

## **Reducing Turnover Intention via Motivational Strategies for Top-Tier Project Team Members in Denver, Colorado <sup>1</sup>**

**Dr. Steve Ford, Dr. Deane Desper, Dr. Kenneth Klosterman**

### **Abstract**

The purpose of this study was to explore which project management strategies could reduce voluntary turnover rates among top-tier aerospace project members at Company X in Denver, Colorado. The study utilized a qualitative case study focusing on interviews with 10 members from the target population to investigate. The sample group met the following criteria: the participant must have had a salary of at least \$75,000 per year, must have been employed by Company X for at least two years, must have been fully promotable (must have completed any professional development courses required to advance), must have worked on a project in the last six months, and must have had a desire to advance into a management position. The resulting data was consistent, trustworthy, credible, and repeatable. Key findings include a strong relationship between strong project management leadership and a reduced turnover intention among the population. Specifically, project managers are strongly advised to establish project goals clearly and team member expectations at the beginning of a project, enable a healthy team dynamic, confirm top-tier employees are being compensated fairly, ensure that employees are appropriately recognized for their accomplishments, afford challenging and meaningful work, actively safeguard against employee stagnation and burnout, resolve conflicts quickly, and establish a detailed individual development plan process for each team member.

### **Introduction**

Management as a discipline is primarily concerned with balancing interpersonal, informational, and decisional organizational roles in an effort to accomplish goals in the furtherance of corporate success (Mintzberg, 2009). In a sense, managers must fulfill several different roles and responsibilities to achieve corporate goals. Also, in general, corporate success is strongly correlated with project success (Kerzner, 2018; PMI, 2017). Interestingly, these two facts combine to imply that successful managers are those that ensure project success. Projects are generally defined as temporary efforts undertaken to create value (Kloppenborg et al., 2019; PMI, 2017). Project success is dependent upon many factors, one of which is a reduction in project team voluntary turnover, particularly top performers (Kerzner, 2018; Kloppenborg et al.,

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2019). Top performers disproportionately impact project health, with top-tier workers providing nearly 400% more productivity than their counterparts and costing nearly 250% of annual salary to replace (Boss, 2018). From a management and project management perspective, preventing or reducing top-tier project member voluntary turnover is, therefore, a primary function (Boushey & Glynn, 2012; Mintzberg, 2009; PMI, 2017).

A critical factor in defining top employees is that these workers typically earn more than \$75,000 salary (Kahneman & Deaton, 2010). Importantly, this specific salary is highly correlated to how an employee falls on Maslow's hierarchy of needs rather than the specific income number itself (Chamorro-Premuzic, 2013; Kahneman & Deaton, 2010; Maslow, 1943). In other words, Kahneman and Deaton (2010) used the average salary for employees that both fulfilled the qualifications of a top performer and self-identified as pursuing higher needs on Maslow's hierarchy. Given this relationship between salary and Maslow's hierarchy, one can generally interchange a salary of \$75,000 with a location on Maslow's hierarchy at the level of pursuing higher needs. This distinction is critical and helps determine which employees are considered top-tier.

Interestingly, project success is strongly correlated with top-tier employee turnover (García et al., 2019; Raziq et al., 2018). All things being equal, projects with lower turnover rates among top performers are highly likely to succeed, while projects suffering high turnover rates among top-tier personnel are more likely to fail (Yang, 2010). Also, top-tier employee turnover intention is strongly aligned with employee motivation. Top performers are far more likely to leave an organization or manager with insufficient or inappropriate motivational methodologies (Cho & Perry, 2011; Martin, 2017). In general, top performers are typically intrinsically motivated and desire to achieve higher needs, such as: exploring new challenges, pursuing educational opportunities, or self-actualization (Kahneman & Deaton, 2010; Maslow, 1943; Robinson, 2010). In short, top-tier performers have different motivational needs and warrant specialized consideration given both their production and cost to replace (Willyerd, 2014).

In brief, there is a specific line of causation in the research and practitioner literature linking corporate success to management, project management, top-tier employee turnover, and employee motivation. This line of causation assumes critical importance given the reality that the top performer turnover intention rate is at an all-time high across nearly all industries in the United States (Boss, 2018; Cook, 2017). Furthermore, Ojo (2018) concluded that there is no specific investigation into reducing top-tier employee turnover in the aerospace industry. Thus, the literature firmly establishes the importance of reducing top-tier employee voluntary turnover from project teams, with a specific focus among top-tier project members in the aerospace industry.

## **Problem Statement**

The problem is how near all-time high turnover rates among top-tier employees (Boss, 2018; Cook, 2017) has a detrimental effect on project health (Project Management Institute, 2017; Wallström et al., 2012) and how to mitigate this problem using project management strategies to reduce turnover rates of nearly 10% among project members earning \$75,000 or more per year (Alkhatib, 2016; Alton, 2016; Boss, 2018; Dmitrieva, 2018). This level of turnover is five times the historical level of turnover among top-tier personnel, and it is essential to note that top-tier employees provide approximately 400% more productivity than standard employees and can cost up to 250% of their salary to replace (Boss, 2018; Dmitrieva, 2018). There is a clear line of causation regarding high employee turnover and a lack of appropriate motivational strategies (Kerzner, 2018). In other words, the literature supports the reality that aerospace project managers in the Denver, CO area that lack fitting motivational strategies for top-tier employees can expect high employee turnover among this specific employee population (Cook, 2017). Furthermore, turnover within this top-tier segment leads to a disproportionately negative impact on the probability of project success and, therefore, overall corporate success (Alshanbri et al., 2015; Boss, 2018).

## **Study Purpose**

The purpose of this study was to explore which project management strategies can reduce voluntary turnover rates among aerospace engineering project members earning more than \$75,000 per year at Company X in Denver, Colorado. To explore, the study utilized a qualitative case study focusing on interviews (Levy et al., 2016; Yin, 2018). The target group was aerospace project team members in an advanced training and leadership program at Company X. The sample group met the following criteria: the participant must have had a salary of at least \$75,000 per year, must have been employed by Company X for at least two years, must have been fully promotable (must have completed any professional development courses required to advance), must have worked on a project in the last six months, and must have had a desire to advance into a management position. These criteria were set to prevent data skew due to outside factors.

## **Research Question**

The research problem is how near all-time high turnover rates among employees (Boss, 2018; Cook, 2017) has a detrimental effect on project health (Project Management Institute, 2017; Wallström et al., 2012) and how to mitigate this problem using project management strategies to reduce turnover rates among project members earning at least \$75,000 per year (Alkhatib,

2016; Boss, 2018). The proposed study's research question was derived from the research problem, research purpose, and qualitative case study methodology, as defined by Yin (2018). Applying this methodology to the research problem and purpose yielded the following question:

**Q1.** What motivational techniques are most effective for a project manager to use to reduce voluntary turnover rates among top-tier aerospace project members in the Denver area?

