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## **Change Management in Sri Lankan IT Projects**

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## Thesis Abstract <sup>1</sup>

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Change management is an influential segment of IT projects due to the uncertainty of achieving the planned target. It confirms the proper use of resources, reduces risk, and ensures successful changes in managing the project scope, new requirements, time frame, and dynamic technologies. However, prior researchers have yet to investigate the issue in a similar stream. Therefore, this study tries to identify the company's successful proactive strategies considering the factors that affect the IT project's change management. Sri Lanka has been selected for the research due to technological advancement, IT industrial collaboration, and the progressive nation. Moreover, qualitative research has been accomplished on the two IT case companies following Kotter's eight-step and Adkar's models. The data were gathered by interviewing three senior project managers and conducting web surveys of forty-one IT professionals using Microsoft Teams and Forms. The study conducted a thematic analysis with Microsoft Excel to identify, categorize, and evaluate the main themes and patterns of the collected data.

Empirical findings illustrate that proper communication, training, and leadership support are influential change management factors affecting IT project success. On the other hand, maintaining a sound knowledge management system, risk assessment, identification of the necessity of the change, and obtaining approval to accomplish the changes are the company's feasible strategies considering those factors. Project managers also play a pivotal role in successfully implementing changes. Furthermore, the findings indicate that Kotter's and Adkar's models should include a new dimension of sound knowledge management systems for further theoretical development because it enhances change management efficiency, particularly in IT projects.

The study also suggests that Sri Lankan companies should implement a proper management system for knowledge allocation, risk analytics, and adaptability to succeed in any impending changes in IT projects, considering project-specific training, communication, competent leadership, and expertise. Consequently, it will assist in sustainable project transitions toward contemporary technology changes and market demands.

<sup>1</sup> Keywords: Change Management, Information Technology Project, and Project Management.

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## Terms and Abbreviations

<b>IT</b>	Information Technology
<b>CM</b>	Change Management
<b>PM</b>	Project Management
<b>BPM</b>	Business Process Management
<b>ERP</b>	Enterprise Resource Planning
<b>KM</b>	Knowledge management
<b>ITSM</b>	Information Technology Service Management
<b>PMI</b>	Project Management Institute

# 1 INTRODUCTION

This chapter provides an overview of the thesis. First, it illuminates the study background to explain the importance of change management in IT projects. Then, it identifies the research gaps based on earlier literature. Afterward, it formulates the research questions and objectives based on the identified research gaps. Subsequent sections present the study scope. The last section explains the study structure.

## 1.1 Thesis Background

The first personal computer was invented in the world in 1981 (Campbell-Kelly, 2015). It was open to use with Internet facility. Consequently, the world has transformed into a closely connected global community (Ring, 2023). Businesses are actively pursuing IT solutions to enhance efficiency and maximize profitability. Considering the Sri Lankan context, the first mainframe computer was set up in 1967 (Chandrasekera, 2012). In Sri Lanka, with an experienced and trained workforce, the information technology business is expanding at a rapid rate, and by the year 2025, it is expected to reach USD 5 billion in revenues (SLASSCOM, 2020). Organizations in Sri Lanka began to compete with companies based in other countries in the information technology industry by offering reliable services in network, hardware, security, and software.

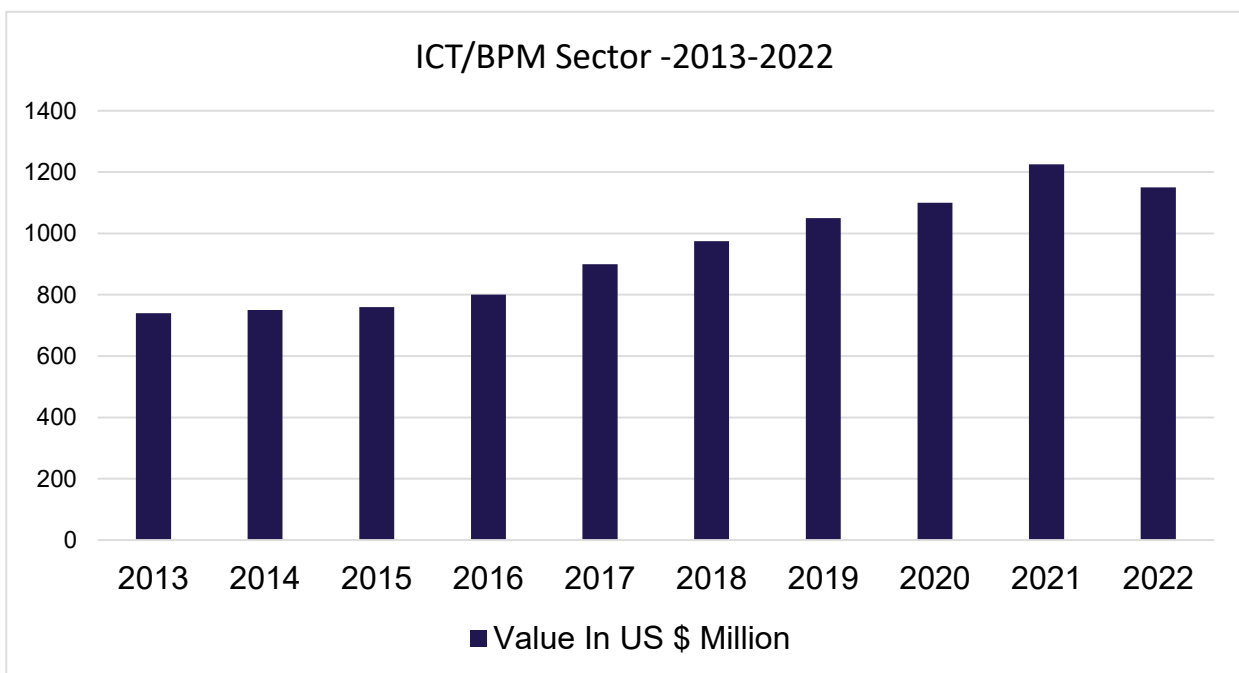


Figure 1. IT Export Performance (EDB, 2024).

However, many industries have failed in the execution of IT projects. Among them, the highest rate of failures was reported from government-executed IT projects (Parliament, 2020). Several years ago, IT project management was primarily used in the aerospace industry, focusing on quantitative approaches for scheduling and end-product quality control (Carayannis et al., 2005). However, this discipline has become necessary as the IT sector has grown rapidly. It is now widely used by enterprises worldwide to meet their information technology project goals. Project management is the strategic coordination and orderly arrangement of various tasks and activities.

Change management is a crucial field that comprises managing many changes that could occur within a project. These changes can be effectively assisted by using tools and methods (Ramosaj et al., 2014). Pollak and Algeo (2015) argue that change management is a more expansive discipline than project management because it encompasses a broader array of approaches. Evaluating change management and project management is crucial for organizations to achieve successful organizational change. Although these two disciplines have different methodologies and emphases, they are essential in ensuring that persons and activities are aligned toward achieving desired goals. Acquiring comprehension of the interaction between project management and change management is a fundamental and vital endeavor in constructing a solid framework for an information technology (IT) organization. The process of change management often involves the participation of a project manager and a specialized team.



## 1.2 Research Gaps

Efficiently implemented change management is crucial for the success of every IT project. Organizations can increase the chances of successful project implementation by actively addressing significant variables that may limit change adoption. Pollack and Algeo (2015) suggested that project and change management are critical to project success, with project management being more influential in project planning and execution. In contrast, change management is more influential in stakeholder engagement and communication. They suggest that integrating project management and change management can lead to more successful organizational changes, but there are potential challenges in executing the project that way. According to reports, Sri Lankan software industry has experienced significant growth, establishing itself as a major player in the global market (ICTA, 2020). The industry has attracted both local and international companies, leading to increased competition within the market (Gapstars, 2021).

Although the Information Technology industry displays substantial growth in Sri Lanka, some information technology project failures occurred, significantly impacting the Sri Lankan economy (see Appendix 1). The leading causes of IT project failure in Sri Lanka include inadequate testing resources, lack of proper change management, and neglecting the people factor in IT service management projects (Gamage, 2017). Additionally, neglecting the consideration of people in IT service management can lead to issues in the implementation and deployment of ITSM projects. Software developers in Sri Lanka face challenges in the testing phase, which can impact the quality assurance of software products (Musfira et al., 2016). Furthermore, these causes highlight the importance of proper change management, risk management, and quality assurance in software development projects.

Thusharika and Perera (2023), emphasized on IT infrastructure projects, subcontractor failures were identified as the most significant cause of defect claims, which can lead to project failure. As a solution, it highlighted that using risk assessment in IT projects and proper change management utilizing techniques such as after-action reviews and collaborative virtual workshops has been beneficial in implementing successful IT projects.

Asanka and Jayasena (2006), conducted a study on reasons for software implementation failures in Sri Lankan organizations. The study highlighted the importance of the implementation stage in software projects and emphasized the need for collaboration between client organizations and software providers. The agriculture sector in Sri Lanka has been identified as particularly prone to software implementation failures, suggesting further investigation into sector-specific reasons. This study focuses only on software implementation projects in the agriculture sector in Sri Lanka. Conversely, Nanayakkara and Weerasinghe (2014) highlighted the importance of having clear objectives and effective communication with stakeholders to reduce employee resistance during information system implementation.

This study focuses only on successfully managing ERP implementation projects without addressing the change management concept in the IT project. Therefore, there was a lack of sufficient previous research studies on this topic as most of the researchers are targeted at change management at the organizational level but not the change management in IT project management. Neither of those studies indicated what proactive strategies the company needs to take to manage influential factors affecting the success of change management in the IT project.

Therefore, this study aims to investigate proactive strategies that a company needs to address to manage changes in the IT project efficiently. With this study, companies can develop a model for proactive change management, which can help them handle requirement changes and reduce the risk of project failure. Additionally, implementing a proactive change management solution that includes effective procedures for managing project changes can ensure successful project completion and higher-quality outcomes (Hu & Liu, 2008). It is essential to recognize that IT projects involve organizational and human aspects, and treating these issues as part of the project can help avoid undesirable impacts and realize planned benefits more effectively (Doherty & King, 2015).

### 1.3 Research Question and Objectives

Change management in IT projects refers to the systematic process of planning, executing, and overseeing modifications to a project. Changes are a crucial factor when determining the success of a project, as they may significantly impact the project's scope, timeline, and budget. Efficiently implementing change management is vital for the success of every IT project. Organizations can increase the chances of successful project implementation by actively addressing significant variables that may limit change adoption. Therefore, based on the study aim mentioned above, the research question is: What are the company's proactive strategies considering the factors that affect the IT project's change management? This study systematically splits the main question into the objectives to achieve the research aim. Therefore, the general objective is to identify the company's proactive strategies, addressing the factors affecting IT project change management in Sri Lanka. Consequently, the sub-objectives are as follows.

- To recognize the influential factors that affect IT project's change management.
- To identify the company's feasible strategies addressing those factors.
- To clarify the project manager's role in change management.

Theoretically, the study considers ADKAR and Kotter's 8-step process models as fundamental change theories to reach the above research objectives. The ADKAR model is one of the widespread change management strategies that Jeff Haiyat has developed. It helps to understand and address the factors influencing successful change management adoption. In addition, John Kotter introduced eight steps of the change process that an organization could adopt when processing a project change. Empirically, this study considered a web survey questionnaire. The questionnaire was distributed to gather feedback from IT project managers and IT professionals in Sri Lanka. In addition, open-ended interviews were conducted with IT project managers in Sri Lanka for further clarification.

## 1.4 Scope of the Study

Due to the lack of adequate studies on change management in IT project management. This study aims to identify the company's proactive strategies considering the factors affecting the accomplishment of the change management of the IT project. Therefore, the scope of this research is to identify the company's proactive strategies addressing the factors affecting the success of the change management process of the IT project in the Sri Lankan context. This study investigates the influence of the two management disciplines, change management and project management, on the success criteria of an information technology project. The target audience is IT organizations and IT professionals in Sri Lanka. The study collected data from forty-one IT professionals from two leading IT organizations in Sri Lanka as a target sample.

The place of study is Colombo, a city in Sri Lanka. The snowball and purposive sampling methods are used to select fifty participants. This survey ends when fifty questionnaires have been filled out or the ten-day time frame is over. Each participant is asked to complete a survey questionnaire to identify and evaluate any experience managing IT project changes. Three project management professionals are also interviewed. Therefore, the study considers qualitative research and follows the inductive method in the entire investigation. The survey and open-ended interview tools used were Microsoft Forms and Microsoft Teams for the online interview. Therefore, the study's sample size is limited to fifty participants from both companies to gain more accurate results from experienced IT professionals in the software industry. The sample size is assumed to generate more reliable and accurate information for a larger population.

On the other hand, this research mainly focuses on human interaction. Therefore, the busy schedules of respondents can also be a barrier to collecting information. The data given by the sample would not be highly reliable as this study builds up considering personal attitudes. Finally, the researcher does not disclose the participants' and company names in this research. The study identified companies' proactive change management strategies in information technology project management, offering recommendations to project managers and other professionals to help them achieve goals in IT projects.

## **1.5 Structure of the Study**

Chapter one covers the background information for the thesis, research questions, objectives, and scope of the study and explains critical concepts mainly referred to the research. Chapter two explains the concept of change management in project management with the support of theories, including the 8-step process for leading change and the ADKAR model. This information is based on books, articles, and online resources. This mainly comprises an analysis of various aspects of IT change management in project management and comes up with a research gap. Chapter three explains the research methodology. For this research, a qualitative approach is followed by an inductive method. The study used feedback gathered from IT project professionals in Sri Lanka.

Chapter four briefly introduces two selected IT organizations where this research was conducted. It addresses both organizations' products, services, and market positions in their current markets. In addition, chapter five covers the presentation of data received from survey questionnaires and open-ended interviews. Chapter six illustrates the presentation of data analysis, which is gathered through survey questionnaires and open-ended interviews. This chapter explains how to conduct data analysis and includes the presentation of data, analysis, findings, and interpretations. Chapter seven summarizes the study, discusses its limitations, and suggests future research development. Furthermore, the following figure depicts the structure of this thesis chapter's outline.

Chapter 1	• Introduction
Chapter 2	• Change management: theoretical perspective
Chapter 3	• Research methodology
Chapter 4	• The case studies
Chapter 5	• The empirical findings
Chapter 6	• Discussion on the empirical findings
Chapter 7	• Summary and implication

Figure 2. Structure of the thesis.

