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**Impact of Leadership in
Project Management**

By

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Advisor: Mr. Justin Shipp

**An Honors Thesis in partial fulfillment of the requirements for the degree Bachelor of
Science in Business Administration in Finance and Information Systems.**

**Sam M. Walton College of Business
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Fayetteville, Arkansas**

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Introduction to Project Management

Today's business environment demands effective project management for enterprises to meet their goals and continue to be innovative. Inherently, this also means that project managers must have strong leadership skills. Project management provides a framework of techniques that provides a symbiotic relationship between both the framework and the leader. The idea behind project management is to complete objectives efficiently within a certain time period given a restricted number of resources. This means project management is a process of principles, tools, and methodologies used to effectively manage a team through the System Development Life Cycle. The System Development Life Cycle (SDLC) is made up of six parts. These include identifying the problem, planning, and monitoring the project, discovering, and understanding the problem, designing system components to solve the problem, build/test/integrate system components, and implementing the solution. There are many methodologies such as XP, SCRUM, or Agile, but we must first understand the importance of project management principles.

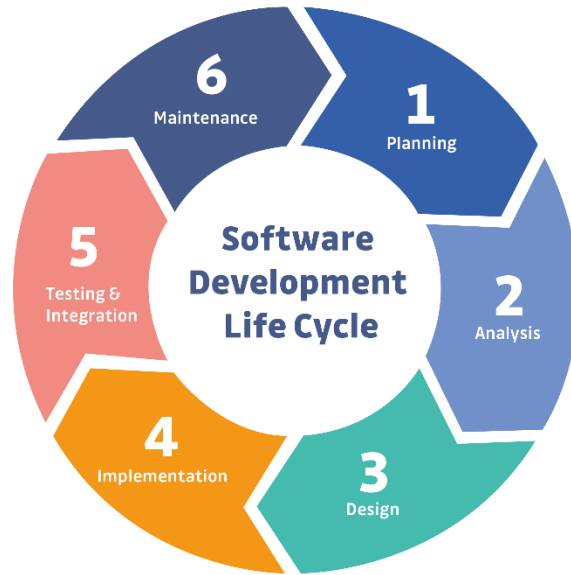
Project management is a structured approach to achieving specific goals given finite time and resources. This means that project managers must remain cognizant of a few core principles. Firstly, a project manager must remain goal-oriented. This means defining and understanding business needs and translating this into technical documentation, rather this be activity diagrams, use case diagrams, or user stories. Ultimately, it is the project manager's job to plan project objectives from beginning to end and allocate tasks. Project managers may use RACI or Gantt charts to effectively manage time and task allocation. Limited resources is another core principle. Companies will only have a finite number of resources. Resources can be tangible or intangible, but project management must understand this limitation prior to beginning a project, which is why scoping is so important. Additionally, project decisions come with risks. Quality risk management is necessary to determine if a project might be worthwhile or not. Both qualitative and quantitative skills must be defined. A variety of tools are available at your disposal to determine risk, such as risk matrices or risk estimation. Your team might not have the right skills available, your team could be overloaded, or the project may not be profitable. Additionally, investors and stakeholders want to engage in profitable endeavors, which is why effective cost-benefit analysis is critical prior to beginning a project. A project must also be divided into functional and non-functional requirements, which means that the project must be secure, usable, reliable, available, and maintainable. Defining functional requirements requires determining user requirements while non-functional requirements should be implemented in the plan before development. Project managers must also be effective in cross-functional teams, which is why strong leadership and communication among a projects various stakeholders is key.

Project Management Processes and Frameworks

The SDLC is a critical understanding in Project Management and a process that will be used redundantly. The SDLC is a structured approach to software development and an integral part of project management. In this section, we will dive into the significance of SDLC process and integral aspects of project management frameworks.