## **Conceptual Framework**

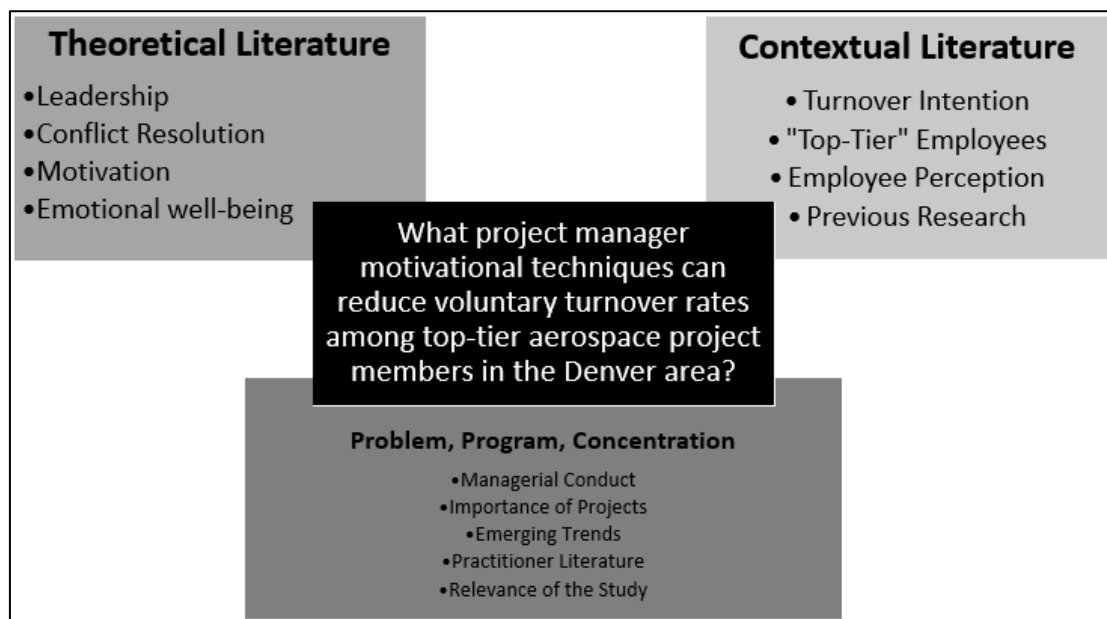
This study's conceptual framework included theories relating to leadership, conflict resolution, motivation, and emotional well-being. The significant leadership theories utilized in the study were transactional, transformational (Nahavandi, 2015; Northouse, 2018), and the concept of emotional intelligence (EI) and emotional quotient (EQ) (Alawneh & Sweis, 2016; Goleman, 2006; Goleman, 2017). Regarding conflict resolution theory, PMI (2017), Shamma (2017), and Trejo (2016) provided theoretical constructs for managers and project managers. Motivation theories included Scientific Management (F. Taylor, 1911), Maslow's Hierarchy of Needs (Maslow, 1943), theory X and theory Y (McGregor, 2006), Equity theory (Adams, 1965), Hygiene theory (Herzberg, 2008), Expectancy theory (Porter & Lawler, 1968), Satisfaction and Environment theory (Flowers & Hughes, 1973), and Self-Determination theory (Deci & Ryan, 2008). Deci and Ryan (2008) and Kahneman and Deaton (2010) provided a theoretical base for examining an employee's emotional well-being as a function of motivation.

Regarding conceptual literature pertaining to this study, Boss (2018), Cook (2017), and SHRM (2016) provided context regarding the criticality of top performer turnover and the impact to project health. Kahneman and Deaton (2010) and Nahavandi (2015) delivered the prevailing context regarding top-tier employee definition and importance. Aga et al. (2016), Caillier (2017), and Khamaksorn (2016) provided contextual research regarding employee perceptions of managers. Bowen (2016) and Ojo (2018) offered the most recent and applicable previous research regarding this study. The significant impacts of managerial conduct, the overall importance of projects, emerging trends in the field, practitioner literature, and the relevance of the study were gleaned from industry experts such as Kerzner (2018), Kloppenborg et al. (2019), Mintzberg (2009), Nahavandi (2015), Northouse (2018), and PMI (2017).

The relationship between the significant study components is shown in Figure 1. The illustration further shows the interrelationships and cross-over of individual factors in reducing top-tier employee voluntary turnover among aerospace project members in the Denver area. Also, the chart illustrates the graphical relationship between the literature review sections and the research question. Figure 1 should be interpreted as both a circular path and a spiderweb of

interrelated, interdisciplinary factors that continually impact one another. For instance, the study linked corporate success to project success, then project success to project management, only to then link project management to project management leadership style (Kerzner, 2018; PMI, 2017; Wallström et al., 2012). However, corporate success and project success also directly impacted an employee's motivational needs and vice-versa (Boss, 2018).

**Figure 1 Conceptual Framework**



### **Significance of the Study**

This study helped fill this specific gap in the literature on reducing top-tier employee turnover via properly motivating aerospace project personnel in the Denver area. This study also contributed to the body of knowledge in the project management field as it provided specific recommendations and courses of action to project management professionals regarding how to motivate and retain top-tier project members, perhaps even in similar industries and other locales (Leedy & Ormrod, 2016). Also, society will be further served by management professionals being better prepared and trained regarding how to more effectively motivate top-tier workers, leading to greater emotional fulfillment, job satisfaction, and quality of life for employees in this field (Kahneman & Deaton, 2010).

## Definition of Terms

There are several terms related to theoretical constructs, contextual elements, or industry-specific vocabulary that warrant explicit definitions. These definitions are provided below.

**Conflict Resolution.** Conflict resolution refers to either a formal or informal process by which two or more parties find or negotiate a solution to a dispute or disagreement (Shamma, 2017; Yazid et al., 2018).

**Project.** A project is a short-term effort commenced to develop a unique service, product, or outcome (PMI, 2017).

**Project success.** Project success is defined as being achieved when a project delivers the agreed-upon scope of work within time and budget constraints while also meeting stakeholder and business objectives (Kerzner, 2018; Kloppenborg et al., 2019; PMI, 2017).

**Top-tier.** The term “top-tier,” in the context of this study, refers to an employee earning more than \$75,000 salary. More importantly, it refers to the reality of an employee that has fulfilled “lower needs” and is searching to fulfill “higher needs” (Kahneman & Deaton, 2010; Maslow, 1943).

**Management.** Management includes the functions of planning, organizing, directing, and controlling human, financial, physical, and informational resources to achieve organizational goals (Mintzberg, 2009).

**Project management.** Project management is the process of applying skills, tools, techniques, and knowledge to project endeavors to achieve project success (PMI, 2017).

**Leadership.** Leadership refers to both the ability and process of an individual to influence others to reach a common goal (Northouse, 2018). Leadership differs from management in that leadership includes an emotional component, while management focuses on processes (PMI, 2017).

**Project Leadership.** Project leadership is the process and ability of a project manager to influence the project team to further project success (Meyer Harwitz, 2019; PMI, 2017). In other words, project leadership is, therefore, the application of leadership to a project environment or setting (Kerzner, 2018).