## **2 CHANGE MANAGEMENT: THEORETICAL PERSPECTIVE**

The chapter presents a concise framework and instructions on utilizing the most reliable information around which this study is founded. The theoretical framework entails a methodical examination of the literature, which is essential for the research. The chapter encompasses the theories, terminologies, and criteria for inclusion and exclusion for this research.

### **2.1 Kotter's 8-Step Change Model**

One of the most recent and popular prescriptions for planned organizational change is Kotter's Eight-Stage process of creating major change. Kotter has achieved 'guru-like' status and book club acclaim for his work in leading the understanding of organizational change and the heart of change. Essentially, Kotter proposes an eight-stage process, and once again, remnants of Lewin's original work are evident (Helms-Mills et al., 2009). John Kotter introduced the 8-Step Process for Leading Change to transform organizations. Kotter's Change is based on decades of empirical research and the latest thinking in brain science, organizational design, behavioral science, and business transformation. The process informs the most successful approaches to leading change and creating agile and adaptable organizations (Bedard, 2024).

However, there are varying viewpoints regarding its effectiveness, according to McLaren et al. (2023), the model's portrayal of the current condition has a harmful impact since it could cause anxiety and tension among employees. Sihite (2023) highlights that the fundamental reason for organizational change is because something relevant to the organization has changed or is about to change. Because of that, the organization had no choice but to change. This change occurred because of encouragement from internal and external companies. The decreased performance of its employees, which leads to unsatisfactory service, is often a trigger factor for internal organizations to make changes, and the external factor is increasingly fierce business competition. Furthermore, organizations must change in response to both internal and external influences. The model can be effectively utilized to facilitate this transformation. Morozov et al. (2018) analyze the application of Kotter's ideas in implementing systems in education and emphasize the beneficial influence on academic performance.

In addition, Lakdinu et al.(2022) stated that leadership, such as communication between employees management, building central team output, top management dedication, and the quality of reengineering methods, navigate the execution of the victory in change management results and how those impact the success of ERP implementation. The model highlights the significance of instilling a feeling of insistence, developing a vision and strategy, and empowering broad-based action, which can help organizations navigate through complex and uncertain situations. (McLaren et al., 2023).

While receiving criticisms and producing differing outcomes, Kotter's approach has been applied in various situations and can facilitate effective change initiatives. However, research conducted using Kotter's model in the information technology aspect is minimal. It is a top-down approach where the need for an approach to change originates at the top levels of the organization and then is promoted down through the organization's layers of management to the change recipients (Project Management Institute, 2021, p. 162).

Create urgency step Identify potential threats and opportunities that drive the need for change. Kotter highlighted the significance of developing a compelling rationale for change. Leaders must effectively convey the necessity for change in a manner that instills a compelling sense of urgency inside personnel. This entails the process of recognizing potential risks and advantages, exchanging pertinent information, and demonstrating the possible outcomes of sustaining the current situation (Athuraliya, 2020; Project Management Institute, 2021, p. 162). Identifying the change leaders is a crucial step. Change leaders are not necessarily based on hierarchy. The change leaders should be influential people from various roles, with expertise, social and political importance. Achieving successful transformation needs robust leadership and support. A collective of influential individuals is established during this stage to lead the transformation process. The coalition should comprise individuals possessing a wide range of skills, experience, and influence inside the organization. Their primary responsibility is to advocate for change and assist in overcoming any opposition (Athuraliya, 2020; Project Management Institute, 2021, p. 162).



Identify the values that are central to creating a vision for change. Then, create a brief vision statement that summarizes the change. Next, identify a strategy to realize the vision. Leaders must communicate a well-defined vision for the future and devise strategic efforts to accomplish that objective successfully. The vision should be succinct, motivating, and readily communicable. It serves as a strategic plan for the organization and facilitates the coordination of individuals' actions toward a shared objective (Athuraliya, 2020; Project Management Institute, 2021, p. 162).

Communicate the vision throughout the change process and apply it throughout all aspects of the organization. Senior management and the change coalition should consistently communicate the vision and demonstrate the urgency and benefits of the change. Comprehensive involvement is essential for achieving a successful transformation. Leaders should actively include and empower people at every level by providing chances for engagement and participation. Fostering a sense of ownership and commitment among a heterogeneous collection of personnel facilitates the dissemination of the change message across the company (Athuraliya, 2020; Project Management Institute, 2021, p. 162).

All change comes with obstacles, such as outdated processes, organizational structure, and people resistant to the changes. Regardless, all obstacles need to be addressed. Identify and overcome any barriers that may hinder growth. Leaders should proactively strive to eradicate any obstacles, be they structural, cultural, or procedural. The phase entails enabling employees to take the initiative and ensuring they have the requisite resources and assistance (Athuraliya, 2020; Project Management Institute, 2021, p. 162). Identify quick and easy wins to build momentum and support for the change. Commend and convey prompt, precise accomplishments. Immediate successes generate forward motion, enhance team spirit, and illustrate the efficacy of the change endeavor. Acknowledging and commemorating achievements aids in fostering self-assurance during the process of transformation (Athuraliya, 2020; Project Management Institute, 2021, p. 162). As a seventh step, build on the change and consider that once the short-term wins are complete, the organization needs to set goals for continued improvement.

This entails consistently conveying the message of change, addressing any lingering opposition, and integrating new practices into the organizational culture (Athuraliya, 2020; Project Management Institute, 2021, p.162). The final stage is to anchor the changes in corporate culture. Ensure the change becomes ingrained into the culture: continue to communicate the vision, tell success stories, recognize people in the organization who embody and empower the change, and continue to support the change coalition. The ultimate stage entails firmly establishing the change inside the organization's culture. This entails revising policies, procedures, and reward systems to ensure they align with the new mode of operation. Leaders must ensure that improvements are deeply embedded in daily routines and procedures. Kotter's 8-Step transformation Model offers a thorough structure for effectively managing the specifics of organizational transformation. This model highlights the significance of proactive leadership, effective communication, and active involvement of employees during the transition process (Athuraliya, 2020; Project Management Institute, 2021, p.162).

Finally, Kotter's 8-step and ADKAR models have similarities in their approach to change management. Both models emphasize the importance of awareness and desire for change (Paramitha et al., 2020). They recognize that individuals and organizations need to understand the need for change and be motivated to embrace it. Additionally, both models highlight the significance of knowledge and the ability to implement change (Mukwenda, 2019). However, no studies are available to identify the proactive strategies a company needs to follow to manage the information technology project successfully.

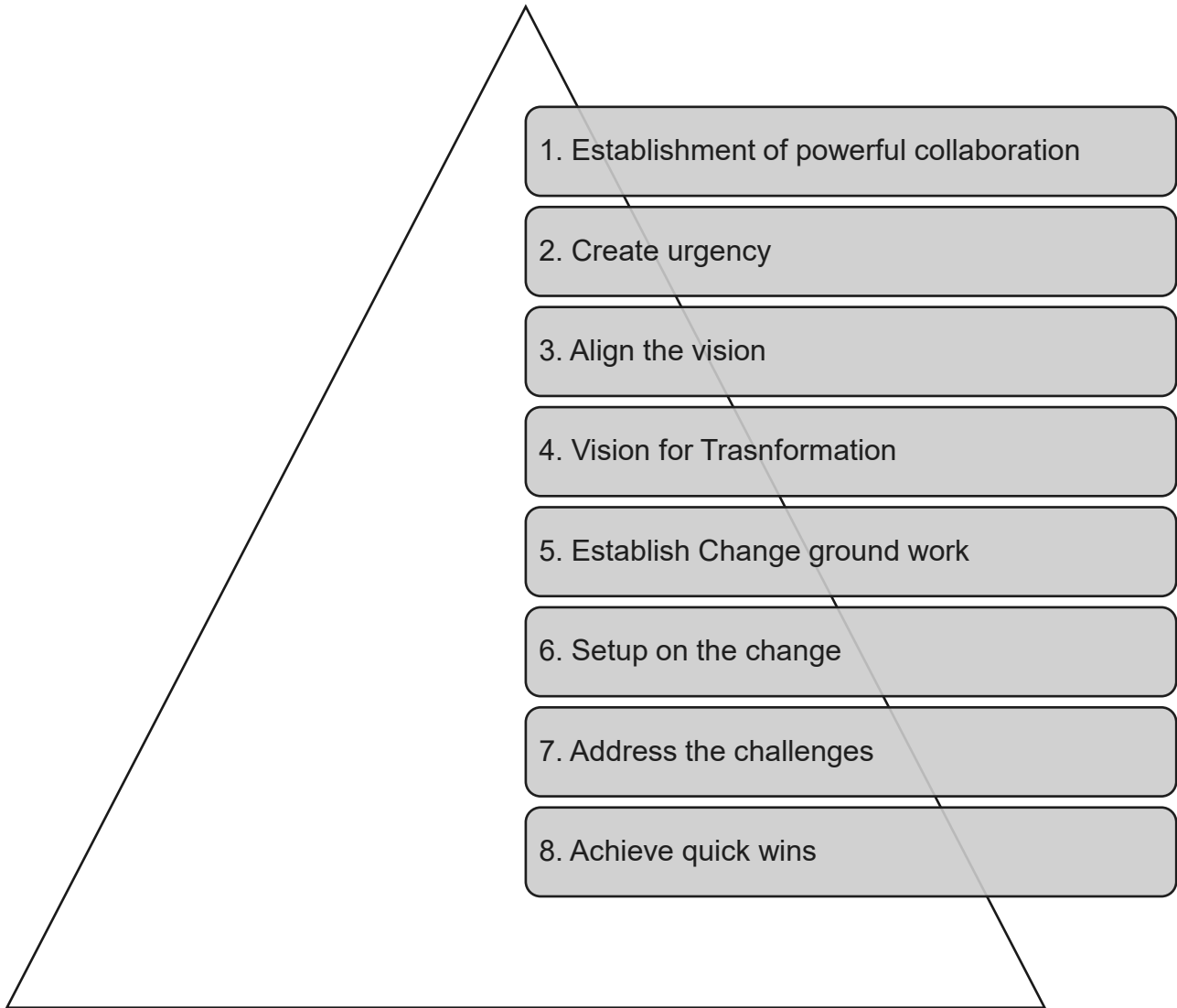


Figure 3. Kotter's 8-step for change (PMI, 2021, p.162).

## 2.2 ADKAR Model of Change Management

The ADKAR model is a structured method for managing change, centering on an individual's development during organizational evolution. Jeff Hiatt created a framework consisting of five sequential components: awareness, motivation, understanding, proficiency, and reinforcement. These elements describe the typical stages of an individual's adaptation to a significant change (Project Management Institute, 2021, p.161). Hiatt and Creasey (2012) suggests the concept, which is comprised of two primary tiers. The first level pertains to the human aspect of transformation. The second level of analysis accounts for the many stages of a change project.

Research indicates that successful change management depends on the desire for individual acceptance and support. With that support, an organization can easily implement the desired change. Ali et al. (2021) suggest that leadership and human resource management practices are also crucial for inspiring employees to opt for and demonstrate a behavior change. The researcher has applied awareness and desire levels in the ADKAR model for the research. Found that leadership and human resource management practices are also impacted by individuals' initiation of changes from the change management perspective. She has applied awareness, ability, and reinforcement in the ADKAR model. In addition to successfully implementing change within an organization, several key areas must be addressed. These include the ability to anticipate change, understand the impact of the scope of change, overcome resistance to change, develop a communication strategy to address resistance, possess cross-cultural skills, and secure top management's support for the organization's future vision. This has highlighted awareness ability and reinforcement in the ADKAR model (Hurn, 2012, pp. 41–46).

Abdallah and Mohammad (2016) argue that Prosci's ADKAR model is a commonly used objective-driven method that enables development management teams to concentrate on achieving outcomes, facilitating individual development. The model operates under the assumption that organizations themselves remain static, but the individuals inside organizations are the ones who change. ADKAR defines effective change at the personal level and delineates the objectives or results of successful change. The tool is beneficial for designing Change Management activities, identifying deficiencies, formulating remedial measures, and assisting managers and team leaders.

Therefore, the emphasized research is focused on organizational change management. Further research is required to examine how the ADKAR model effectively and proactively manages IT project changes. ADKAR model consists of five steps: Awareness, desire, knowledge, ability, and reinforcement. The awareness step focuses on why the change is necessary. During the Awareness stage, individuals must comprehend the rationale for the change and its implications for themselves and the company. It entails developing a comprehension of the imperative nature of change and the underlying rationales behind it. Effective communication is essential to efficiently distribute information regarding the change (Hiatt & Creasey, 2012, p. 47). In addition, In the desired step, people know why the change is necessary; there needs to be a desire to be part of and support the change. Desire entails cultivating an individual's dedication to the transformation. Individuals must possess intrinsic motivation to endorse and engage in the transformation process. The process entails acknowledging and resolving issues, cultivating a favorable mindset, and showcasing the advantages of the change on both the organizational and individual fronts (Hiatt & Creasey, 2012, p.47).

According to the knowledge step, people must understand how to change, including new processes and systems and roles and responsibilities. Knowledge can be imparted through training and education. Knowledge provides individuals with the necessary information and abilities to comprehend and effectively implement change. This phase involves providing instruction and dissemination of information to guarantee that individuals possess the requisite expertise to adjust to the novel procedures or systems (Hiatt & Creasey, 2012, p. 48).

In the ability step, knowledge is supported by hands-on practice, access to expertise, and help as needed. Ability is the phase in which individuals effectively convert knowledge into practical action. They must possess the necessary abilities and competence to execute the transformation effectively. During this phase, it is crucial to provide individuals with practical training, hands-on experience, and continuing support to ensure their confidence and competence in implementing the new methods of working (Hiatt & Creasey, 2012, p. 48). Finally, Reinforcement supports the sustainment of the change. This can include rewards, recognition, feedback, and measurement. Reinforcement entails maintaining the alteration and guaranteeing its enduring achievement.

This phase centers on identifying and acknowledging the desired behaviors, reinforcing the advantages of the change, and dealing with any challenges or opposition that may emerge. Ongoing feedback and assistance are essential for integrating the change into the company culture (Hiatt & Creasey, 2012).