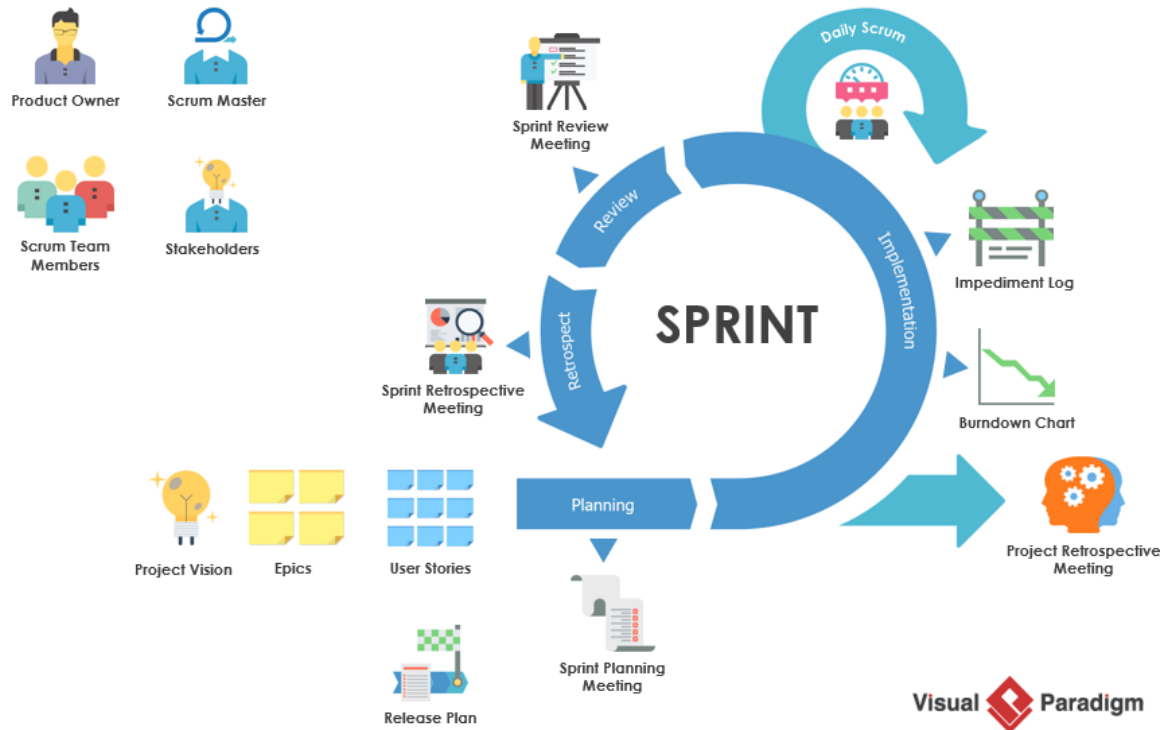
After the project manager has identified a problem, they must consult with stakeholders for potential solutions. During project initiation, identifying the scope of the project, identifying key objectives, and identifying business use cases are some of the roles a project manager will oversee. It is crucial for obtaining initial approvals, support, and financing. Tasks will include project vision documentation, stakeholder identification, and feasibility studies. Next comes project planning, where the team develops an extensive plan for the completion of the project. This plan will outline the scope, schedule, budget, quality/acceptability criteria, and risk associated with the project. It is important to emphasize that many of these things should be done to a lesser degree prior to choosing a project for effective cost-benefit analysis. The project manager must remain adaptable as plans will change, but this should not allow for scope creep.

Team members should have a good understanding of the problem and how to complete tasks at this point, which leads us to project execution. This is where the team will work together to complete tasks, manage resources, and monitor progress. Understanding and completing tasks with quality acceptance criteria is vital for the success of this phase, and where the majority of work and adaptation amongst the team will take place. The project manager should be ready to lead, ensure team communication, and reallocate resources as necessary. Project monitoring/controlling should take place during all phases of project development. This is where the project manager meets with the team and stakeholders regularly to ensure that project goals are aligned with stakeholder requirements and that these goals are effectively communicated with the team. Project managers should be aware and adjust to challenges such as scope creep, resource constraints, communication breakdowns, and technological challenges. Ultimately, this should lead to project implementation, where the project should be completed and delivered. Developers should be ready for potential bugs, changes, and maintenance in the final delivered product. Depending on the terms and conditions of the agreement made prior to development, this will be the final stage in the SDLC, otherwise maintenance of the system will be required.