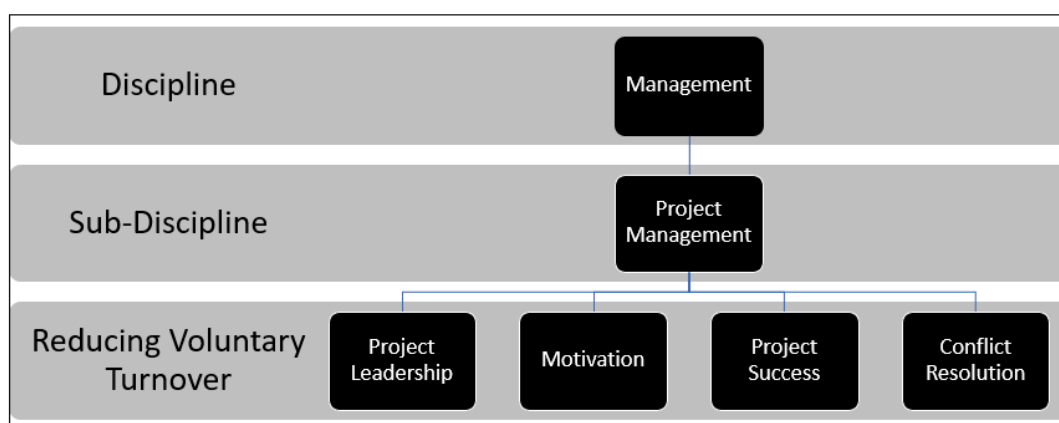
**Motivate.** Motivate refers to a manager's ability to influence an employee to behave or perform in a certain way (Northouse, 2018). Motivation is one of the core tenets for a project manager (Abyad, 2018).

**Voluntary turnover.** Reina et al. (2018) stated that voluntary turnover refers to the phenomenon of an employee leaving a position or firm by choice, not by direction (i.e., not being fired). Rubenstein et al. (2018) described voluntary turnover as someone leaving their job due to something other than adverse organizational action.

## Review of the Literature

Preventing or reducing turnover is a primary function of management (Mintzberg, 2009). In many cases, project management is the practical exercise of management theory (PMI, 2017). The body of research unequivocally connected employee turnover intention to numerous facets of management and project management (Abyad, 2018). These facets included motivation, the negative influence of turnover on project success (to answer the question regarding why employee turnover, particularly among top-tier personnel, is so impactful), the interaction between leadership and motivation, and the influence of conflict resolution on motivation, as seen in Figure 2 (Kerzner, 2018).

**Figure 2: A Graphical Depiction of Literature Focus**



Specifically, the literature supported the assertion that specific project management motivational techniques could reduce turnover rates among employees. These same sources linked top-tier personnel turnover to four factors, including motivation, project success, leadership, and conflict resolution, as seen in Figure 2. (Eaton, 2016; Judge, 2010). These four areas were critical when considering the reasoning behind why top-tier personnel decided to



leave a firm. Thus, examining why these four factors dominated the literature on team turnover narrowed the study's focus on reducing turnover via specific project management motivational strategies for aerospace project members in the Denver area.

## **Motivation and Project Success**

The Project Management Institute irrevocably linked team member motivation and project success (PMI, 2017). Abyad (2018) and Kerzner (2018) stated that project managers were responsible for motivating team members to achieve project success and thereby achieve corporate success. The Project Management Institute (2017) held that project member motivation was essential to project success, defined as meeting project objectives within the cost, scope, and schedule constraints. Raziq et al. (2018) concluded that “motivation is key to project success” (p. 11). Without a highly motivated team, García et al. (2019), Mintzberg (2009), and Raziq et al. (2018) recognized the high probability of team turnover, lower performance, and overall team dysfunction. These three consequences of low motivation directly contributed to project failure (Yang, 2010). Eaton (2016) and Judge (2010) found that motivation significantly influenced job performance, turnover intention, work quality, absenteeism, tardiness, and commitment level.

Likewise, Alvarenga et al. (2018) and Sharma and Nambudiri (2015) linked a relationship between higher job satisfaction and lower turnover intention rate, with job satisfaction linked to motivational and leadership traits. Shao (2017) described a project’s internal and external environment, with the internal dynamic containing team member interactions, including motivational techniques. A project manager must have controlled the triple constraints of scope, schedule, and cost in the external environment, in addition to governing the internal environment, to achieve project success (Shao, 2017). Thus, successfully motivating team members was critical to achieving lower team turnover rates. In other words, lower team turnover rates were a cornerstone to project success (Hughes et al., 2017; Nurun et al., 2017). However, to truly understand the depths of the links between motivation and project success, the study explored motivation theory in a holistic manner.

## **Motivation Theory**

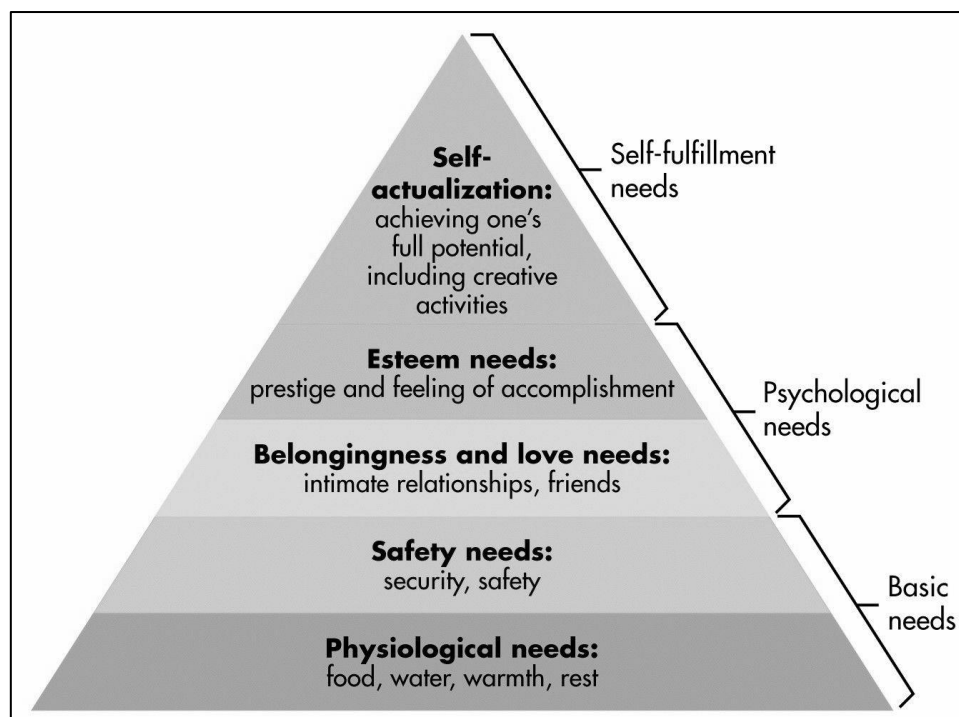
Robbins and Judge (2017) defined motivation as being able to harness an employee’s persistence, direction, and intensity to attain an organizational goal. Taylor’s Scientific Management theory (Dean, 1997; F. Taylor, 1911) described the link between employee motivation and higher employee output as a management function and something to be further studied. Modern academic research into motivation theory began with the work of English



(1921), Wolfe (1921), and Perrin (1923). English (1921) studied how to motivate individuals given a dynamic psychological landscape and was one of the first to identify the idea that a manager must motivate inherently unique people via individualized motivational techniques. Wolfe (1921) investigated radicalism's motivation, which provided insight into how motivation lies on a spectrum unique to everyone. Perrin (1923) examined the reality that motivation has a biological-social aspect and found the theory to have substance. In other words, biological impulses (safety, shelter, food, water, and other similar base desires) can heavily influence employee motivation. These biological impulses were later termed lower needs. These early researchers were the first to codify the importance of motivation to overall worker productivity, the relationship between managers and employee motivation, and the necessity of different motivational strategies for inherently unique workers regarding motivational needs.