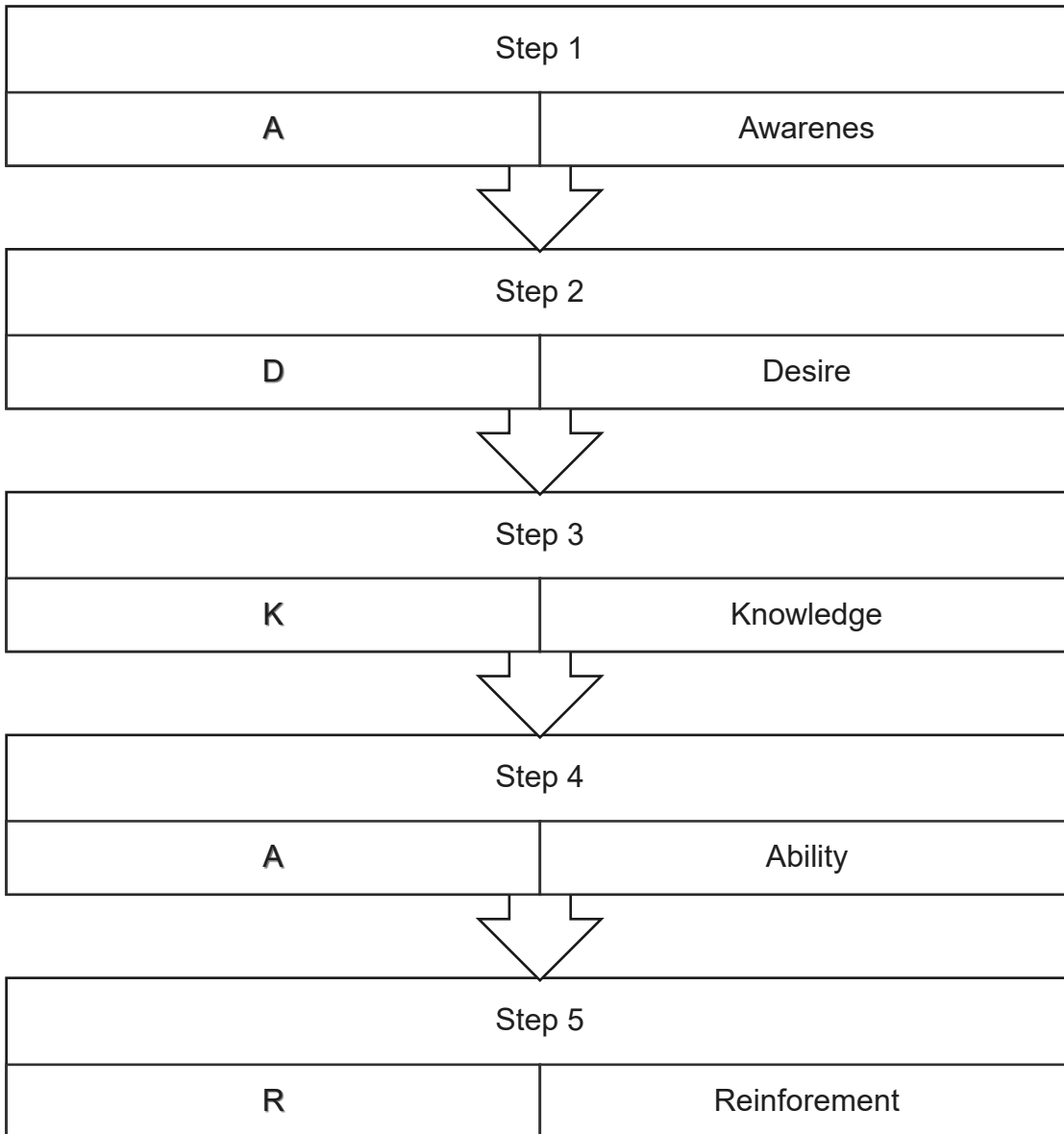


Figure 4. ADKAR Model (Hiatt & Creasey, 2012).

### **2.3 Complementarities and Differences Between Kotter's and ADKAR's Models**

The ADKAR and 8-step models share similarities in their approach to change management. Both models emphasize the importance of awareness and desire for change (Vázquez, 2022). They recognize that individuals and organizations need to be aware of the need for change and desire to make it happen. Additionally, both models highlight the significance of knowledge and ability in implementing change. They acknowledge that individuals and organizations need the necessary knowledge and skills to carry out the change successfully. Furthermore, both models recognize the importance of reinforcement and support to sustain the change over the long term. They understand that ongoing reinforcement and support are crucial for ensuring that the change becomes embedded in the organization's culture (Jaaron et al., 2022). Overall, the ADKAR and 8-step models share common elements in their approach to change management, focusing on awareness, desire, knowledge, ability, and reinforcement.

On the other hand, both methodologies offer structured approaches to change management but have different focuses and emphasize different aspects of change. Kotter is more comprehensive and suitable for large-scale organizational change. At the same time, ADKAR is more individual-centered and suitable for minor changes or individual transitions within a more significant change initiative. The 8-step model focuses on leadership, strategy, and creating a shared vision, whereas ADKAR focuses on individual mindset and behavior change. Kotter's steps are sequential, whereas ADKAR's steps can occur in parallel or be revisited as needed (Franz, 2022). Both methodologies can create a more holistic approach to change management, addressing organizational and individual change aspects.

## 2.4 Factors Affecting Change Management in Light of Both Models

The Kotter 8-step model of change has been successfully used in various contexts. For example, Sihite (2023) highlights how organizational structure, culture, and technology changes can increase employee value and motivation. According to Saifaldin (2022), the study demonstrates the application of Kotter's model in the University of Khartoum, where creating urgency and developing a vision for change led to staff members embracing and sustaining the change. Ravi et al., (2022) applied Kotter's model in a large academic medical center to manage the evolving COVID-19 screening protocols, resulting in successful operational improvements. In this research, highlighting the urgency step is crucial in the Kotter 8-step model. The model can be effectively utilized to facilitate this transformation. Another researcher analyzes the application of Kotter's ideas in implementing systems in education. The stages like crafting a change vision, conveying it effectively, achieving immediate victories, progressing with change, and embedding changes in organizational culture positively impact academic achievement. (Morozov et al., 2018).

Furthermore, the 8-step change model can improve organizational performance by addressing various aspects of the organization. Previous researchers found that structure, culture, and technology changes can create an environment that motivates employees to act and adapt to new challenges. Effective change management and employee involvement in the change process may support the creation of a healthy organizational culture and the effectiveness of organizational performance (Romania et al., 2023).

Finally, organizational transformation, encompassing adjustments to technology, strategy, culture, staff attitudes, structure, communication, leadership, and employee development, can impact employee performance and ultimately improve organizational performance (Laila & Mardi, 2022). Based on the above research, factors such as creating urgency, laying out a strategy for change, informing people regarding it, getting quick wins, building on the change, and making sure the changes adhere to the company culture the changes in corporate culture have been the most influential factors in executing changes successfully in the project. Therefore, those researchers emphasize six out of eight steps in the 8-step model.



The ADKAR change management model has practical applicability in various contexts. It has been used to understand measures needed to ensure accessibility in the web portals of educational institutions. The article has highlighted the importance of reinforcement and awareness in the ADKAR model (Vázquez, 2022). This model has also been applied to identify essential changes in a company before and after the COVID-19 pandemic, with suggestions for improving employee performance (Leksono & Yulianti, 2022). In undergraduate science education, the ADKAR model has been used in a mentoring network to sustain change toward active teaching practices. Additionally, the model has been proposed to promote the performance and sustainability of student loan schemes in higher education. The research has highlighted the awareness, desire, and knowledge steps of the ADKAR model (Mukwenda, 2019).

The model also focuses on building desire and motivation for change, which is crucial for successful implementation. It emphasizes the importance of knowledge and providing employees with the necessary skills to adapt to change in veterinary practice and animal production; the ADKAR model has been adapted to enable herd veterinarians to profile farmers about antimicrobial stewardship (Houben et al., 2020). This research highlights reinforcement and support to ensure that changes are sustained over the long term. Effective change management and employee involvement, along with open communication and support, contribute to the success of organizational change initiatives and the development of a positive organizational culture. The ADKAR model can help organizations address these challenges and increase the likelihood of successful change implementation by identifying the key elements that prevent successful behavioral change. These examples demonstrate the practical applicability of the ADKAR model in facilitating change and improvement in various domains. In summary, the validity of steps such as awareness, desire, knowledge, and reinforcement has been identified in previous research. Therefore, four out of five steps in the ADKAR model have been recognized in the research.

## 2.5 Strategies of Change Management Considering the Models

The Kotter 8-Step and ADKAR models are popular approaches to leading organizational change. The Kotter model focuses on creating a sense of urgency, building a coalition, and sustaining achievements (Havlovska et al., 2023). Companies can apply a few strategies, considering the above models.

For example, Vázquez (2022) investigated the necessary intervention strategies to enhance accessibility in web portals and resources of education institutions, drawing from the Kotter 8-step model. The results indicate that although awareness scores regarding the necessity for change are elevated, other components within the model necessitate immediate attention to guarantee the longevity of the change effort. These findings are related to the ADKAR model's Awareness, desire, and reinforcement steps. On the other hand, they studied the difference in gender perspective towards organizational change using awareness, desire, knowledge, ability, knowledge, ability, and reinforcement ADKAR model of organizational change in various branches of a public sector bank in a prominent region of Northern India. Correlation and test analysis are done to conclude. The results would help the banking firms to understand the facts about gender perspective towards change management and accordingly formulate their future strategies. These findings related to Kotter 8-step model activities such as creating urgency, creating the vision for change, and communicating the change.

Both the ADKAR model and Kotter's 8-Step Change Model emphasize the foundational idea that individuals fundamentally drive successful organizational change. They share a common recognition of the need to address employee mindsets, concerns, and capabilities to ensure the effective adoption of change initiatives. Both models break down the change process into distinct stages, offering a structured roadmap that guides leaders through a logical sequence of steps (Sihite, 2023). This systematic approach helps prevent the oversight of crucial elements and ensures a comprehensive strategy for navigating the complexities of organizational transition. Effective communication is a central theme in both models, emphasizing the continual need to inform stakeholders, address concerns, and actively engage employees throughout the change journey. Furthermore, the models highlight the importance of crafting a clear and compelling vision for the future that excites and motivates employees, fostering a shared understanding of the change's purpose.

Recognizing that resistance to change is a natural response, both models offer strategies for addressing concerns, building visionary change, and overcoming obstacles (Errida & Lotfi, 2021). Finally, Varkey Antonio (2010) The shared emphasis on ongoing support and reinforcement underscores the necessity of sustaining change through practices such as highlighting successes, providing continuous training, and acknowledging employees' efforts. These commonalities form a robust framework for effective, people-centric change management.

While both models have common shared principles, the ADKAR model provides a more comprehensive framework by addressing the individual's readiness for change and the need for reinforcement to sustain the change over the long term. On the other hand, the Kotter model may be more effective in creating a sense of urgency and mobilizing a coalition for change. Ultimately, the effectiveness of each model depends on the specific context and goals of the organization undergoing change (Herath et al., 2016).

## **2.6 The Factors and Strategies of Change Management in View of Both Models.**

Kotters 8-step model driving a culture of innovation within an organization involves a strategic and phased approach. Initiating the process and creating a sense of urgency becomes essential by highlighting the imperative for innovation to maintain competitiveness in a rapidly evolving market. Forming a guiding partnership and assembly of a team of influential leaders who passionately champion the new culture, ensuring a united and committed front (Havlovska et al., 2023). The subsequent step involves the development of a clear vision and strategy, precisely defining the desired change and outlining strategic steps to achieve it. Employees are encouraged to contribute ideas and actively participate in innovative initiatives to empower broad-based action, fostering a culture of inclusivity and idea-sharing.

Building on this momentum, the strategy incorporates the creation of short-term wins, where early successes in innovation are celebrated and enthusiasm is maintained. Subsequently, the process involves consolidating gains and initiating further change, refining approaches based on lessons learned, and continually fostering innovation. Anchoring new approaches in the culture is the final step; integrating innovative practices into daily work routines and establishing mechanisms that reward and recognize employees' innovative behavior be directly supported to continue the change (Appelbaum et al., 2012).

Complementing this change model, the ADKAR framework ensures individual readiness for change. Raising Awareness involves helping employees understand the significance of innovation for the company's success. Building desire fosters a belief in the positive outcomes and personal growth associated with innovation. Knowledge is imparted through training and resources, empowering employees with the skills needed for innovation. Facilitating Ability involves removing barriers, providing support systems, and encouraging employees to experiment and take risks. Finally, Karambelkar and Bhattacharya (2017) emphasized the crucial reinforcement aspect, recognizing and rewarding innovative ideas and behaviors to solidify the new culture. In essence, this integrated approach creates a comprehensive strategy for developing a culture of innovation embraced throughout the organization. The following figure depicts the similarities between the Kotter 8-step and ADKAR models.