There are many frameworks that are used in project management, but agile is the most popular as over 70% of U.S. companies use this framework. Additionally, agile projects have a 64% project success rate as opposed to the second most popular framework, waterfall, which resides at a 49% project success rate. Agile foundations can be used in a variety of business functions such as R&D, operations, marketing, sales, HR (Human Resources), Finance, not just software development. Scrum is the most common form of Agile with 61% of respondents claiming that they use the framework. Scrum is defined as a “lightweight framework that helps people, teams, and organizations generate value through adaptive solutions for complex problems”. Roles in a nutshell include a Product Owner who creates a product backlog, a Scrum Master who creates a sprint backlog, and the scrum team that works on sprints. These roles make up a small team of individuals who work towards a common goal. These teams are to be cross-functional, which means that all members have the necessary skills required to create value, as well as self-managing. The idea of Scrum is to be a flexible framework that is as useful as the collective intelligence of the individuals that use it. This allows for a variety of processes and methods to be used. Transparency, inspection, and adaptation are key to Scrum artifacts. Scrum teams should remain below 10 individuals, otherwise they should be split into multiple Scrum teams working on 1 project. These teams should be supported by the organization to work towards common goals and are responsible for creating value in each sprint. Teams should meet regularly to discuss scope and each role, particularly the Scrum Master and Product Owner, should be sure the product goals are transparent and being met. Aside from project roles, teams should meet through daily standup and sprint retrospective. Scrum is not the only agile framework, but its flexibility and principles allow for use in many business contexts.

The Agile – Scrum Framework



Despite the benefits of following SDLC and Agile principles, project managers must prepare for its many challenges. Scope creep is defined as uncontrollable changes to the project's scope that can result in overloading of team members, schedule delays, and budget overruns. Managers must remain on course with a project's scope and stick to a product backlog. Resource scarcity can be another challenge. This is where limitations such as skilled workers, budgets, data, or other resources can be prohibitive to the success of a project. Project managers should do their due diligence prior to project initiation and determine project feasibility while not allowing scope creep during the project. Lack of communication is an additional challenge that faces individuals at every level throughout the project. Poor communication can lead to misunderstandings and reduce the value of projects. Not understanding business goals and project managers who do not communicate with them effectively can result in breakdowns throughout the project. Project managers should remain vigilant and create a plan for regular meetings. Technological change can also present a threat. Technology is rapidly changing and can influence the direction or requirements for the duration of the project. This may cause stakeholders to want additional features or create additional scope creep. Technological changes are hard to predict but the agile framework allows for the flexibility needed to adapt in a constantly changing environment. Project managers should also be sure to manage the risk associated with a project. No investment decision goes without risk, and this goes for projects as well. These risks should be identified prior to project initiation and be accounted for throughout the project. Confounding risks may be associated with the project, so effective monitoring and

controlling is essential. There are many additional challenges that may strain a project manager's leadership ability, which is why they must remain attentive to the needs of all stakeholders, be adaptable, and create structure for their team.

The importance of understanding project management and its principles cannot be understated. The Software Development Life Cycle (SDLC) and Agile frameworks, such as Scrum, provide structured approaches to project development. Choosing the right framework for the task at hand and adapting it to the needs of the business are critical for achieving project success. Not every project will use the same processes, techniques, or methods, so adaptability and flexibility are key. Effective implementation of these frameworks and principles allows project managers to effectively navigate challenges, maintain project scope, and drive innovative value for their respective enterprise.

Qualities of a Strong Business Leader

The world of business is dynamically evolving and getting increasingly competitive, which is why effective leadership is key. Strong leaders in business are instrumental for steering teams through challenges, inspiring others, fostering innovation, and driving achievement of strategic goals. Managers are responsible for monitoring and completing goals from strategic planning to operational achievement. The difference between a leader and manager is their ability to motivate and influence employees to achieve goals. Managers, on the other hand, aim to control a team in order to meet organizational objectives. Generally, leaders are more likely to achieve greater outcomes than that of managers, which is why understanding the qualities and role of these individuals is critical to any aspiring businessperson.