Modern researchers linked workers' needs to worker motivation. According to Mayo (Dininni, 2017; Mayo, 1945), Maslow (1943), and McGregor (McGregor, 2006), a worker or manager who has their basic needs satisfied will look to satisfy higher needs. Mayo explicitly acknowledged a worker's desire to achieve higher needs eventually (Dininni, 2017). Maslow (1943) showed those higher needs of love and belongingness, self-esteem, and self-actualization on his pyramid of needs, as shown in Figure 3.

**Figure 3: Maslow's Hierarchy of Needs**



Maslow (1943) stated that as individuals achieved lower level needs on the pyramid, employees would naturally move up the pyramid and achieve higher levels. In other words, if workers' lower needs are fulfilled and stable, they will begin to work on fulfilling higher needs (Maslow, 1943). McGregor related these findings regarding theory X and theory Y (McGregor, 2006), which described employees as extrinsically or intrinsically motivated and the general theory linking them. A theory X worker was considered resistant to work, requiring high supervision levels and generally extrinsically motivated by money (McGregor, 2006). A theory Y employee was generally intrinsically motivated and higher performing (McGregor, 2006). McClelland's Human Motivation theory (McClelland, 1961) explained human motivation as a combination of a need for power, affiliation, and achievement, and generally coincided with previous findings regarding human motivation. In short, McClelland (1961) stated that employees generally desired power (control over others), affiliation (the desire to belong), or achievement (self-fulfillment). Most top-tier employees were naturally drawn to either the power or achievement groups, with achievement being the dominant force among top-tier workers (McClelland, 1961). Regarding how to manage top-tier employees with disparate motivational needs, Adams (1965), Porter and Lawler (1968), and Herzberg (2008) examined the desirable dynamics between a manager and employee to achieve the highest levels of motivation.

### **Project Management Leadership**

Project management is defined "as the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements" (PMI, 2017). Badewi (2016) agreed and added project practices to the list of project management attributes. Ahmed and Abdullahi (2017) differentiated between project management and project leadership, with project management referring to the hard skills required to administer a project and project leadership referring to the soft skills one must possess to complete a project successfully. Bowen (2016) and Meng and Boyd (2017) agreed and described project management leadership as critical to facilitating project member motivation and thereby contributing to project success. Likewise, Mir and Pinnington (2014) conclusively stated that project manager performance was consistently statistically correlated to project success, with specific project manager behaviors (key performance indicators and staff interaction) reaching the level of causation. Thus, project leadership is a direct link between project management and the necessity to focus on employee motivation (Cohen, 2019; Daiane et al., 2017).

The literature regarding project management leadership and its role in motivating team members is extensive, particularly when viewed through a general leadership lens. To narrow the focus somewhat, Munyeki and Were (2017) and Yang et al. (2011) uncovered those project managers adopting both transformational and transactional leadership techniques improved

team communication, reduced turnover, and were more likely to successfully complete projects. Burns (1978) and Northouse (2018) described transformational leadership as a leadership style whereby a leader engages and connects with employees to establish an emotional connection that can raise motivation, loyalty, and commitment. Burns (1978) and Northouse (2018) defined transactional leadership as a style in which leaders focus on the continual exchange between leaders and followers (i.e., bonuses or promotions for exceeding expectations and negative consequences for failure to meet expectations). Whether a manager pursued transformational or transactional styles depended on the project and team type, but a mixture of the two styles was most effective (Anne et al., 2019; Munyeki & Were, 2017).

Furthermore, the literature linked project leadership to project success. Schmid and Adams (2008) found that proper team motivation was vital to accomplishing a project successfully and a project manager's leadership attributes directly impacted project member motivation. The predominant factor in establishing and maintaining high levels of motivation, according to Schmid and Adams (2008), was ongoing respectful communication, a tenet of transformational leadership. Grisales and Lopez (2011) also linked project manager leadership skills and successful project completion, citing managerial and intellectual talents (hard skills) and emotional intelligence (soft skills) as equally important. Bennis et al. (2015) also reinforced that a project manager utilizing a combination of hard and soft skills, in addition to a mixture of transactional and transformational leadership traits, was more likely to complete projects successfully.

Nahavandi (2015) described the necessity for project managers to possess both hard and soft skills to lead project teams in the furtherance of organizational goals successfully. Nahavandi (2015) went even further and stated that a significant role of project management is discerning which hard and soft skills (and the specific mix of transformational vs. transactional leadership traits) were the most appropriate given project context. Novo et al. (2017) found that both hard and soft skills were crucial managerial proficiencies and were critical enough to have causative impacts on overall project success and failure. Furthermore, Asree et al. (2019) and Novo et al. (2017) and concluded that soft skills must be relatively well matched to a suitable leadership style and project type to be effective. Alkhatib (2016) also stated that mixing transformational and transactional leadership traits was an effective method to reduce project member turnover and increase the probability of project success. Latham et al. (2017) found that conducting performance appraisals, setting challenging and specific employee goals, and on-going coaching (a mixture of hard and soft skills) were critical to team and project success. Senthil's (2018) findings suggested that the most consistently successful project managers possessed traits from both transformational and transactional styles of leadership and both hard and soft skills. In other words, the most successful project managers possessed hard analytical skills and soft management skills (C. Taylor, 2018).

Shontz (2016) stated that part of a project manager's leadership responsibilities was managing the teams' work-life balance, occupational stress, and job satisfaction by utilizing both transformational and transactional leadership techniques. Shontz's (2016) findings dovetail with Kronos' (2017), which listed "burnout" as the biggest threat to building a sustainable and engaged workforce. Guveli et al. (2015) also reinforced that employee burnout was a leading voluntary turnover factor. Bond (2017), Seyedsafi (2017), and Sudha et al. (2016) also hit upon definitive links between transformational and transactional leadership traits and project success, including a lower turnover intention among team members. Bond (2017) also documented a statistically significant relationship between a lack of demotivation and project success, echoing Herzberg's hygiene theory. Shaw (2017) agreed and listed a lack of demotivation as a pivotal contributor to high-functioning teams throughout multiple industries.

In effect, Shaw (2017) stated that a critical role of project leaders, mainly when leading high-performing teams, was to resist the urge to undertake methodologies or leadership traits that would very likely cause demotivation. In other words, Shaw (2017) posited that workers were generally motivated to work unless otherwise actively demotivated, which was reminiscent of McGregor's theory Y. Newton (2018) found that path-goal and situational leadership were most effective for project managers regarding motivation and general leading, but classified the identified traits (communication, emotional connection, timely feedback) under the umbrellas of transformational or transactional. Newton (2018) also revealed that EQ was a critical skill set for a project manager desiring to employ transformational leadership tools.