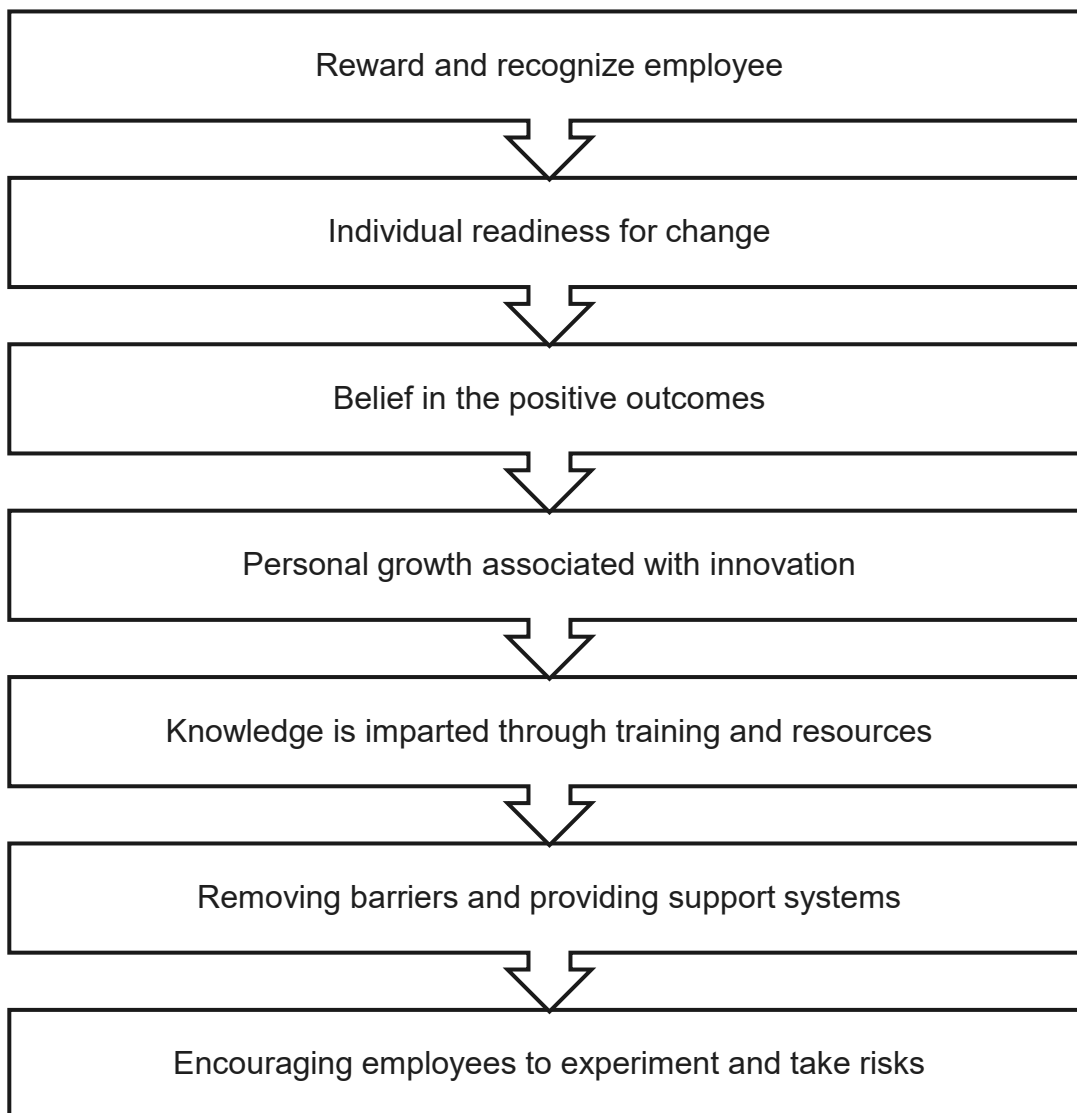


Figure 5. Combining ADKAR's and Kotter's Models (Shonhe & Grand, 2019).

In the end, efficiently implementing change management is essential for the success of every IT project. Organizations can increase the chances of successful project implementation by addressing influencing variables that could delay change adoption in advance. Both the 8-step model and the Adkar model highlight how a change initiative can be managed efficiently and effectively. The following are some proactive techniques that firms can follow to address critical aspects impacting the success of change management based on the 8-step and Adkar models.

Create open and effective communication and involvement to inform employees about the project's progress, benefits, and potential challenges. This has been addressed in creating a vision for change and communicating the change in the 8-step model and awareness and desire stage in the Adkar model. Understand the root cause for change. Identify the reasons employees may resist the change, whether it is fear of the unknown, concerns about job security, or perceived inconvenience. This has been addressed by removing obstacles in the 8-step model. Additionally, desire and knowledge steps in the Adkar model.

Despite that, it offers comprehensive training to equip employees with the necessary skills and knowledge to adapt to the new system or process. Provide ongoing support and mentorship to ensure smooth adoption. This is addressed in knowledge and ability in the Adkar model. Additionally, create short-term wins in an 8-step model. In addition to that, regularly monitor the implementation of change and gather feedback from employees. Use this feedback to identify areas for improvement and make necessary adjustments. This is applicable to anchor the change in the 8-step model and the Reinforcement step in the Adkar model.

### **3 RESEARCH METHODOLOGY**

This chapter explains the research strategy. It first emphasizes the research philosophy. Next, the research approach and research design are illustrated. Subsequent segments clarify the data gathering and analysis. The last sections are the validity, reliability, and ethical considerations.

#### **3.1 Research Philosophy**

Research philosophy means a belief in how data are gathered, analyzed, and used to address an issue or problem (Wilson, 2014). The fundamental principles of qualitative research philosophy include the recognition of ethical aspects, the emphasis on participant perspectives, and the understanding of multiple subjective realities. Ethical considerations are essential in qualitative research, with principles such as subject protection and responsible research conduct forming the basis for ethical standards.

Qualitative research philosophy focuses on participants as experts, valuing their perspectives and focusing on their experiences (Cernasev & Axon, 2023). From an ontological point of view, this study focuses on identifying the company's proactive strategies considering the factors affecting the success of the change management of the IT project. Since IT professionals' engagement is related to human beings' interaction, it is better to interpret the issue considering epistemology. Epistemology refers to the nature of knowledge, which means how we conceive our surroundings. An inductive research approach has been followed. Because this type of investigation is inherent to this research, additionally, this research is engrained in philosophical traditions of constructivism, emphasizing the subjective nature of knowledge and the importance of understanding participants' experiences (Wilson, 2014).

### 3.2 Research Approach

Two terms often used to describe the primary research strategies for business research are qualitative and quantitative. Denzin and Lincoln (2018, p. 12) describe the distinction between qualitative and quantitative research. The word 'qualitative' implies an emphasis on the qualities of entities and on processes and meanings that are not experimentally examined or measured (if measured at all) in terms of quantity, amount, intensity, or frequency. Qualitative researchers stress the socially constructed nature of reality, the intimate relationship between the research and what is studied, and the situational constraints that shape inquiry. They seek answers to questions that stress how social experience is created and given meaning. In contrast, quantitative studies emphasize the measurement and analysis of causal relationships between variables, not processes. Proponents of such studies claim their work is undertaken within a value-free framework.

The main aim of this research is to find out what the company's proactive strategies are addressing the factors that affect the accomplishment of the change management of the IT project. As this research aims to find out the companies' proactive strategies of the selected respondents, The researcher follows the qualitative method as a research approach since this research tries to find the solution from the human aspect and experience when executing change management and IT project management.

Qualitative researchers are more likely to confront the constraints of everyday life, while quantitative researchers tend to abstract themselves from this world and, consequently, seldom study it directly. Qualitative researchers tend to believe that detailed descriptions are valuable, while quantitative researchers are less concerned with such detail (Näslund, 2002). According to Radović-Marković (2023), qualitative research has several advantages over other research methods. It allows for in-depth and detailed information, offers flexibility, and enables multiple data collection methods. In addition, qualitative methods are beneficial for gaining insights into local-level perspectives and testing assumptions relevant to decision-making on particular issues. They also provide a human touch and can be cost-effective, making them the only option in some research problems (Mwita, 2022).

However, Qualitative research has its own set of limitations, which are essential to consider. Qualitative research typically involves a small sample size and focuses on an in-depth understanding of a specific context or phenomenon (Cornell, 2022). As a result, findings may not be easily generalizable to a larger population. Qualitative research relies on the researcher's interpretation and data analysis, which introduces the potential for subjectivity and bias. The researcher's own beliefs, values, and experiences can influence the interpretation of the data. Qualitative research often requires significant time and resources to collect and analyze data. Conducting interviews, observations, and analyzing qualitative data can be time-consuming and labor-intensive. Qualitative research typically does not involve statistical analysis, which can limit the ability to quantify and measure relationships between variables. This can make it challenging to draw definitive conclusions or generalize based on the findings. The researcher's presence in qualitative research can influence the behavior and responses of participants. This can introduce a potential bias and impact the validity of the findings (Denzin & Lincoln, 2000; Wilson, 2014).

Two general approaches to reasoning may result in acquiring new knowledge: inductive and deductive. Inductive reasoning is a theory-building process, starting with observations of specific instances and seeking to establish generalizations about the phenomenon under investigation. Deductive reasoning is a theory-testing process that commences with an established theory or generalization and seeks to see if the theory applies to specific instances (Hyde, 2000). The approach to qualitative research has been inductive. An inductive approach is suited to the areas of investigation where the concepts are under study. As mentioned earlier, this research is intended to develop a change theory. Because of that, this research has been following an inductive approach.



### 3.3 Research Design

The research design refers to the plan or strategy that outlines how the research can be conducted. Key research designs are quantitative research design, qualitative research design, mixed methods research design, experimental research design, and observation research design. Among those, this research has adopted a qualitative research design since it tried to understand the IT professionals' thoughts, feelings, opinions, and reasons behind these successfully executed changes in IT projects.

The study area is the location or the place where the research is directed. This study was conducted in the capital city of Colombo, Sri Lanka, where most IT tech companies operate. This study obtained its information from the two leading IT companies. As this research aims to find out companies' proactive strategies of the selected respondents, the researcher mainly used qualitative methods; according to the author's perspective, this research follows not only a case study strategy but also an action research strategy because case study strategy is an in-depth study of a specific individual or phenomenon in its existing context. In contrast, action research focuses on solving an immediate problem or working with others to solve problems and address issues.

However, both survey questionnaires and open-ended interview methods were used, considering that all human beings are difficult to understand to study their attitudes. Various techniques and tools can be used. It also needs more than one approach. Hence, qualitative methods have been used to gather more reliable data as the researcher wants to analyze the findings statistically. Qualitative research involves gathering and analyzing qualitative data through open-ended communication. Its primary aim is to comprehend individuals' thoughts, opinions, emotions, and the underlying reasons behind these feelings (Cornell, 2022). A survey is an investigation of the characteristics of a given population by collecting data from a sample of that population and estimating their characteristics through the systematic use of statistical methodology. In addition, when studying complex social phenomena involving human experiences, attitudes, and behaviors, qualitative methods can capture the richness and distinctions of these aspects. It provides a more holistic view of the subject matter (Lazar et al., 2017).

Consequently, as mentioned above, the researcher used a survey questionnaire and open-ended interviews to determine the companies' proactive strategies for factors affecting the accomplishment of IT change management. The following Figure depicts an overview of the research methodology.

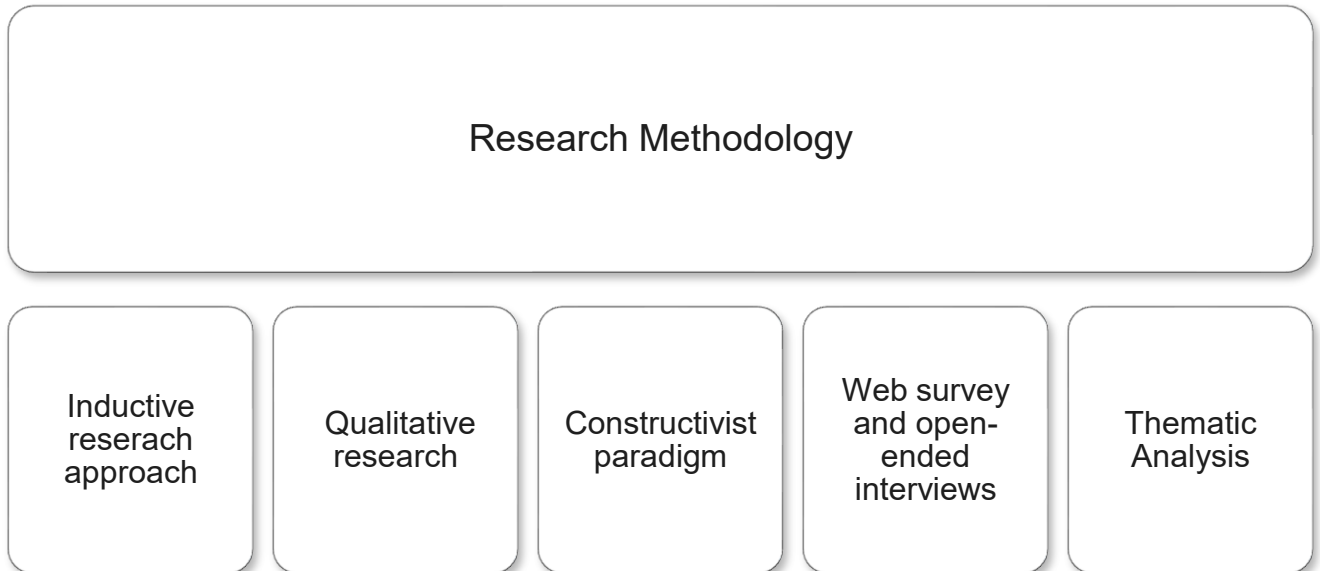


Figure 6. Honeycomb of research method (Wilson, 2014).

### 3.4 Sampling Methods

The study selected the two leading IT companies as a sample from Colombo City, Sri Lanka, where most software companies conduct their business operations. Snowball and purposive sampling were used to develop the research sample. According to these methods, a sample was selected covering all three research objectives. For that, the researcher selected fifty IT professionals from two leading IT organizations, respectively. They are under different age categories, experiences, and job designations. From that fifty samples, three senior project experts from both organizations be interviewed to identify exact opinions regarding change management in IT projects. According to Wilson (2014) Interviews are a standard tool for data collection among business and management students. Interviews are more commonly associated with a qualitative research strategy. Interviewing allows the researcher to gain insight into a person's beliefs and attitudes towards a particular subject. A vital advantage of some types of interviews is that it allows one to examine verbal and non-verbal communication.

Each research methodology uses one or more techniques to collect empirical data, including interviews, participant observation, fieldwork, archival research, documentary materials, etc. The form of data collection depends on the research methodology. For example, case study research usually relies on interviews and documentary materials, whereas ethnography research requires considerable fieldwork. Since this research focuses on a case study and action research, interviews and survey questionnaires have been utilized as a strategy.

### **Interviews**

Qualitative interviewing is gathering data by asking people questions. Interviewing can be very flexible - they can be one-on-one but can also take place over the phone on the Internet or in small groups called "focus groups." There are also different types of interviews. Structured interviews use pre-set questions, whereas unstructured interviews are more free-flowing conversations where the interviewer can probe and explore topics as they come up. Interviews are beneficial if you want to know how people feel or react to something. The research conducted open-ended interviews and questionnaires to collect the necessary data considering the same study objectives. Therefore, open-ended interviews were conducted with three project managers from both IT companies in Sri Lanka. Interviews are carried out by using Microsoft Teams.

### **Surveys**

Written questionnaires and surveys about ideas, perceptions, and thoughts are other ways by which you can collect data for your qualitative research. In this research, the Survey questionnaire was used to identify companies' proactive strategies when executing changes in IT projects. It consisted of open-ended questions, and several questions were formed according to the five-point Likert scale and multiple-choice questions. The questionnaire consists of three sections: demographic details, recognizing influential factors, assessing company strategies, and project managers' perception experience and approaches used for change management in IT project management. This questionnaire was directed to fifty IT professionals working in the two leading IT organizations in Sri Lanka. The study shared the questionnaire and gathered answers through Microsoft Forms.