Depending on your level in the organizational hierarchy, a leader needs to have the ability to think about the firm's overarching vision and be able to think strategically. A company vision defines its primary long-term goals and a firm's strategy are the initiatives a firm takes to achieve these long-term goals. Any great business leader has the ability to envision a future for the company and inspire a sense of direction in others. Strategic thinking allows leaders to anticipate market trends and find opportunities to make informed, data-driving decisions that align with the organizational vision. Coupled with this comes effective communication, which is critical for employee's understanding of a company's vision and motivation to complete shared objectives. Strong business leaders excel in articulating goals, ideas, and standards to others. Rather it be employees, stakeholders, or executives, business leaders understand how to tailor their messages to their respective audience. Leaders are not only good communicators, but also good listeners. They should actively listen to others, encourage open dialog amongst the team, and foster an environment where diverse perspectives are appreciated. A leader should be committed to creating an environment that enhances a team's collaboration and keeps everyone aligned with goals that provide organizational value.

Decision-making is probably one of the hardest skills for a leader to master and often comes with experience. In the modern, fast-paced environment of business, leaders need to make both timely and well-informed decisions. This ties in with a leader's analytical/problem-solving skills and should be able to deduce a course of action given all available information. They need to be able to analyze situations, evaluate alternatives, and choose a course of action that aligns with the organizational vision. Making good decisions in a hectic situation can be difficult, but it is a leader's job to navigate through complex challenges and keep a stoic composure. This is key to maintaining a team that has confidence in your decisions and trust amongst others. Building a high-performing team is a critical responsibility of any business leader and it is their job to understand what motivates each individual. Motivation is a difficult concept as everyone is unique in what encourages them to perform each day. Some types of motivation include intrinsic and extrinsic rewards, achievement, affiliation, and power among others. As a leader, it is their role to understand their source of motivation and harness the diverse strengths of each team member. To improve the moral of a team and help individuals overcome their obstacles, leaders should make it understood that success is a collective effort and should invest in a collaborative, encouraging environment.

Leaders should also be adaptable and resilient to change. Change is inevitable in the business world, especially due to the advancements in technology. Rather the firm is fluctuating in the markets, competitors are making technological breakthroughs, or another type of risk to a firm's strategy, good leaders can pivot and make the best out of suboptimal situations. Resilience is key for any leader and should view setbacks as opportunities for improvement. This should be emphasized among the team to preserve motivation and inspire their team to navigate uncertainty. Ethical behavior and acting with integrity are foundational. Any business leader should prioritize ethical decision making to foster a culture of trust and transparency with an organization's various stakeholders. Any integrity concerns should be addressed, and individuals should be held accountable for any breaches. An ethical leader not only holds others accountable, but also themselves. General standards for themselves and their team includes honesty, fairness, accuracy, respect, and loyalty.

Finally, one of the biggest things that separates the average from top performing leaders is their ability to think innovatively and take well-informed risks. Strong leaders foster a culture of innovation and encourage informed risk-taking within the organization. The failure to recognize industry trends and innovation will cause a growth company to reach maturity or potentially even decline. By supporting ideas that might involve some calculated risk, leaders stimulate creativity and initiative in their firms. In financial terms, firm managers should invest in projects that have a positive NPV, an IRR that is greater than its WACC, or a DCF that's greater than cost. Additionally, high growth firms with a high ROC should not be paying excess cash flows to dividends or stock buybacks. Managers should know the requirements, considerations, and risks when taking on projects, but investing in innovative projects aligning with an organizational vision are critical to the firm's growth, development, and longevity.

Aside from the various qualities of leaders, there are also many types of leaders. There is no one type of leader that is best as they all serve their purpose and have had varying successes. Some of these types include Transformational leaders who tend to be inspiring of the long-term vision and unite the team under one goal, Laissez-Faire leaders who tend to be hands-off and delegates authority to team members, Democratic leaders who encourage collaboration in the decision-making process, Strategic leaders who focus on the long-term strategy and vision of the organization, and Autocratic leaders who centralize the decisions and input from the team. In general, a project manager should be adaptable and be able to tap into all these types aside from Autocratic. The role of a project manager in the SDLC, Agile, SCRUM, or any other modern project management framework tends towards a leader who is vision driven, values a collaborative work environment, has the ability to motivate a team, and is an organized, strategic thinker.