Thus, the research conclusively demonstrated that project management leadership skills are crucial to motivating team members, which was critical to achieving project success. As for specific project manager behaviors that can impact project member motivation, recent research shows that an individual development plan was an effective strategy to increase team member motivation (Kontoghiorghes, 2016; Zago, 2019). Inviting feedback, having informal feedback sessions, establishing both team and individual goals, increasing overall compensation, and using cloud-based PM software have also been identified as increasing motivation among project team members (Clarizen, 2017; Dandage et al., 2018). Bachman (2016) listed the strength of personality, interpersonal skills, emotional intelligence, and other soft skills as leadership proficiencies that directly contributed to project success. In other words, Zago (2019), Clarizen (2017), and Bachman (2016) all found that project managers should master appropriate facets of both transformational and transactional leadership. Kontoghiorghes (2016, p. 1833) went one step further and found that for high-performers, an organization should institute a culture of "... change-, quality-, and technology-driven culture, and characterized by support for creativity, open communications, effective knowledge management, and the core values of respect and integrity."

## **Conflict Resolution**

Conflict resolution is critical in a project management environment because it is one of the leading factors regarding team members' motivation and directly impacts an employee's turnover intention (KPMG, 2017; PMI, 2017; Yazid et al., 2018). Successfully managing conflict and helping resolve it is a crucial responsibility of a project manager (Kerzner, 2018). PMI (2017) listed conflict resolution skills under interpersonal skills as a core competency of an effective project manager. PMI (2017) also described general conflict resolution techniques as avoidance (avoiding the problem in the hopes it solves itself), compromise (partially pleasing all parties), accommodating (emphasizing points of agreement rather than disagreement), forced (making an explicit decision without regard to other parties), or collaborative (problem-solving). Shamma (2017) organized project conflict into intrapersonal, intragroup, interpersonal, and intergroup. Shamma (2017) also organized solutions into collaborating (win/win), compromising (win some/lose some), accommodating (lose/win), competing (win/lose), and avoiding (no win, no lose). In the end, Shamma (2017) stated that it is the duty of the project manager to control conflict at all levels and to strive for fair outcomes.

In other words, the more a manager could connect with his or her team on an emotional, human level, the greater the chance that conflict resolution strategies would result in a positive outcome. Hon and Chan (2013) and Strahorn et al. (2017) listed work stress and conflict as associated with job satisfaction, turnover intention, and job performance. Specifically, productive stress and conflict levels had positive correlations with these critical factors, while elevated levels of stress and conflict correlate more negatively. In other words, there is a consensus in the literature that conflict resolution techniques (examples include compromise, forced solution, or accommodation) will directly influence project outcomes, job satisfaction, and top-tier employee turnover intention.

Furthermore, Hon and Chan (2013) implied that a manager's primary function was to facilitate a healthy level of work stress and conflict but keep it from spiraling to the point that team performance suffers. Interestingly, Liu et al. (2013) found that a lack of precise job requirements and expectations tended to lead to a higher level of interpersonal conflict, which linked to decreased project performance. In other words, Liu et al. (2013) determined that a project manager that did not have a firm grasp of how to set practical goals and expectations (hard skills) could expect to see a rise in interpersonal conflict to potentially unhealthy levels, leading to a higher probability of project failure. For example, a project team operating without specific project goals and performance expectations could be expected to experience heightened levels of conflict between and among team members, which would directly and negatively impact the likelihood of project success (Liu et al., 2013). Once again, the literature linked a project

manager's expertise in both hard and "soft skills," employee motivation, and project success (Liu et al., 2013). In short, a project manager's effectiveness in successfully navigating conflict resolution at the project, staff, and stakeholder levels was critical to project success, team job satisfaction, and top-tier employee turnover intention.

## **Research Methodology**

Given the research question and the need to deeply explore nonnumeric data, both Creswell (2018) and Levy et al. (2016) suggested that a qualitative research methodology was most appropriate to investigate what project management strategies could reduce turnover rates among top-tier aerospace project members in the Denver area. Furthermore, qualitative methodology includes interviews, observation, and document review (Creswell, 2018; Leedy & Ormrod, 2016). Fundamentally, qualitative methodology is a more holistic approach to a problem requiring analysis of nonnumeric data (Leedy & Ormrod, 2016).

## **Research Design**

Qualitative designs include narrative, phenomenological, grounded theory, ethnography, and case studies (Creswell, 2018; Leedy & Ormrod, 2016). Using a case study design was appropriate because this study focused on a current phenomenon, activity, or event with a real-life context (Leedy & Ormrod, 2016). Additionally, this researcher intended to study the phenomena of reducing team turnover rates as a function of project manager strategy in-depth for a short period, which was indicative of a case study methodology (Leedy & Ormrod, 2016; Yin, 2018). Also, case studies can yield richer data due to the inherent applicability of a subject's experience with the phenomena being studied (Yin, 2018). Finally, the study intended to build on Bowen's (2016) work, which utilized a case study approach to a similar question.

## **Sample**

The desired sample size was 10 interviews based on an examination of similar studies in the project management field. For reference, Bowen (2016) used 25 project members, Bachman (2016) interviewed four project managers, Swanigan (2017) examined three project managers, and Ojo (2018) utilized four project managers. Aaltonen and Kujala (2016) utilized a single case study. Hughes et al. (2017) also used a single case study. According to Leedy and Ormrod (2016) and Yin (2018), a case study should consist of enough participants to result in saturation. Malterud et al. (2016) agreed that saturation is a crucial point of consideration when determining sample size. Based on this information, this study used a sample size of 10 participants. The



researcher gathered a pool of 12 qualified participants to mitigate the risk that one or more could drop out in a way that prevented timely replacement.

### **Data Collection Instrumentation and Procedures**

The sampling plan began by the researcher contacting the study champion at Company X to offer to provide the study findings in return for facilitating the research. The study champion agreed, so this researcher requested that the study champion e-mail appropriate personnel and direct them to contact this researcher if they would like to volunteer. Potential participants were directly contacted via a new e-mail thread to preserve anonymity. If the potential participant agreed to volunteer, this researcher verified their credentials via e-mail. The participant was then provided with informed consent and disclosure documentation, which included assurances of anonymity, ensured voluntary participation, and contained all applicable paperwork and other necessary documentation. This documentation included clear instructions regarding the participant's right to withdraw from the study at any time with no adverse actions taken. Once 10 acceptable participants were identified, vetted, and approved, these 10 individuals made up the sample population. Two additional alternates were identified to prevent a break in the study should a participant have withdrawn.

### **Data Analysis Procedures**

In general, the study analyzed the data according to an accepted methodology involving transcriptions and further analysis (Creswell, 2018; Leedy & Ormrod, 2016). OtterAI software converted the interview audio files into text. The audio files were uploaded to the secure server and converted into text files that the researcher could then verify against the audio transcript. After the researcher verified the text files via comparison to the audio files, the researcher established themes by hand per Levy et al. (2016). Data items, including themes, subthemes, and keywords, were separated into graphical and narrative constructs for further analysis.

After member-checking the interview transcripts, the researcher read each transcript, word for word, highlighting any words or phrases that would require "bolding, underlining, italicizing, highlighting, or vocal emphasis if spoken aloud" (Saldana, 2016, p. 107). Once highlighted, the researcher used the participant's own language to capture the meaning of the provided data via a short code, consisting of three to five words. Some codes were assigned for every line of data, while some codes were assigned for every three to five sentences, depending on the participant's response (Saldana, 2016).