## **Document analysis**

This involves examining written, visual, and audio documents that exist without any involvement of or instigation by the researcher. There are many kinds of documents, including "official" documents produced by institutions and personal documents, like letters, memoirs, diaries, and, in the 21st century, social media accounts and online blogs. For example, if studying education, institutions like public schools produce many kinds of documents, including reports, flyers, handbooks, websites, curricula, etc. Document analysis can often be helpful in conjunction with another method, like interviewing. The study did not consider document analysis because the primary data were collected based on questionnaires and interviews and analyzed them.

## **3.5 Data Analysis**

According to Streefkerk (2019), Qualitative research articulated in words. It is used to understand thoughts, concepts, or experiences. This type of research enables researchers to gather in-depth insights on poorly understood topics. Therefore, the researcher focused on understanding the company's proactive strategies considering the factors affecting the accomplishment of the change management of the IT project. Data analysis was conducted based on thematic analysis, which closely examines the data to identify, categorize, and analyze the main themes and patterns. Final results were communicated in content analysis or narrative analysis. Thematic analysis is a qualitative data analysis method that has evolved over time.

It was first described in the 1970s; however, it gained prominence in the late 1990s with researchers such as Boyatzis and Hayes. Thematic analysis has been widely applied in various disciplines such as psychology, sociology, anthropology, and now increasingly in pharmacy and healthcare research (Cernasev & Axon, 2023). It is an accessible, flexible, and popular qualitative data analysis method. Braun and Clarke have provided a six-step method to conduct thematic analysis, which is widely used and effective in social and organizational contexts. Overall, thematic analysis has become an accepted and widely used qualitative research tool, concisely describing and interpreting themes and patterns from a data set (Majumdar, 2022).

The researcher analyzed the data from the questionnaire using Microsoft Excel and then discussed how to interpret the findings. Microsoft Excel is used to analyze results from survey questionnaires and interviews manually. The reason for using Microsoft Excel for data analysis is that it is user-friendly for identifying patterns, and only forty-one responses were received, which is a small amount of data gathered. On the other hand, the researcher did not consider any professional qualitative data analysis tools due to the time limitation of the research project.

### **3.6 Validity and Reliability**

According to Adams et al.(2014), three criteria are generally used for testing and evaluating measurements of variables and ensuring the quality of data, research design methods, and the overall accuracy of study results. They are known to be reliability, validity, and generalizability. These are very important both in qualitative and quantitative research. Validity is the strength of research conclusions, inferences, or propositions. It involves the degree to which we are measuring what is supposed to be measured and, more simply, the accuracy of the measurement. On the other hand, Reliability estimates the consistency of the measurement or, more simply, the degree to which an instrument measures the same way each time it is used under the same conditions with the same subjects (Adams et al., 2014, pp. 245–247)This is essentially about consistency. Selecting informants with experience is essential to increasing the validity and reliability of qualitative research.

The purpose of this study was to identify the company's proactive strategies addressing the factors affecting the IT project's change management accomplishment. The researcher worked as an IT project manager at several IT organizations in Sri Lanka. Therefore, he had access to the necessary information, enabling him to capture relevant information. In the broadest context, these terms are applicable, with validity referring to the integrity and application of the methods undertaken and the precision with which the findings accurately reflect the data, while reliability describes consistency within the employed analytical procedures.

### **3.7 Ethical Consideration**

Qualitative research that involves human subjects mainly. Therefore, researchers must focus on using the topmost way to interact and capture correct information. Participants can decide what information needs to be shared and not (Nii Laryeafio and Ogbewe, 2023). Collis and Hussey (2014) It is recommended that researchers adopt a policy that upholds the rights and freedoms granted to participants in any qualitative study, allowing for freedom of expression and the option to withdraw from data collection at any point. Ethical considerations are paramount in all research endeavors, as they enable researchers to collect crucial information without inflicting harm on the participants involved in the study (Orb et al., 2001).

Apart from the data collection with existing literature, primary data collection was done by sharing survey questionnaires and conducting open-ended interviews. Ten days have been taken to gather the responses from the participants, and their confidentiality, including company name, has been protected. In addition, there is no obligation to participate for participants to respond to the survey questionnaire during data collection, and they are free to decline to respond to the questionnaire at any given time. Furthermore, the researcher obtained company consent before sharing the questionnaire with participants.

## **4 THE CASE STUDIES**

This chapter demonstrates the organizational background. It explains their business domain product and the services they provide to customers. It then illustrates market positioning in the IT industry.

### **4.1 Description of the Case Companies**

Company A is the National Information and Communications Technology (ICT) Solutions Provider that has served the nation's need for connectivity, operating on fixed, mobile, and other operational segments by offering a range of ICT solutions that cater to consumers with a digital lifestyle including Voice, Fiber, ADSL, 4G LTE, Cloud Services, Enterprise Solutions, wholesale, international ICT solutions, IPTV services, online doctor channeling service and a host of Value-added services.

Company Z is a well-established ERP consultancy firm headquartered in Sri Lanka with over 100 employees. It operates with a strong presence across multiple Asian countries and specializes in providing ERP consultation services, ERP implementation services, and Information security services. The organization is sectioned into a multitude of departments. It consists of certified ERP consultants with deep domain knowledge and extensive experience to accommodate the unique requirements of organizations across a myriad of industries. The researcher conducted a sample selection from both A and Z companies, with fifty participants. High officials shared the web survey link with the companies' executives. The researcher also conducted open-ended interviews with three of them.

## 4.2 Products and Services in the Market

Both organizations provide expert advice, guidance, and support in leveraging technology to achieve business objectives and improve operational efficiency. They work closely with other organizations to assess technology needs, develop strategic plans, implement solutions, and provide ongoing support and optimization services. Here is how ICT consultancy contributes to organizations.

ICT consultants help organizations develop comprehensive technology strategies aligned with their business goals and objectives. They assess the organization's current IT infrastructure, systems, and processes, identify areas for improvement, and recommend solutions to drive innovation and competitiveness. **Solution Selection and Implementation-** ICT consultants assist organizations in selecting and implementing technology solutions that meet their specific requirements and objectives. This may include enterprise software systems (such as ERP, CRM, or SCM), cloud computing solutions, cybersecurity measures, network infrastructure, and communication tools. Consultants evaluate vendor offerings, conduct feasibility studies, and oversee implementation to ensure successful deployment and integration. ICT consultants play a crucial role in helping organizations embrace digital transformation initiatives to modernize their operations and adapt to changing market dynamics. They leverage emerging technologies such as AI, IoT, big data analytics, and automation to optimize processes, enhance customer experiences, and drive innovation across the organization.

With the increasing threat of cyberattacks and data breaches, ICT consultants help organizations strengthen their cybersecurity posture and safeguard sensitive information. They conduct risk assessments, develop cybersecurity strategies, implement protective measures (firewalls, encryption, and access controls), and train employees to mitigate security risks and ensure compliance with data protection regulations. ICT consultants assist organizations in establishing robust IT governance frameworks and ensuring compliance with relevant industry standards and regulations. They develop policies, procedures, and controls to manage IT assets, mitigate risks, and maintain regulatory compliance, such as GDPR, HIPAA, or PCI DSS. ICT consultants provide training and capacity-building programs to empower employees with the knowledge and skills to effectively leverage technology solutions. This may include technical training on specific systems or tools, cybersecurity awareness training, and change management initiatives to facilitate smooth technology adoption.



ICT consultants monitor the performance and efficiency of IT systems and processes, identify bottlenecks or inefficiencies, and recommend optimization measures to enhance productivity and reduce costs. They conduct regular assessments, analyze key performance indicators (KPIs), and implement continuous improvement initiatives to maximize the value of technology investments. Overall, both organizations support customers in harnessing the power of technology to drive innovation, improve agility, and achieve strategic objectives in today's digital age. By leveraging the expertise of ICT consultants, organizations can navigate complex technological challenges, stay ahead of the competition, and unlock new opportunities for growth and success.

### **4.3 Market Positioning**

Company A earning the title "Number One" for the Telecom industry in the Business Today TOP 40 rankings for 2021-2022 suggests strong performance within the Sri Lankan market. Sri Lanka's Top Ten Most Valuable Brands. This further indicates a prominent position within the industry. Launching a pre-commercial 5G network in key Sri Lankan cities signifies their commitment to innovation and keeping pace with technological advancements. On the other hand, based on the online information, company Z appears to hold a strong market position within the Sri Lankan information technology (IT) industry, particularly in enterprise resource planning (ERP) and related software solutions. Critical domain associated with a global leader in ERP and software solutions. Ranked Among the Top 100 Sri Lankan corporations, being listed among the top 100 Sri Lankan corporations by LMD suggests prominence within the broader Sri Lankan business landscape. Collaborations with Sri Lankan universities for scholarships and IT talent development indicate a strong local presence and industry.

In the end, Companies A and Z are well-established and prominent players in the Sri Lankan IT market, particularly within the ERP and related software solutions domain. Their global recognition, local R&D presence, partnerships with universities, and ranking among top Sri Lankan corporations contribute to this strong market position. Both organizations have obtained customer satisfaction by providing the following services to customers: Cloud-based solutions offering cloud-based deployment options flexibility and scalability and reducing up-front infrastructure costs for customers.

Offering Industry-Specific Solutions by developing or tailoring solutions to address the specific needs of Sri Lankan industries (e.g., manufacturing, hospitality, retail) can give a competitive edge. Data Analytics and Business Intelligence- Integrating data analytics and business intelligence tools with ERP solutions empowers customers to make data-driven decisions and optimize operations. Ability to integrate with AI solutions Artificial Intelligence (AI) Integration- Exploring AI's potential to automate tasks, improve decision-making, and personalize user experiences can enhance customer satisfaction.

With growing cybersecurity concerns, robust security measures and compliance with recognized global data privacy regulations are crucial. Initiate Customer Success Programs to understand proactive customer success programs that track performance, address challenges, and offer ongoing optimization to build strong customer relationships. Clear and regular transparent communication about product updates, roadmap plans, and addressing customer concerns fosters trust and satisfaction. While offering comprehensive solutions, Cost-Effectiveness must also be considered to attract new customers and keep existing ones. By focusing on these contemporary determinants and tailoring their approach to the market, both organizations become trusted partners for businesses seeking robust and adaptable ERP and ICT solutions, ultimately leading to higher customer satisfaction.

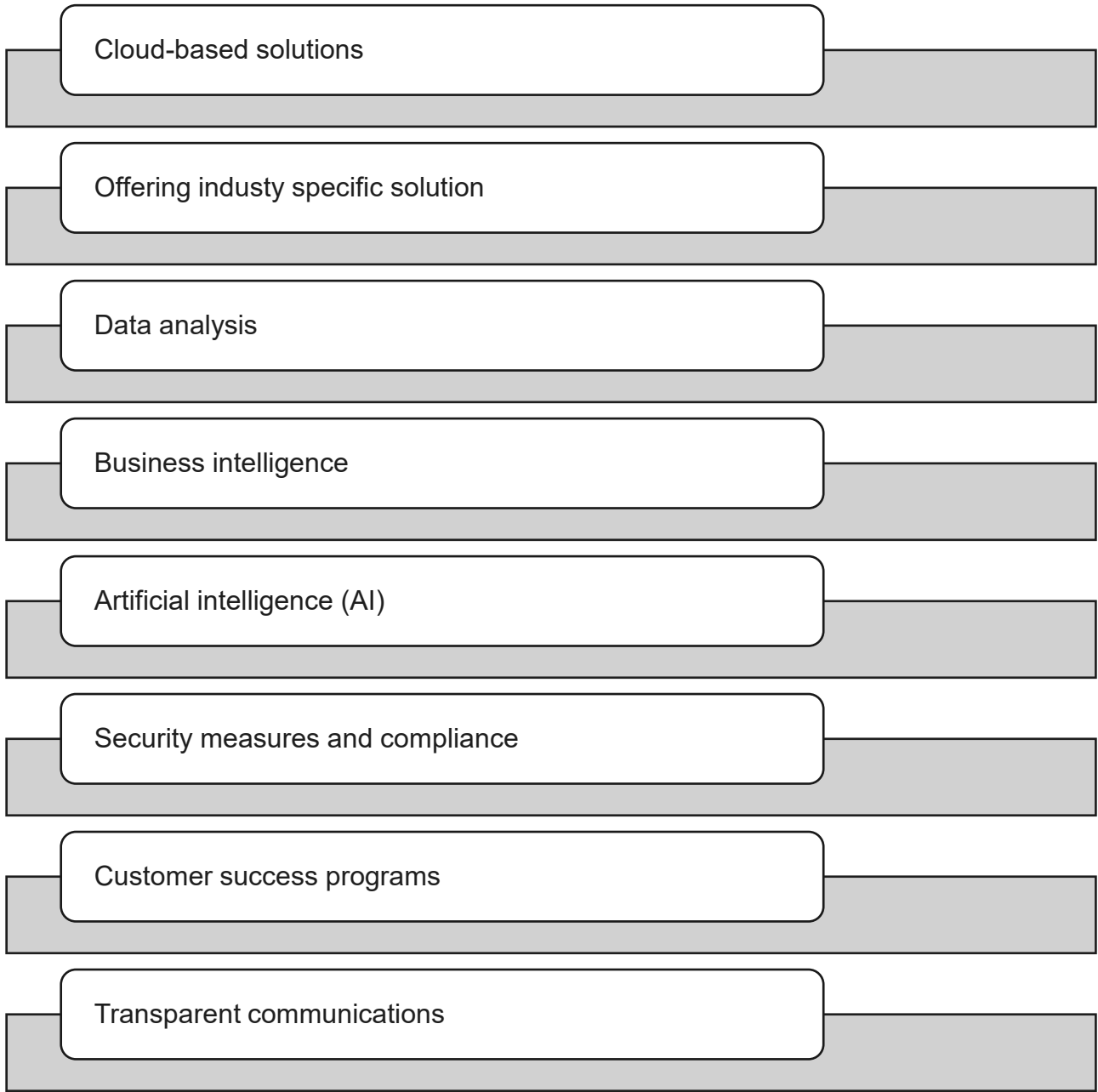


Figure 7. Company Strategy.

## **5 THE EMPIRICAL FINDINGS**

This chapter demonstrates how data were gathered and what responses were received for survey questionnaires and open-ended interview questions. Three project managers were interviewed, and forty-one participants responded to the questionnaire. The researcher has listed the responses received for each question from the interviews and survey questionnaires.

