standardized organizational systems, customized industry specific applications and knowledge areas, and advanced classification systems to rank and classify specific projects by size and complexity. This can be accomplished with surveys to gain initial feedback and a way ahead followed by organizational working groups to work out the details and begin developing products for further validation by industry specific leaders. This will greatly enhance each industries ability to conduct project management activities while providing each project team with a distinct competitive advantage over their predecessors who only had the generic PMBOK guidelines to lead them.
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Performance Management, 61(2), 204-216.


School of Science, Technology, Engineering, and Math

Information Technology – IT Project Management

The thesis for the master's degree submitted by

Brian Thomas Collins

under the title

“AGAINST ALL ODDS” – AN EXAMINATION OF IT PROJECT MANAGEMENT FAILURE IN THE 21ST CENTURY

has been read by the undersigned. It is hereby recommended for acceptance by the faculty with credit to the amount of

3 semester hours.

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