After completing this process, the researcher compiled the data codes in an outline format, grouping codes logically with overarching themes and subthemes (Saldana, 2016). Once the data repeated themselves, the data was seen as having reached saturation. The resulting outline captured codes from both the interview transcripts and survey results. This outline served as the basis for result analysis.

The researcher then loaded interview transcripts into Dedoose, a qualitative analysis computer program, and compared the results against the hand-coding the researcher previously accomplished. The researcher reconciled slight differences in coding terminology by hand. This second coding exercise provided trustworthiness and a crosscheck of data (Leedy & Ormrod, 2016). Using the master outline developed by hand and checked via Dedoose, the researcher proceeded with thematic analysis. In other words, once all data were coded and reached saturation, the researcher formulated themes via an outline methodology. This process yielded reportable findings (Levy et al., 2016).

## Findings

**Table 1: Major Themes and Subthemes**

Themes and Sub-themes	Data Characteristics	
	Percent	Intrinsic Extrinsic
<b>Personal Motivators (PM)</b>		
PM1: Fair Wages (Comparative Value)	100%	x
PM2: Sense of Accomplishment	100%	x
PM2a: Meaningful Work	70%	x
PM3: Job Satisfaction	100%	x
PM3a: Recognition/Appreciation	100%	x
PM3b: Challenging Work, Stretch assignments, Growth	100%	x
PM4: Individual Development Plan	100%	x
<b>Personal Demotivators (PD)</b>		
PD1: Lack of Recognition	20%	x
PD2: Poor Team Dynamic/Conflict	40%	x
PD3: Unhealthy Stress	60%	x
PD4: Feeling Stagnant, Burnout	50%	x
<b>Project Environment Motivators (PEM)</b>		
PEM1: Strong Project Leadership	100%	x
PEM2: Healthy Team Dynamic	100%	x
PEM3: Clear Expectations and Communication	100%	x
<b>Project Environment Demotivators (PED)</b>		
PED1: Poor Team Dynamics	70%	x
PED2: Poor Project Leadership	100%	x
PED3: Lack of Recognition	60%	x
PED4: Feeling Stagnant, Burnout	60%	x
<b>Notable Exceptions (non-answers)</b>		
(1) Salary (Objective Number)	100%	x
(2) Bonuses (Untailored)	100%	x
(3) Rewards (Untailored)	100%	x

Table 1 shows the data breakdown by major theme and subtheme and the percentage of participants that identified the factor in question during the interview process. The table also identifies each factor as an extrinsic or intrinsic factor, which is an important consideration given the research from McLeod (2018) and Sammer (2018), both of whom found that top-tier workers were more likely to be motivated by intrinsic factors rather than extrinsic.

This data strongly correlated with Maslow's (1943) hierarchy of needs, Mayo's research (1945), McGregor's (2006) theory X and theory Y, and Herzberg's Hygiene theory (Herzberg, 2008). The data also reinforced Flowers' and Hughes' Satisfaction and Environment theory (Flowers & Hughes, 1973). In short, the data in Table 1 conveys compliance with all major theories regarding top-tier employee motivation. The notable exceptions clearly demonstrate that top-tier workers are not motivated by untailed monetary rewards or the objective value of salary. In short, the findings are what one expected and are per the body of literature surrounding this topic.

The final visual data analysis aid is Figure 4, a packed word cloud with subcodes. This word cloud provides an intuitive visual method by which to ascertain the dominant themes and subthemes resulting from data analysis (Saldana, 2016). In other words, one can quickly see the more important factors to the participants by seeing the size and position of the theme in question. Each phrase is a theme or subtheme, and its size is relative to the weighting the participant put on the factor or the number of times the factor was coded. Furthermore, the positioning of the phrase, theme, or subtheme is relative to its importance. Thus, one can see that job satisfaction dominated the data, specifically regarding personal motivators. One can also identify poor project leadership as the leading project environment demotivator and strong project leadership as the leading project environment motivator. In short, this packed word cloud with subcodes is an efficient mechanism by which to both convey and simplify complex ideas and themes (Saldana, 2016).

**Figure 4: Packed Word Cloud with Subcodes**



## Discussion of Study Findings

These findings reflect the results of a qualitative case study regarding how to reduce turnover intention among top-tier employees among aerospace firms in Denver, CO. As such, these findings are specific to this paradigm. Specifically, the interview protocol is intended to evoke specific findings regarding motivators and demotivators for each participant (Bowen, 2016). In this case, the participants' responses neatly divided themselves into four major themes: personal motivators, personal demotivators, project environment motivators, and project environment demotivators. Interestingly, nearly all identified personal motivators and demotivators were intrinsic, while nearly all project environment motivators and demotivators were extrinsic.

This phenomenon aligns with Chamberlain's (2017) findings, who found that top-tier employees are more likely to be intrinsically motivated. Additionally, both McLeod (2018) and Sammer (2018) found that top-tier workers were not only more likely to be intrinsically motivated, but that it is similarly important to eliminate negative extrinsic factors. Further analysis reveals a reinforcement of Chamorro-Premuzic and Garrad's (2017) findings, who uncovered that salary's role as a motivator for top-tier employees tends to extend only to comparative fairness rather than the objective number of income. In other words, top-tier employees tend to see income as it compares to other top-tier workers, not the raw value, which agrees with findings from Arnulf (2014).

Job satisfaction (PM3) as a personal motivator is clearly a leading theme in the data, as seen in Figure 4. The associated sub-themes of recognition and appreciation (PM3a) and challenging work (PM3b) are inherent in job satisfaction, as evidenced by being cited 56 times in conjunction with job satisfaction. This finding conforms with Hernick's (2017), who found that job satisfaction, teamwork, and strong project leadership was critical when motivating top-tier employees. Job satisfaction as a key contributor to top-tier employee motivation is also a key component of Deci and Ryan's Self-Determination theory (Deci & Ryan, 2008).

Strong project leadership (PEM1) and poor project leadership (PED2) are, perhaps, the two most critical themes gleaned from the data. Shontz (2016) found that one of the project manager's key leadership roles was managing the teams' occupational stress, work-life balance, and job satisfaction by utilizing a combination of transformational and transactional leadership techniques. This description of project leadership encompasses all of the motivator and demotivator codes. Kronos (2017) listed "burnout" as a leading contributor threat to building a team with healthy dynamics (trusting, supportive, healthy conflict). The data also suggests that burnout (PD4, PED4) is important to top-tier employees. Bond (2017), Seyedsafi (2017), and Sudha et al. (2016) also reinforced the idea that transformational and transactional leadership

traits combined lead to a greater chance of project success, including a lower turnover intention among top-tier project members.

Furthermore, Schmid and Adams (2008) identified some of the predominant factors in establishing and maintaining high functioning teams as ongoing respectful communication (PEM3), a transformational leadership characteristic. Another critical component of project leadership is the possession of hard skills (project administration) and soft skills (EI, EQ), which are of equal importance to top-tier employees (Grisales & Lopez, 2011). Also of note, the data reinforces Herzberg's Hygiene theory (Herzberg, 2008), which states that project leaders should focus more on avoiding demotivating top-tier workers rather than actively attempting to motivate them (PED3, PED4). This theory was echoed by Bond (2017), who documented a relationship between project success and a lack of demotivation. Shaw (2017) also found that a lack of demotivation was critical to high-functioning teams. In other words, employees' personal and project environment motivational factors are ultimately the project manager's responsibility.