### **5.1 Results of the Study**

The researcher conducted open-ended interviews and a survey questionnaire as a tool to fulfill the data-gathering requirements. The survey questionnaire was semi-structured using a five-point Likert scale. The interviews and survey questionnaires aimed to identify the company's proactive strategies addressing the factors affecting the accomplishment of the change management of the IT project in the Sri Lankan context. The survey questionnaire was made easy for respondents by adding five-point Likert scale methods for some questions. Because most respondents dislike and are reluctant to write answers to the questions since they must invest more time in them, the survey questionnaire can be found in Appendix 2.

Open-ended interviews have been conducted to gain more insight into participants' experiences. Interview questions are similar to survey questionnaires. The interview questionnaire can be found in Appendix 3. Following the main objective, the three sub-objectives, including recognizing the influential factors of change management, identifying the company's possible strategies considering those factors, and understanding the role of a project manager in perceiving the influence of change management in Sri Lankan IT projects. The survey questionnaire was sent to the professionals, and the study got responses from forty-one IT professionals within ten days. Also, the researcher conducted three interviews with senior IT project managers at companies A and Z among forty-one respondents.

## 5.2 Influential Factors of the IT Project's Change Management

Considering the research objective, three project managers were asked the following question: What are the main factors you have observed in the successful change management of Sri Lankan IT projects? The interview answers are summarized below from the interview transcripts.

The factors include proper leadership, good communication, transparency, resistant management, lessons learned, and applied experience. In addition, project plan preparation, team management, defining clear project scope, implementing knowledge management systems, and providing training support to staff are influential. (H1)

Further determinants are the requirements for the changes before the implementation, agile project management practices, and leadership styles. (H2)

The influential determinants that can greatly impact the success of change management include implementing a proper communication management plan, utilizing previous similar project experience, and setting up a good knowledge management system. (H3)

The study also conducted a web survey of forty-one professionals in addition to the interview. In the survey, most respondents emphasized proper communication, leadership, and training support (see Appendix 4 & 5).

### 5.3 Company's Feasible Strategies Considering the Factors

The researcher interviewed project managers, asking three open-ended questions illustrated below. First, what early-stage strategies had the company taken to succeed in change management for IT projects addressing the factors? The answers are summarized below from the interview transcript.

Preparation for changes is an essential key step in the project. In addition, analysis, project expectations, and seeking feedback from relevant stakeholders are also essential. Clear and transparent communication, ensuring that all parties are informed and engaged in the execution of change management. Finally, the proper leadership role is central to change management because leadership carries out transformation until the end. (H1)

Resource planning is essential to ensure a smooth transition of changes in the IT project. The alignment of resource availability and capacity is crucial for successfully executing changes. In addition, identifying requirements and finalizing the change requirement at the initial phase with approval from project stakeholders are most important. Afterward, it is essential to develop a detailed plan for change implementation and provide senior management guidance during the new transformation. (H2)

Identifying and analyzing potential risks are important throughout the change management process. On the other hand, mitigating the risks ensures that the project stays on track and achieves its objectives. Factors such as proper requirement gathering, obtaining confirmation before initiating change, and considering time and cost constraints are vital for success. Each step is an entirely connected result of the project. Therefore, every change must be managed and executed carefully within the project. (H3)

The next question is how the company prioritized the factors needed to implement change management successfully in Sri Lankan IT projects.

Identifying and prioritizing change management requirements based on the impact on the entire project is critical. Equally important is the constant monitoring and evaluation of the necessary skills and knowledge needed to adapt to new technologies. (H1)

Understanding organizational culture is a valuable factor. In an organizational hierarchical structure, communication styles and employee attitudes toward changes can influence how change management strategies are implemented in the project. In addition, key stakeholders' engagement levels must be considered when executing changes. Instead, utilizing a knowledge management system and prioritizing effective communication channels are the most significant factors in Sri Lankan IT projects. (H2)

Referring to the experience and knowledge gained from previous similar projects, often referred to as lessons learned, is a decisive aspect of change management in IT projects. Equally important is the support and direction provided by top management in executing these changes. (H3)

The third question is, could you explain how the company implemented those factors to develop change management strategies for IT projects?

It is important to ensure that key stakeholders are involved in the change management process. Apart from that, the appointment of qualified people and the distribution of change responsibilities among them to execute changes in the project is important. Finally, continuous monitoring and evaluation of change is vital. (H1)

The important considerations are identifying the key project stakeholders and communicating with them regarding important changes. In addition, providing training sessions, conducting workshops, and creating online resources related to the change in the IT project are influential. Finally, conducting an appropriate risk assessment for the change efficiently executes the IT project change. (H2)

Experienced and qualified staff are influential in implementing IT project changes. Also, it needs to consider setting up a good communication plan with project stakeholders. (H3)

Also, the study finds almost the same answer from the web survey: most respondents highlighted that maintaining a sound knowledge management system, conducting risk assessment, and identifying the exact requirements of the change are essential determinants (see Appendix 7).

#### 5.4 Project Manager's Role in Change Management

The researcher asked the project managers three questions. The first question is: How important do you think the role of a project manager is for successful change management in Sri Lankan IT projects?

The project manager's role is important because the success and failure of the projects depend on them. Therefore, they must identify the value, necessity, and implication of the project changes in the context of business. Also, the impact of changes on the entire project regarding cost, quality, and time must be considered. (H1, H2 & H3)

The next question was, what qualities or skills do you think project managers should have for effective change management in IT projects?

Project managers must have communication, negotiation, and collaboration skills with project stakeholders. Generally, effective change management requires high competencies such as a creative mindset, complex decision-making, strong communication, leadership, problem-solving, and an agile mindset. (H1, H2 & H3)

The following third question was: Can you explain if you have any experience in which project managers directly influence change management in Sri Lankan IT projects?

The project scope should be achieved on time. Also, the project leader should inform all stakeholders of the projects if there are constraints. Apart from that, working with different teams to ensure successful delivery of the project scope. Being flexible enough to understand the practical issues to escalate the situation properly and ensure all parties are working towards a common goal and not creating conflict. (H1)

Implementing custom-designed information systems, organizational commitment, agile project management practices, and setting up proper communication plans and competency influence change management in Sri Lankan IT projects. (H2 & H3)

The survey answers from the forty-one respondents claim that project managers play a crucial role in planning, executing, and adapting the change management process (see Appendix 8).



## **6 DISCUSSION ON THE EMPIRICAL FINDINGS**

This chapter presents data analysis gathered through survey questionnaires and open-ended interviews. Subsequently, it explains how the researcher conducted data analysis, including the presentation of data, interpretation, and examination. Then, it describes the ultimate findings and interpretations.

### **6.1 Discussion on the Research Findings**

This research aimed to determine the company's proactive strategies, considering the factors affecting the success of the change management of the IT project in Sri Lanka. This has been achieved with sub-objectives such as recognizing the influential factors of the change management that affect IT project success, to identify the company's possible strategies addressing those factors in Sri Lanka and to identify the role of a project manager in perceiving the influence of change management.

The literature review aimed to analyze the change management process through two world-recognized theories, namely, Kotter's 8-step model and the ADKAR model, and go through theories about the change management process so that the research results could be better understood. The qualitative research method was executed through open-ended interviews and survey questionnaires for the participants. All participants are IT professionals from two Sri Lankan IT organizations. Based on the responses received from the research participants, the researcher conducted an inductive thematic analysis to identify the patterns of the responses. Most respondents mentioned the necessity of effective communications, a Knowledge Management system (KM), and a proper understanding of the change requirement. In addition to that, they also highlighted the validity of the project manager's role in executing change management in an IT project in Sri Lanka.

## **6.2 Interpretation of the Influential Factors Affecting IT Project's Change Management**

The study found various prioritized factors related to change management, such as proper communication, top management, and training support. These influential factors interact with each other in complex ways and can vary depending on the specific context of the IT project. By carefully considering and addressing these factors, project managers can increase the likelihood of successful change management and achieve desired project outcomes. Following demonstrate identified key factors from survey questionnaire and interviews.

### **6.2.1 Proper Communication**

The results indicate factors such as the importance of clear communication about the purpose and benefits of the change. Communication is essential for keeping all stakeholders informed, engaged, and motivated along the change pathways. Communicate timely and transparent messages, especially concerns, to build community and solicit input to help address change resistance. Also, the Project Management Institute (2021) highlighted how proper communication helps keep stakeholders updated regarding project status. Solid Communication helps provide sufficient information regarding project timelines and expectations. This factor is also related to user feedback communication and concerns with related changes in ongoing IT projects.

This covers official communication of project-related information while engaging stakeholders effectively. This is an accepted form of unofficial communication which happens inside the project. Some keywords or phrases that emerged in this theme were clear communication, sufficient information, efficient communication channels for user feedback, and concern. Based on interviews conducted by the author, Participant One and Participant Three also highlighted the importance of proper communication when executing an IT project. They mentioned that effective communication ensures that all stakeholders, including team members, clients, and management, clearly understand project goals, requirements, timelines, and deliverables. This alignment prevents misunderstandings and helps keep everyone on the same page throughout the project lifecycle. Furthermore, effective communication builds collaboration among team members, facilitating knowledge sharing, brainstorming, and problem-solving, which are essential for project success. In addition, in the survey questionnaire, out of forty-one participants, 97.6% selected clear communication about the purpose, which means effective communication

plays a significant portion in executing successful change in IT projects in Sri Lanka. The responses received for this question are listed in the appendices (See Appendix 4).

### **6.2.2 Top Management Support**

As top management support is considered one of the critical success factors in project management, effective executive involvement can significantly improve project success. Leadership is outside of the authority and position power of the project manager and project team. Active engagement and oversight by a project sponsor support the project manager and team and ultimately drive project outcomes.

This includes providing necessary resource allocation, decision-making authority, and guidance in managing risk, and this does not cover technical expertise, detailed technical decisions, and daily project management. In this theme, some keywords or phrases that emerged were right leadership, resistant management, Top management support, and company culture, which also reflects some aspects. On the other hand, during the interview, Participant One highlighted that leaders are providing strategic guidance, leveraging their influence to address external challenges, and gathering support from higher levels of the organization if needed.

In addition, 80.5% of participants selected leadership support in managing resistance in the survey questionnaire provided, which means top management plays a significant role in executing successful change in IT projects in Sri Lanka (See Appendix 4).

### **6.2.3 Training**

When executing changes in IT projects in Sri Lanka, providing training and support is crucial to ensure the successful adoption of new technologies, processes, or systems. This includes providing necessary training, such as sharing user manuals, on-site support and coaching, and workshops. During interviews, some keywords or phrases emerged in this theme: Training, Adequate user training, and support for the new IT system. Furthermore, Participant Two and Participant Three highlighted that training programs provide team members with the necessary skills and knowledge to utilize these new resources effectively.

By investing in training, organizations ensure that their workforce is equipped to handle the changes and maximize the benefits they bring. In addition, survey questionnaire outcomes demonstrate that training supports a significant portion of executing successful change in IT projects in Sri Lanka.

### **6.3 Explanation of the Company's Feasible Strategies Addressing the Factors.**

To address the influential factors of change management affecting IT projects, companies can implement a range of feasible strategies tailored to their specific context and needs. Following are the key factors highlighted during the interviews and survey questionnaire.

#### **6.3.1 Knowledge Management System (KMS)**

Knowledge management systematically manages an organization's knowledge assets to create value and meet tactical and strategic requirements. It consists of the processes, strategies, and systems that sustain and enhance knowledge creation, storage, and sharing. This includes all systems to manage and open up an organization's information (Uit Beijerse, 2000). Knowledge management systems may provide access to training materials, documentation, and resources related to IT projects, but they may not offer comprehensive training and development functionalities specific to change management.

During the interviews, Participant One and Participant Two highlighted how knowledge management systems help execute changes in an IT project. Some keywords or phrases in this theme were knowledge, knowledge management system implementation, change management system, sufficient information, and lessons learned. Furthermore, they emphasized that the knowledge management system plays a vital role in executing changes within IT projects by providing a platform for knowledge sharing, learning, collaboration, decision support, and continuous improvement. By utilizing the capabilities of a KMS, organizations can enhance their change management processes.

### 6.3.2 Risk Assessment

Survey questionnaire participants highlighted that risk assessment is also helpful in successfully driving change in an IT project. A risk is an uncertain event or condition that, if it occurs, can have a positive or negative effect on one or more objectives. Identified risks may or may not materialize in a project. Project teams endeavor to identify and evaluate known and emergent risks, both internal and external to the project, throughout the life cycle.

However, risk assessment does not include business continuity, Legal/compliance risk, or human factors. Some keywords or phrases in this theme were risk assessment and risk management. The examples and themes are extracted from the survey questionnaire shared with the participants. In their twenty-seven times, participants selected risk assessment options.

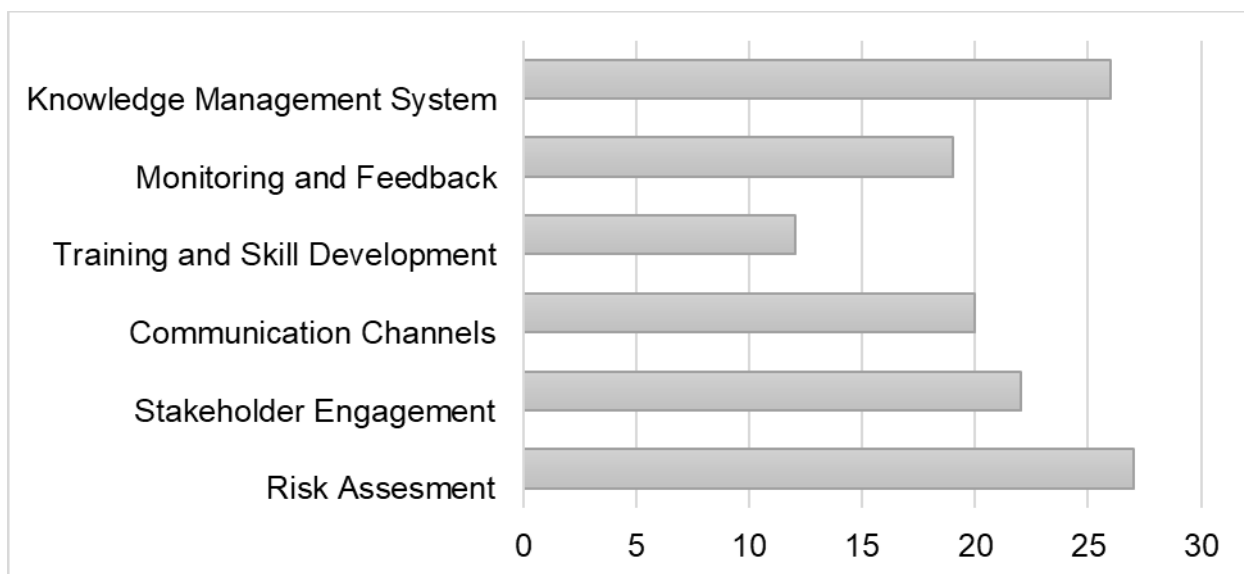


Figure 8. The company's proactive strategies in IT project change management.