Leadership is a multifaceted role where many combinations of various qualities can produce effective leaders. There are many other qualities, such as empathy, delegation ability, time management, accountability, the ability to sell and negotiation among others, but the ones covered in depth are core qualities that are often overlooked. By embodying these qualities, leaders can successfully navigate challenges they will face in their business careers and inspire their teams to contribute value to the firm's overarching vision. Leadership is a broad term that is highly desirable to organizations and their success.

Pivotal Qualities of a Project Manager

In the world of project management, the project manager's role is critical to the project's organization and success. Successful project managers do not just delegate, create backlogs, or generate tasks, but are the bridge between the stakeholders and the team. Project managers must exhibit many of the leadership qualities mentioned prior in addition to their technical abilities. Skills such as communication, organization, and time management will be particularly strained in a project manager's role.

As mentioned before, project managers must be versatile in their skillset. They need a combination of both hard skills and leadership. While guiding and motivating their team, they need to effectively communicate stakeholder requirements for a technical understanding. This is usually done through technical documentation. Project managers will need to be adaptable throughout the project lifecycle to ensure requirements are met and teams complete their objectives. This ties in with communication, which is an essential skill. Project managers need to be able to communicate with stakeholders to understand the project's vision and be able to communicate these goals, expectations, and changes to their team. In addition to project initiation, the project manager will continue to have regular meetings with stakeholders to correct errors or change direction, which leads to another skill of adaptability.

Projects will often times have unplanned challenges. Project managers must keep a level head and adjust plans, reallocate resources, or change strategies to resolve the issue. Good organizational skills with a solid plan will reduce potential challenges. Project managers must be highly organized to manage timelines, resources, and deliverables effectively. They should create extensive project plans, monitor progress, and ensure that tasks are completed on time. There are lots of tools and technical documentation project managers must keep up with, so organizational ability is an absolute must for those in this role. There are lots of risks associated with project development and it is the project manager's responsibility to plan for these ahead of time. This includes time management and avoiding scope creep, planning for operational risk, financial risk, market risk, regulatory risk, and strategic risk, among others. Identifying these risks during project planning will reduce unforeseen challenges and mitigate project risk. A strong project manager will be proactive in identifying potential risk and have strategies stated within their plan on how to minimize the impact of these risks.

The ability to solve problems is a common skill needed by anyone in a leadership position, and this is no different for project managers. Project managers will run into a variety of issues during the project development process. Their ability to resolve these challenges by analyzing problems, identifying root causes, and implementing effective solutions is essential to the success of the project. Project managers are also team builders. Building a diverse and motivated project team is a primary responsibility. Project managers should foster a positive team culture, encourage communication, identify the strengths and weaknesses of the team members, and delegate accordingly.

Importance of Leadership in Project Management

As discovered in the prior two sections, leadership is critical in project management and there is a lot of overlap between successful leaders and project managers. Leadership is a core quality that a project manager must possess and separates a project leader from a mere coordinator. Effective leadership in project management transcends the conventional understanding of authority; it is a nuanced orchestration of vision, communication, adaptability, and motivation.

The core of project management starts by setting a compelling vision for the project. This includes covering project requirements with various stakeholders and communicating these to the team. The project manager should provide a clear and inspiring vision that navigates the team through the intricacies of the task while instilling a sense of purpose. This vision serves as a guiding light that aligns the team's efforts with the organization's overarching goals while fostering a collective understanding of the project's significance.

Communication is the lifeblood of leadership in project management. The ability to convey the vision, project goals, and expectations with clarity is pivotal. Effective leaders ensure that team members comprehend the project's purpose, their individual roles, and how their

contributions interconnect. Beyond articulating expectations, adept communicators in leadership positions such as project management also value active listening, open channels for feedback, and maintaining an environment where every team member feels heard.

Adaptability emerges as another critical facet of leadership in project management. Projects rarely unfold as they were planned, no matter how rigorously a project manager tries. Leaders are adaptable in times of uncertainty and adapt to changing circumstances, unforeseen challenges, and shifting priorities. An adaptable leader navigates these challenges with a strategic mindset, steering the team through uncharted waters without losing sight of the project's ultimate destination.