The individual development plan (PM4) is of particular importance, as it was the most heavily weighted and identified of the personal motivators (PM). Identified by 100% of participants and generally weighted heavily in terms of importance, the individual development plan is critical to motivating top-tier employees. In furtherance of Zago's (2019) findings, the data confirmed that the top-tier employees interviewed unanimously desired a specific individual development plan during this case study. This plan was to be developed in conjunction with a mentor or otherwise knowledgeable individual within the company. The plan would contain specific developmental goals, complete with specific skill sets, jobs, and timelines. The data, therefore, support the findings of both Kontoghiorghes (2016) and Zago (2019), who rank individual development plans as critical for motivating top-tier employees.

Notable omissions in the data include salary as an objective number, untailored bonuses, and untailored rewards. Participants continually noted that comparative salary was important. However, the actual value of the salary was typically unimportant to them.

In other words, it is the comparative value of the salary that is important to top-tier employees, not necessarily the number. Other comments noted that bonuses and rewards tailored to a specific accomplishment were meaningful and motivational, but that blanket bonuses and rewards received after the fact did not tend to be impactful. These comments echo Aga's (2016) findings that contingent rewards were positively correlated with project success only if the project manager had set clear goals and expectations and tied the rewards and bonuses to the goals and expectations laid out previously.

## Discussion and Conclusions

### Limitations of Study Findings

Study limitations are factors that constrain findings due to methodological or data analysis limiters inherent in the research design, in addition to limiting factors that may arise during the study process (Leedy & Ormrod, 2016). In the case of this study, the researcher intended to triangulate the data using internal study results and exit interview data from Company X. Unfortunately, that information was deemed to be proprietary and, therefore, non-releasable to the researcher. Therefore, this study's data is not triangulated via external findings (other than the previous research noted in previous sections) (Yin, 2018).

Another possible limitation of this study was sample bias, given that the sample size was 10 interviews. With a relatively small sample, the researcher took precautions in the form of purposeful selection to prevent bias, which could have occurred if a lack of selection criteria skewed participant selection or responses (Leedy & Ormrod, 2016). The researcher found that participant responses were well within the norm for this study, with no notable outliers. A possible related limitation was a failure to reach data saturation. However, this limitation is not applicable, as data saturation was confirmed during data analysis to have occurred after the sixth interview.

A common critique of the case study methodology is the reality that results are generally not applicable outside of the case study setting (Yin, 2018). The same characteristics of a case study (a holistic, in-depth examination of a potentially complex problem) lead the results to be relatively specific to a given set of circumstances surrounding the event or phenomenon in question (Yin, 2018). This inherent limitation of the case study is present and cannot be easily mitigated. Therefore, this study's results are specific to top-tier aerospace project team members at Company X in Denver, CO. In other words, it would be inappropriate to apply these findings directly to another population or industry. However, the conclusions and implications can be indirectly applied to other industries and populations as an advisory tool, within reason (Saldana, 2016).

An appropriate application of this study's findings to another industry or population would be using them as a discussion point or launching point for further investigation within the context of the applicable target industry or population (Yin, 2018). The conclusions drawn from this study may benefit project leaders and organizations during transitions from single culture project teams to multicultural virtual project teams. Certainly, this study's findings support the

conclusions of prior research, which identified that contextual factors, such as the teaming environment, influence the determination of acceptable and unacceptable behaviors (Carsten et al., 2010). Undeniably, team member characteristics differ between culturally heterogeneous virtual and culturally homogeneous co-located, teaming environments (Klosterman, 2020). Certainly, both Snaebjornsson and Vaiciukynaite (2016) and Uhl-Bien et al. (2014) indicated a better understanding of team member behaviors could improve overall leader effectiveness. Global top-tier project leaders can enhance the probability of leadership success by gaining a deeper understanding of implicitly determined emic characteristics of team members (Klosterman, 2020).

In the world's current state and growing virtual environment, the results from this article include the leadership strategies with effective virtual project managers. Organizational leaders could use the results to select virtual project managers and provide leadership strategies to manage virtual teams effectively to minimize failure rates. Knowledge of the leadership strategies for virtual project managers are critical to the overall success of organizational leaders' implementation of virtual teams. Desper (2013) reported that understanding how to improve project failure rates is vital as 71% of virtual teams fail. This is extremely relevant because the popularity of virtual teams continues to increase and organizations continue to grow into global operations and perform tasks through the advancements of technology (Mukherjee et al., 2012). Desper (2013) identified numerous leadership strategies that organizational leaders should set in place for virtual team leaders to lead effectively. Some of the main categories for leading effectiveness included: (1) Hiring/Training, (2) Professionalism, (3) Knowing team members, (4) Recognition, (5) Valuing team members, (6) Setting clear goals/expectations, (7) Open communication, (8) Establish Rapport, and (9) Using appropriate technology (Desper, 2013). In summary, the knowledge gained from this article offers suggestions of leadership strategies to leading virtual teams effectively.

### **Interpretation of Study Findings**

The study's findings are rooted in the idea of project management leadership. Project management leadership is the practical application of both hard and soft skills in the pursuit of project success (Grisales & Lopez, 2011; Schmid & Adams, 2008). The hard skills of project management include ensuring that projects are completed within scope, cost, and schedule (the "triple constraints"), and include skills such as scheduling, contract management, procurement management, risk management, critical path analysis, quality management, monitoring and controlling, planning, cost analysis, change management, and other associated talents related to the practical administration of a project (PMI, 2017). Project management's soft skills are those talents related to leadership, motivation, communication, conflict management, making



decisions, building trust, creating a healthy team dynamic, and overall organization (Kerzner, 2018; PMI, 2017).

As seen in the findings section, top-tier aerospace project members at Company X in Denver, CO, are overwhelmingly personally motivated by intrinsic factors. Even the one extrinsic factor, PM1 (fair wages), was only described as a motivator insofar as a comparative measure. The other factors (sense of accomplishment, meaningful work, job satisfaction, recognition/appreciation, challenging work, IDP) were deemed critically important to the participants. Even though these personal motivators are intrinsic and highly personal, the participants were unanimous in describing them as related to the tenets mentioned earlier of project management leadership. Personal demotivators (lack of recognition, poor team dynamics, unhealthy stress, stagnation/burnout) were also predominately intrinsic and associated by the participants as the result of poor project management leadership.

Interestingly, project environment motivators (strong project leadership, healthy team dynamic, clear expectations and communication) were also highly correlated to project management leadership by the participants. These extrinsic factors were unanimously cited as critical to overall top-tier employee motivation. Project environment demotivators (poor team dynamics, poor project leadership, lack of recognition, and stagnation/burnout) were highly correlated by the participants (ranges from 60%-100%) to poor project management leadership and increased risk of turnover by top-tier employees. The notable exceptions (salary, untailed bonuses and rewards) are also related to project management leadership and tend to corroborate Aga's (2016) findings regarding the relatively low impact of untailed rewards on top-tier employee motivation.