### **6.3.3 Identification of the Necessary Changes**

Thomas (2023) states that the Change Management Process is used to initiate, record, assess, approve, and resolve project changes. Project changes are needed when the scope, time, or cost of one or more previously approved project deliverables changes. Most changes affect the budget and project schedule.

During the interview, participants also highlighted that by identifying the needed changes, project stakeholders can align their efforts toward common objectives, ensuring that the project stays focused and targeted. Project teams can accurately estimate resource requirements and allocate resources effectively to ensure the successful execution of the project. According to the survey questionnaire, a response theme has been extracted. This element focuses on building the rationale to help people understand why change is needed and how the future state will be better with that change. These covers identifying the need for the change and obtaining approval from the obligated stakeholders to execute the changes.

### **6.4 Interpretation of the Project Manager's Role in Change Management.**

The results indicate that most respondents decided that project managers play a crucial role in planning, executing, and adapting the change management process. The role of a project manager in an IT project is multifaceted and crucial for success. Project managers in IT projects are responsible for forming business and stakeholder alignment, utilizing various influence tactics. They must possess diverse skills and tools to ensure project success in the technology sector. Additionally, project managers play a significant role in an IT project by utilizing project management methodologies.

The project management process is essential for coordinating decisions, planning, and personnel in IT projects, impacting enterprises' efficiency and strategic development. This includes how the project manager's role is vital to execute changes inside the IT project. A project manager is generally considered to be the person responsible for delivering a project on time, within budget, and according to the quality standards specified by the client (Somerville et al., 2010). Various sources of literature discuss the roles and functions a project manager executes.

Sommerville and Campbell (2001) differentiate between three roles/function skill areas: communication, mentoring, and technical. Griffith and Watson (2004) describe the functions of a project manager as forecasting, planning, organizing, controlling, motivating, coordinating, and communicating.

Three interview participants highlighted that project managers play a vital role in executing changes in IT projects by providing leadership, planning and coordination, stakeholder management, risk management, resource allocation, quality assurance, and communication and reporting. Project managers execute successful change implementation by effectively fulfilling these responsibilities and ensuring project objectives are achieved on time and within budget. Similarly, from survey questions, 75% of participants indicated that project managers play a crucial role in planning, executing, and adapting the change management process (see Appendix 8).

According to the analysis conducted based on three research questions, the researcher has found that proper communication, receiving leadership support to execute changes, and training support are influential factors of change management that affect IT project success in Sri Lanka. On the other hand, maintaining sound knowledge management systems, conducting risk assessments, and identifying the precise requirements of changes are the company's possible strategies considering the factors in Sri Lanka. Finally, project managers play a crucial role in change management in IT projects by managing cost, quality, and Time.

## **7 SUMMARY AND IMPLICATIONS**

This chapter explains a summary of the study. It then describes theoretical, managerial, and policy implications. The following segments are study limitations, discussion of practical implication and suggestions for future research.

### **7.1 Summary of the Study**

The study identifies the company's proactive strategies considering the factors affecting the success of the change management of the IT project. Researchers investigate this requirement by setting up three sub-objectives. The researcher has come across proper communication, leadership support to execute changes, and training support as influential factors of change management that affect IT project success in the Sri Lankan context. On the other hand, maintaining sound knowledge management systems, conducting risk assessments, and identifying the precise requirements of particular changes are identifying the company's possible strategies for addressing the factors in Sri Lanka.

Finally, project managers play a crucial role in change management in IT projects by managing cost, quality, and time. With this research, the researcher was able to fulfill the lack of sufficient previous research studies on this topic as most of the researchers are targeted on change management of organizations but not the change management in IT project management. Neither of those studies indicated what proactive strategies the company needs to take to manage influential factors affecting the success of change management in the IT project. Therefore, the expected research aim has been achieved. With this study, the company will be able to develop a model for a proactive change management approach, which can help to manage the requirement of changes and reduce the risk of project failure. Additionally, implementing a proactive change management solution with effective procedures for managing project changes can ensure successful project completion and higher-quality outcomes.



## **7.2 Theoretical Implications**

From a theoretical point of view, Kotter's eight-step model and Adkar's model support findings such as proper communication, receiving leadership support to execute changes, and training and support. This research focuses on investigating proactive strategies that a company needs to address to manage changes in the IT project efficiently. On the other hand, maintaining sound knowledge management systems, conducting risk assessments, and identifying the precise requirements of changes are possible company strategies considering those factors in Sri Lanka. Maintaining a sound knowledge management system is a new strategy that has been identified, which neither the Kotter nor Adkar model correctly addresses. However, the Adkar model Knowledge step mentioned this as a new system. This research finding reflects a knowledge management system matching the lessons learned. According to the knowledge stage in the Adkar model, it is defined as people needing to understand how to change.

This includes understanding new processes and systems and new roles and responsibilities. Knowledge can be imparted through training and education. Therefore, this finding could be utilized to improve the definition of the knowledge stage in the Adakar model. In addition to that, Kotter's 8-step model also can be further developed with this new finding.

## **7.3 Managerial Implications**

This study found that implementing a proper knowledge management system is one of the company's possible strategies considering change management factors affecting IT project success in Sri Lanka. Knowledge management systematically manages an organization's knowledge assets to create value and meet tactical and strategic requirements. It consists of the processes, strategies, and systems that sustain and enhance knowledge creation, storage, and sharing (Yee et al., 2019). Building a knowledge management system allows identifying, creating, communicating, socializing, measuring, and improving internal knowledge to support strategic objectives (Hislop et al., 2018).

This could be done by applying any IT consultancy firm in Sri Lanka by implementing a proper knowledge management system. Implementing a proper knowledge management system, including lessons learned, will be straightforwardly supportive of smoothly transitioning changes within IT projects.

#### **7.4 Policy Implications**

This research suggests a link between the successful execution of change management in IT projects in the Sri Lankan context. Appropriate communication, top management support, and training and support are critical factors of change management that affect IT project success in Sri Lanka. In addition to that, the implementation of a knowledge management system will lead to reducing time and resource waste. A knowledge management system supports increasing knowledge related to specific changes and utilizing previous lessons learned from similar projects. The company's top management or board of directors can implement rules and policies to implement knowledge management systems in the organization, and every project stakeholder needs access to the system.

Therefore, everyone can refer to previous similar types of project resources and how the changes are executed successfully. In addition to that, as the project manager plays a significant role in the execution of changes in the IT project, the company can define rules like every project has a designated person for the project manager and that the project manager should have required project management experience and related project management qualifications. On the other hand, Government institutions can adapt these findings to implement proper knowledge management systems when executing government IT projects in Sri Lanka.

#### **7.5 Limitations of the Research**

While this study provides valuable insights into identifying a company's proactive strategies considering the factors affecting the success of the change management of the IT project, several limitations should be acknowledged. Firstly, the study relied on two IT organizations situated in Colombo, Sri Lanka, from participants, which may be subject to bias and inaccurate data. On the other hand, the sample size was also limited to forty-one due to a lack of resources and limited time availability to conduct this research. Another limitation of this research is related to participant confidentiality because it requires more in-depth information about the company. All efforts to ensure anonymity and protect the privacy of participants of this research. On the other hand, this research was conducted using a qualitative research strategy.

Another limitation of this research is that it did not assess many other external factors that could influence changes in IT projects, such as rapid technological advancement, security threats, and vulnerabilities, economic downturns, changes in government regulation, etc. Despite these limitations, every effort was made to ensure the reliability and dependability of the research findings.

## **7.6 Suggestions for Future Research**

While this study has provided valuable insight into influential change management factors that affect IT project success, there are still areas to explore further. Future research could investigate why that change management requirement arises in IT project execution. On the other hand, future research can be conducted on preventing unnecessary changes while executing IT projects. Finally, future research could consider not only the role of the project manager but also similar roles like product owner and scrum master.

On the other hand, this research was conducted based on two private IT organizations in Sri Lanka. Future research could be conducted by considering private sector organizations and government organizations. It would be helpful to understand the factors that facilitate the successful execution of changes in IT projects in both sectors. To better understand the implications of these results, future studies could address them by increasing sample size. In addition, future research can incorporate diverse samples, such as the Sri Lankan context and other countries or regions, and consider a broader range of contextual factors. Despite that, future research can also accommodate research methodology as a mixed method, providing more reflective ideas on the findings. Finally, project management methodologies could include waterfall, Agile, Scrum, Kanban, etc. The research can be extended to how changes can be executed when IT projects are executed using those methods.

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## **APPENDICES**

**Appendix 1. List of project failures in Sri Lanka (Parliament, 2020)**

**Appendix 2. Survey questionnaire.**

**Appendix 3. Interview Questionnaire**

**Appendix 4. How effectively does the company address the below-mentioned factors?**

**Appendix 5. Additional change management factors**

**Appendix 6. What additional factors contribute to the success or failure of change management in IT projects in Sri Lanka?**

**Appendix 7. Based on your experience, do you have any additional recommendations for enhancing the company's change management for IT projects?**

**Appendix 8. Please select the statement that best reflects your perspective on the role of a project manager in influencing change management.**

**Appendix 9. Details of the managers (Interviewee)**

## Appendix 1. List Of Project Failures In Sri Lanka (Parliament, 2020)

Name	Findings
Lanka Government Network 2016	The project started in 2016, and the evaluation committee revealed that its progress was 17% in 2023.
Google Loon Project 2015	After spending a considerable amount of money in the initial stage. This project has suddenly stopped.
e-pension project	Because of various hardware and software failures, this project was abandoned on 1 November 2013.
e-NIPO	ICTA pays the salaries of company employees without obtaining proper government approvals.

## Appendix 2. Survey questionnaire.

Dear Participant,

Thank you for taking the time to participate in this survey. If you have previously worked in change management within an IT project, you are cordially invited to complete a survey questionnaire. Your cooperation will help me fulfill my MBA degree.

1. Job Title
2. Years of experience in IT projects.
3. Based on your experience, please indicate how effectively the company addresses the factors mentioned below (Scale 1-5). (Consider the last IT Project)
  - Clear communication about the purpose and benefits of the change.
  - Sufficient information regarding project timelines and expectations.
  - Efficient communication channels for user feedback and concerns.
  - Adequate user training and support for the new IT system.
  - Involve key users in the planning and testing phases.
  - Provide incentives or recognition for early adopters.
  - Address employee concerns about job security due to the new system.
  - Familiar and complex processes associated with the change.
  - Lack of leadership support in managing resistance.
  - Realistic project timelines and resource allocation.

- Proper planning and execution of the change management process.
- Adequate monitoring and adaptation to address evolving challenges.

4. Do you think any other factors affect the list previously mentioned? If so, please list below.

5. Based on your experience, please indicate how effectively the company addresses the changes in IT project overall (Consider the last IT project)

- Very effectively-. The company consistently implements measures to prevent or mitigate the issue.
- Somewhat effectively- The company addresses the issue, but improvement is needed.
- Ineffectively- The company does not effectively address the issue.
- Very ineffectively-Project failure

6. Based on your experience, do you have any additional recommendations for enhancing the company's proactive strategies in change management for IT projects?

- Risk Assessment
- Stakeholder Engagement
- Communication Channels
- Training and skill development programme
- Continues Monitoring and feedback gathering.
- Maintain a sound Knowledge Management system (KMS)

7. Please select the statement that best reflects your perspective on the role of a project manager in influencing change management

- Project managers have limited control over change management; it primarily relies on external factors.
- Project managers play a crucial role in planning, executing, and adapting the change management process.
- Project managers mainly focus on technical aspects and delegate change management to other specialists.

8. Based on your experience, what additional factors contribute to the success or failure of change management in IT projects in Sri Lanka?

9. In your opinion, what specific strategies could the company implement to improve its approach to change management in IT projects?

10. Based on your experience, do you have any additional recommendations for enhancing the company's change management for IT projects?

"Thank you for participating in this survey. Your insights are invaluable in advancing my understanding of the company's proactive strategies in IT change management.