Motivation is another crucial ability of a project manager and is absolutely pivotal to the success of a project. The ability to motivate oneself and their team is the most powerful tool a leader has and separates managers from leaders. A leader's capacity to inspire, encourage, and instill confidence in the team fuels a collective drive toward success. Motivational leadership transcends the occasional pep talk; it involves making individuals feel valued, recognizing team achievements, fostering a positive team culture, and providing the support necessary to overcome obstacles. It is absolutely paramount that teams feel valued; teams that feel as if they are valued, are having an impact, and are closely aligned to the overarching vision tend to have stronger retention rates and fewer project failures.

In essence, leadership in project management is a multifaceted dance of vision, communication, adaptability, and motivation. It transforms a project manager from a mere overseer of tasks to a catalyst for collaboration and innovation. As technology advances, projects evolve in complexity, and organizations strive toward excellence, the ability to be a leader in project management not only becomes desirable, but indispensable for navigating challenges and achieving triumphant project outcomes.

Conclusion

In the intricate tapestry of project management, the symbiotic relationship between project management and leadership emerges as a defining factor in the success of organizational endeavors. Project management is more than a systematic approach to completing tasks; it is a dynamic understanding of resources, timeliness, and goals, guided by a strategic vision. Leadership allows this systematic framework to be functional, transforming the role into a journey of collaboration, innovation, and achievement.

At its essence, project management is an art of balancing constraints and risks by aligning efforts to deliver tangible results. It involves meticulous planning, resource allocation, and the continuous monitoring of a project. Yet, it is the infusion of leadership that elevates project management from a procedural exercise to a transformative experience. Leadership in project management is about casting a compelling vision that ignites passion and purpose within the

team. It is the ability to communicate this vision effectively, fostering a shared understanding that aligns individual efforts with collective goals. Successful project managers, therefore, wear the dual burden of being an adept organizer and inspirational leader, skillfully navigating the intricacies of tasks while ensuring the team's unwavering commitment to the project's overarching objectives.

The role of leadership in project management extends beyond motivation and vision; it encompasses adaptability, effective communication, and a commitment to continuous improvement. An adept leader in project management is one who can pivot in the face of uncertainty, communicate with clarity, and evolve alongside the ever-changing innovative landscape that projects entail.

In conclusion, project management and leadership are intertwined disciplines, each reinforcing and enriching the other. The success of a project manager hinges on their ability to seamlessly integrate the technological aspects of project management with the inspirational qualities of leadership. It is this fusion that propels projects beyond mere completion to true accomplishment. As organizations navigate the complexities of an evolving business landscape, the role of leadership in project management and in general remains paramount; This is the guiding force that not only ensures the efficient execution of business processes and innovative development, but also inspires the team to surpass expectations and achieve enduring success.

References

Top 5 qualities of Project Managers (n.d.).

<https://www.gracefederalsolutions.com/2022/03/15/qualities-project-manager/>

Agile Framework Tools: From Small Teams to Scaling Agile. Agile Framework Tools: From small teams to scaling agile. (n.d.). <https://www.visual-paradigm.com/scrum/from-small-teams-to-scaling-agile/>

Champion College Online. (n.d.). *The top 10 qualities of a great leader*. Champlain College Online. <https://online.champlain.edu/blog/top-qualities-of-a-great-leader>

Flynn, J. (2023, June 28). *16 amazing agile statistics [2023]: What companies use agile methodology*. Zippia. <https://www.zippia.com/advice/agile-statistics/>

Jackson, M. (2023, March 15). *Secure software development life cycle (SSDLC)*. GitGuardian Blog - Automated Secrets Detection. <https://blog.gitguardian.com/securing-your-sdlc-software-development-life-cycle/>

Schwaber, K., & Sutherland, J. (n.d.). *The scrum guide*. Scrum.org. <https://www.scrum.org/resources/scrum-guide>

Tenney, M. (2023, July 28). *The 8 types of leadership - business leadership today*. Business Leadership Today - The resource for leaders working to build and sustain world-class teams and organizations in today's business environment. <https://businessleadershiptoday.com/what-are-the-8-types-of-leadership/#:~:text=The%20eight%20types%20of%20leadership,members%2C%20and%20the%20organization's%20goals>.

Whitten, N. (n.d.). *Attributes of the successful project manager | PMI*. <https://www.pmi.org/learning/library/attributes-successful-project-manager-4797>