Using the conceptual framework as a lens through which to view project management leadership, the participant responses clearly establish all aspects of a project as the project manager's responsibility. The theoretical literature firmly stated that project managers are responsible for leading the team, resolving conflicts, motivating team members, facilitating the emotional well-being of employees, and successfully administering the project (Mintzberg, 2009; Northouse, 2018; Shamma, 2017; Trejo, 2016). The contextual literature suggested that project managers are responsible for not only managing the triple constraints of a project, but also turnover intention, employee perception, and other soft skills associated with successfully completing a project (Boss, 2018; Bowen, 2016; Kerzner, 2018; PMI, 2017).

It is important to note that the findings suggest that all personal motivators, personal demotivators, project environment motivators, and project environment demotivators, regardless of whether extrinsic or intrinsic, are under the project manager's purview (Bolino & Klotz, 2018; PMI, 2017). This association is not necessarily described as causative by the

participants but is rather described as one of responsibility. For instance, it may not be the project manager's fault that an employee faces administrative hurdles that contribute to burnout, but it is the project manager's responsibility to address the hurdles and alleviate the concern. Therefore, every aspect of a project team member's motivational basis is the project manager's responsibility. Thus, the conclusion and primary answer to the research question (what motivational techniques are most effective for a project manager to use to reduce voluntary turnover rates among top-tier aerospace project members in the Denver area?) is strong project management leadership, including the subsets of associated skills.

### **Practice Implications of Study Findings**

The practical implications of these findings are straightforward. All aspects of a project are the project manager's responsibility, including employee motivation (Abyad, 2018). Table 1 clearly shows that top-tier aerospace project members at Company X in Denver, CO expect their project managers to possess the necessary hard skills to effectively and efficiently administer a program, as well as the soft skills to establish a desirable work environment (PMI, 2017). These considerations can be grouped under the heading of strong project management leadership (Bennis et al., 2015).

Given these facts, the implications for practicing aerospace project managers in the Denver, CO area include the reality that adopting a philosophy of strong project management leadership will reduce turnover intention among top-tier employees. Strong project management leadership includes the traditional baseline skills of administrative project management (contract management, scheduling, critical path analysis, procurement management, monitoring and controlling, risk management, quality management, planning, cost analysis, change management, and similar skills) (PMI, 2017). Strong project management leadership also involves the soft skills of project management and leadership, including a mix of transactional and transformational leadership, clear and concise communication, effective conflict resolution, prompt decision-making, building team trust, creating a healthy team dynamic, and overall organization (Desper, 2013; Ford, 2020; Northouse, 2018; PMI, 2017).

Furthermore, project managers for aerospace companies in the Denver, CO area would be well-advised to do the following to reduce turnover intention among top-tier employees: clearly establish expectations at the beginning of a project, ensure top-tier employees are being compensated fairly and appropriately, provide challenging and meaningful work, ensure that employees are appropriately recognized for their accomplishments and work, facilitate a healthy team dynamic, resolve conflicts quickly and appropriately, actively prevent employee stagnation and burnout, and institute a detailed individual development plan (with specific timelines and

goals). It is important to note that project managers should communicate with top-tier employees regarding all these facets, as specific employees will desire different approaches. For instance, regarding recognition, some participants desired public praise, while others did not.

## **Conclusion**

The problem this study addressed was how near all-time high turnover rate among top-tier employees (Boss, 2018; Cook, 2017) has a disproportionately detrimental effect on project health (Project Management Institute, 2017; Wallström et al., 2012) and how to mitigate this problem using project management strategies to reduce turnover rates of nearly 10% among project members earning \$75,000 or more per year (Alkhatib, 2016; Alton, 2016; Boss, 2018; Dmitrieva, 2018). This problem is significant because top performers disproportionately impact the probability of project success, with top-tier workers providing nearly 400% more productivity than their counterparts and costing nearly 250% of annual salary to replace (Boss, 2018).

A literature review conclusively linked overall corporate success to project success, project success to top-tier employee performance, and top-tier employee performance to motivation (Cook, 2017). There was a gap in the literature surrounding the specific methodologies and strategies concerning motivating top-tier employees at aerospace firms in the Denver, CO area (Bowen, 2016; Ojo, 2018). This study's findings helped fill this gap and found a focus on strong project management leadership as being critical to reducing turnover intentions among top-tier aerospace project members in Denver, CO. Strong project management leadership was defined as the phenomenon in which the project manager possesses both hard and soft skills and creates an effective and efficient project environment in which team members can leverage intrinsic motivation to achieve higher needs.

The specific findings of this study suggest that the research population is highly motivated by a project manager clearly establishing expectations at the beginning of a project, ensuring top-tier employees are being compensated fairly and appropriately, providing challenging and meaningful work, ensuring that employees are appropriately recognized for their work and accomplishments, facilitating a healthy team dynamic, resolving conflicts quickly and appropriately, actively preventing employee stagnation and burnout, and instituting a detailed individual development plan.

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## About the Authors



**Dr. Steve Ford**

Colorado, USA



**Dr. Steve Ford** holds a Bachelor of Science from the US Air Force Academy (2004), a Master of Science from the University of North Dakota (2009), and a Doctor of Management with a concentration in Project Management from Colorado Technical University (2021). Steve is currently the managing member of Advanced Applied Project Management Solutions (LLC), a project management consultant firm. He holds numerous project management-related qualifications, including Project Management Professional (PMP), LEED AP (BD+C), Lean Six Sigma Black Belt Professional, Project Management- Lean Process Certified, Lean Supply Chain Management Certified, and Lean Culture Certified. He has more than 20 years of aerospace and construction experience in project management. He can be contacted at [Steve@aapms.net](mailto:Steve@aapms.net)



**Dr. Deane Desper**

Georgia, USA



**Dr. Deane Desper** holds a Bachelor of Science in Management from National Louis University, a Master of Business Administration from South University, and a Doctor of Business Administration (specializing in leadership) from the Walden University. Also, Dr. Desper has a Project Management Professional (PMP), Lean Six Sigma Black Belt (LSSBB), SCRUM Foundations (SFPC) certification. Dr. Desper is a TRIDENT Fleet Support manager and has worked and managed supply chain, logistics, and business projects for the federal government for more than 25 years. Expertise includes the U.S. Navy as a Supply Officer followed by work as a defense contractor in support of TRIDENT submarines. Dr. Desper serves as a research supervisor with Colorado Technical

University. Dr. Desper has also served as an adjunct professor from undergrad courses through doctoral studies and on dissertation committees at various organizations. He can be contacted at [desper.deane@yahoo.com](mailto:desper.deane@yahoo.com).



### **Dr. Kenneth Klosterman**

Colorado, USA



**Dr. Kenneth Klosterman** holds a Bachelor of Science in Business Administration (BSBA) and a Master of Science in Management (MSM) from Regis University in Denver Colorado, a Master of International Management (MIM) from Colorado State University's Global Campus, and a Doctor of Management (with an emphasis in global leadership) from Colorado Technical University. Dr. Klosterman is currently the Senior Director of Global Strategic Initiatives at PGI and has over 25-years' experience in the Conferencing, Collaboration, and Meeting Service industry. Dr. Klosterman serves as an Assistant Professor with Colorado Technical University for both undergraduate and graduate business and leadership courses. He can be contacted at [Dr\\_Klosterman@yahoo.com](mailto:Dr_Klosterman@yahoo.com).