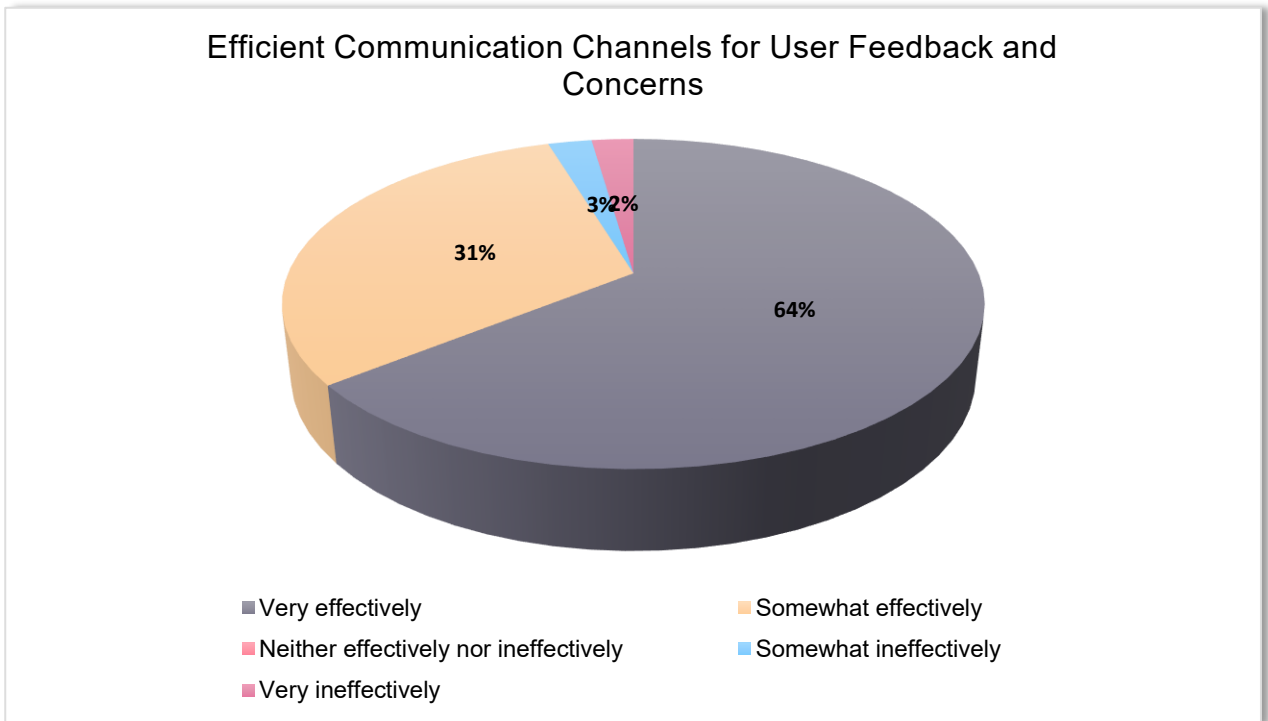
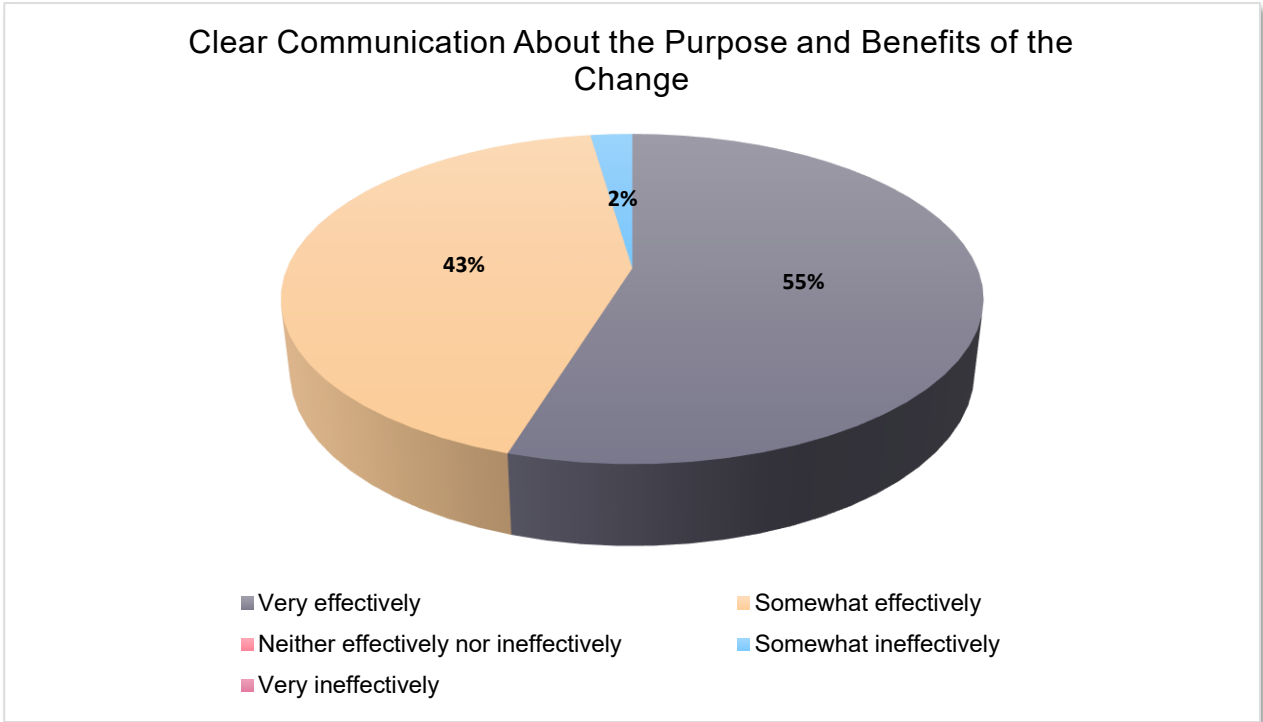
Sincerely,

Prabath Samarawickrama"

### **Appendix 3. Interview Questionnaire**

1. Could you please answer the questions below by considering one IT project change management of a Sri Lankan company with which you have experience?
2. What are the main factors you have observed in the successful change management in the Sri Lankan IT projects?
3. What had the company taken early-stage strategies to succeed in change management for IT projects addressing those factors?
4. How did the company prioritize the factors that will ensure the successful implementation of change management in Sri Lankan IT projects?
5. Could you explain how the company implemented those factors to develop change management strategies in IT projects?
6. How important do you think the role of a project manager is for successful change management in Sri Lankan IT projects?
7. What qualities or skills do you think project managers should have for effective change management in IT projects?
8. Can you explain if you have any experience where project managers directly influence change management in Sri Lankan IT projects?

**Appendix 4. How effectively does the company address the below-mentioned factors?**



## Appendix 5. List of additional change management factors

Response 1	Knowledge management systems
Response 2	Previous similar project experience is an added advantage.
Response 3	as mentioned, clear communication and top management support.
Response 4	no
Response 5	Experience with the same type of project
Response 6	Setting up a Lesson learned approach and Knowledge Management system.
Response 7	Industry experience with similar project
Response 8	Industry experience with similar projects will add an advantage.
Response 9	Lesson learned and KM system.
Response 10	Previous experience with the same typo project
Response 11	I think I have almost covered everything.
Response 12	Covers points above
Response 13	Clear communication, Knowledge Management system
Response 14	no
Response 15	Previous experience with the same type of project
Response 16	Implementation of Good Knowledge Management system
Response 17	Essential points are covered above
Response 18	None
Response 19	Utilization of a Knowledge management system is essential.
Response 20	Knowledge and Experience
Response 21	Previous experience and lessons learned from previous similar projects
Response 22	KM is the most important, and cost is the most important.
Response 23	No
Response 24	Lesson learned
Response 25	Knowledge Management system, early same type of projects experience
Response 26	Experience with similar projects and use of lessons learned
Response 27	no
Response 28	Lesson learned: Top Management support
Response 29	Building good customer relationships
Response 30	Communication skills
Response 31	Experience with similar projects, Lessons learned, and communication skills
Response 32	All are mentioned above.
Response 33	Top Management support
Response 34	Provide proper training for executing training.
Response 35	Similar experience, Knowledge management system, lesson learned.
Response 36	-
Response 37	Good change management system
Response 38	Previous experience, Change historical information.
Response 39	No
Response 40	Top management support and communication skills
Response 41	Lesson Learned from the previous project



## Appendix 6. What additional factors contribute to the success or failure of change management in IT projects in Sri Lanka?

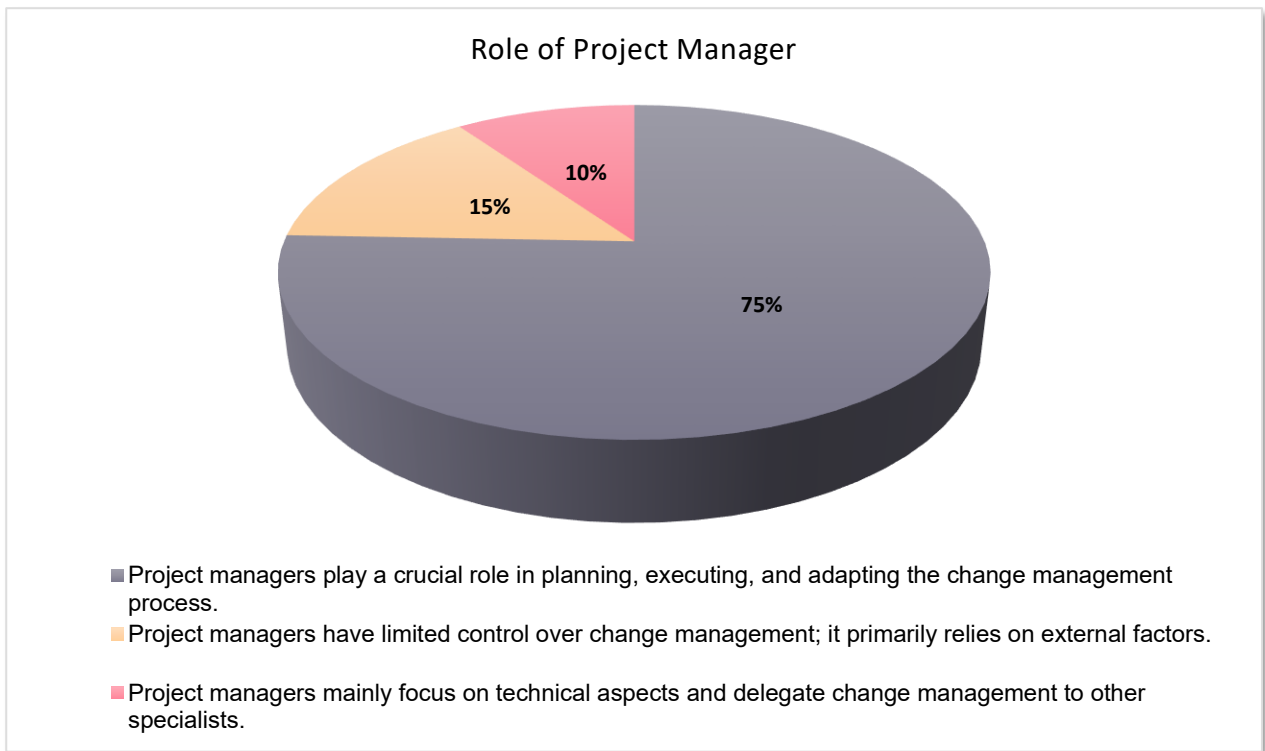
Response 1	Government Regulations, Infrastructure and Resource Constraints
Response 2	Top management support and organization culture
Response 3	Customer Acceptance
Response 4	Impact of Project Cost
Response 5	Overall project cost and customer requirement and acceptance
Response 6	Limitation of Resource
Response 7	Company Culture
Response 8	Training and Education
Response 9	Change cost and scope.
Response 10	Customer acceptance for the change execution
Response 11	Nothing
Response 12	Lesson learns: Training
Response 13	Privacy and security concerns
Response 14	Company owner's support, Cost of the change.
Response 15	Top management support and change cost
Response 16	Awareness of the change requested
Response 17	Validity of the requested change
Response 18	Top management support and change cost
Response 19	Lesson learned: Top management support, Change management cost.
Response 20	Customer acceptance of the change
Response 21	Identifying whether the change can be implemented is an agreed-upon constraint with the customer; if not, a feasibility analysis is required.
Response 22	KM is the most important, and the cost is also essential.
Response 23	Lesson learned: Top management support, training.
Response 24	Change cost and time.
Response 25	Knowledge Management system, early same type of projects experience
Response 26	Project scope, cost, and schedule
Response 27	The time frame available to execute the change
Response 28	Impact on the entire project Scope
Response 29	Proper analysis of the change requested
Response 30	-
Response 31	Identifying change is needed.
Response 32	Budget, cost, Quality
Response 33	Analysis of Impact on Main Project
Response 34	Analyze the impact of cost, quality, and budget of the project.
Response 35	Accepted time and cost by the customer
Response 36	--
Response 37	Good change management system
Response 38	Previous experience, Change in historical information
Response 39	no
Response 40	Top management support and communication skills
Response 41	Feasibility analysis of required Change

**Appendix 7. Based on your experience, do you have any additional recommendations for enhancing the company's change management for IT projects?**

Response 1	Feedback Mechanisms - Establish clear and accessible feedback mechanisms throughout the change process.
Response 2	Top management support and a solid vision and mission are vital for the execution of successful change.
Response 3	Setting up a sound change management system
Response 4	Extend time and resources for the project.
Response 5	Implement a sound system for executing changes (change management system)
Response 6	Utilizing previous lessons learned from similar types of projects
Response 7	identifying the impact of the based scope, time, and cost
Response 8	Obtain all stakeholder agreements to do a modification.
Response 9	Getting agreement from all stakeholders to execute changes. Setup Good KM system
Response 10	Properly investigating the exact requirements for the change is vital.
Response 11	Set up a good schedule and utilize previous lessons learned.
Response 12	Understand the actual requirements of the change.
Response 13	Analyze the change requirement, Setup KM and change management tracking system
Response 14	Understand the necessity of the change.
Response 15	Setup Knowledge management system
Response 16	I believe gathering approval from the customer before executing the change is the most important.
Response 17	Refer to past project records and analyze the possibility of applying them.
Response 18	Providing proper training to learn about the project will help.
Response 19	Establish a proper communication plan.
Response 20	Setting up a sound Knowledge management system, Getting Top management support, and communicating correctly help execute changes successfully.
Response 21	Analyze the requirement of change (Why change is required)
Response 22	-
Response 23	Using previous similar project knowledge will save time.
Response 24	Use of knowledge management system
Response 25	Utilize similar knowledge in the previous project.
Response 26	Continuous monitoring and investigation of the change
Response 27	A learning management system and early use of similar types of project information will be helpful.
Response 28	no
Response 29	Setup knowledge Management system
Response 30	Refer to previous project documentation.
Response 31	Top management support and required resource allocation to execute changes
Response 32	Obtain feedback and approval from the customer.
Response 33	Top management supports and analyzes the requirements for change.

Response 34	use of previous system implementation experience
Response 35	Reducing the impact of the initially agreed project budget, time, and cost is very important.
Response 36	-
Response 37	Utilization of previous experience, such as lessons learned.
Response 38	Utilization of previous similar project knowledge
Response 39	Proper training, Learning management system
Response 40	Sri Lankan companies can improve their change management strategy by implementing a proper Knowledge management system.
Response 41	Identify the exact need for the change.

**Appendix 8. Please select the statement that best reflects your perspective on the role of a project manager in influencing change management.**



### Appendix 9. Details of the Managers (Interviewee)

H1 (Manager 1)	He is the functional lead in Microsoft Business Central ERP. He holds a Master of Business Administration Degree from the University of Sri Jayawardhanapura and a few Microsoft certifications. He has over ten years of experience in the IT industry.
H2 (Manager 2)	She is the head project manager and holds a degree from NSBM Green University, Sri Lanka. She earned a Certified Associate in Project Management (CAPM) from PMI Institute and has over 13 years of industry experience.
H3 ((Manager 3)	He is the head of the IT project management department. He holds a Master of Business Administration degree from the University of Trinity Saint David, UK. In addition to that, he earned a Project Management Professional (PMP) from PMI Institute, and he has over 16 years of industry experience.