

Pre-Sales Pitfalls Causing Failure of IT Projects: An Exploration of Challenges Faced by Project Managers of an ICT Service Firm

Pre-Sales
Pitfalls

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Abstract

IT project failure is a prevailing issue in the IT service providing landscape which impacts organisations across the world, causing losses, leading to customer attrition, and preventing them from reaching opportunities. While there are numerous reasons for IT project failures, a significant contributor to IT project failure is linked to pitfalls of pre-sales of such projects. This research investigates the pre-sales pitfalls, proposes strategies for their effective mitigation and corrective actions. Adopting an interpretivist paradigm, the study qualitatively explored pre-sales pitfalls and their impact on project delivery through semi-structured interviews with 12 IT project management professionals, aiming to answer three key questions: What are the common pre-sales pitfalls causing challenges for project managers during the project management phases of IT projects delivery? What strategies can be employed to mitigate pre-sales pitfalls and enhance project success rates? Why assessing pre-sales pitfalls is important at the start of project lifecycle of IT projects? Several common pitfalls were identified through 12 interviews conducted and validated with documents analysis, which hinder project success by causing various factors. The study also outlines strategies to mitigate pre-sales pitfalls effectively highlighting early project manager involvement, leveraging past experiences, and conducting risk assessments. Further, it stresses the importance of assessing pre-sales pitfalls early in the project lifecycle to prevent challenges and improve project success rates, stakeholder satisfaction, and proactive organizational actions.

Keywords: Pre-sales pitfalls, Project success, Project failure, Project delivery challenges, Mitigation strategies.

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Introduction

In the dynamic landscape of ICT, the successful execution of projects serves as a cornerstone for organizational growth and client satisfaction. Compared to other projects, IT projects are known to be more complex due to the seamless integration of various components towards achieving the ultimate result (Poveda-Bautista et al., 2018). Furthermore, finalizing a detailed blueprint prior to project commencement poses a significant challenge (Stepanek, 2005). The organisation in study is an Information and Communication Technology (ICT) service provider based in Singapore, with branch offices in Australia and Sri Lanka.

The organization began operations in 2000, focusing on software development using mainframe and IBM technologies. Over time, it expanded into an ICT service provider, adding ERP systems and other tech stacks, which created new revenue channels. Over the next 15 years, the company successfully completed IT projects and met strategic and profit goals. However, amid emerge of rapid software development needs, intense competition among existing firms and complex expectations of clients, the company began confronting analogous challenges in delivering successful projects beyond first 15 years.

However, the recent project success rates have declined compared to the organization's earlier years. Project managers and directors attribute this to underestimated scope, inadequate requirements, scope creep, and unrealistic expectations, leading to cost overruns and delays. These issues highlight the need to improve scope management within the organization. As following graph illustrates, it is evident that the cost overrun of projects observes a declining trend over the recent 5 years in the organisation in study, with increasing pattern of average cost overrun. Although the cost of failure is sometimes factored into IT solutions, pre-planned overcharges don't solve the root issue of IT project failure (Hughes et al., 2017). But pre-estimating the project cost more accurately is crucial.

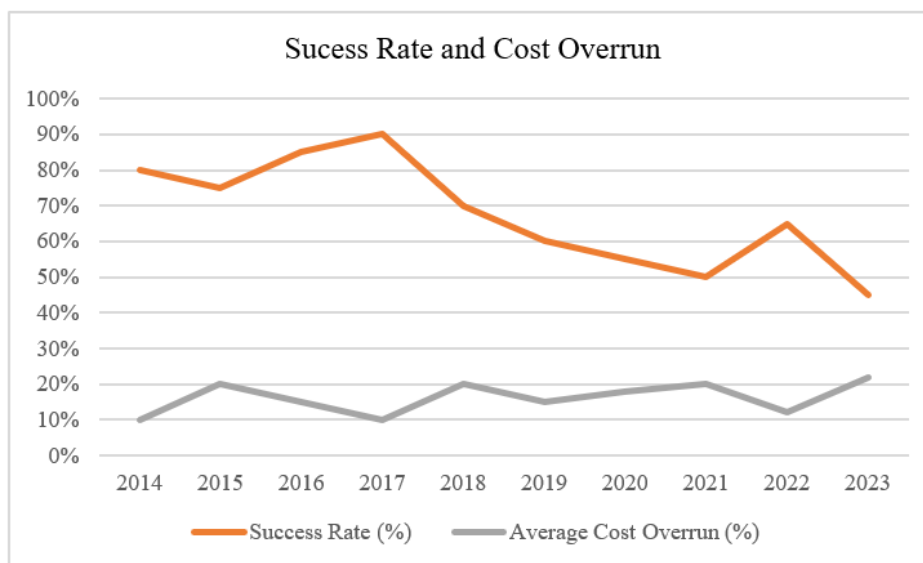


Figure 1: Success Rate and Cost Overrun

Source: Internal data of the organization

Moreover, in the organisation in study, average time deviation has also shown an increasing pattern, as depicted in below graph. IT projects are becoming increasingly complex, and as their complexity rises, so does the challenge of managing them, and project delays is one of the key potential consequences of IT projects not being completed successfully (Wills , 2015).

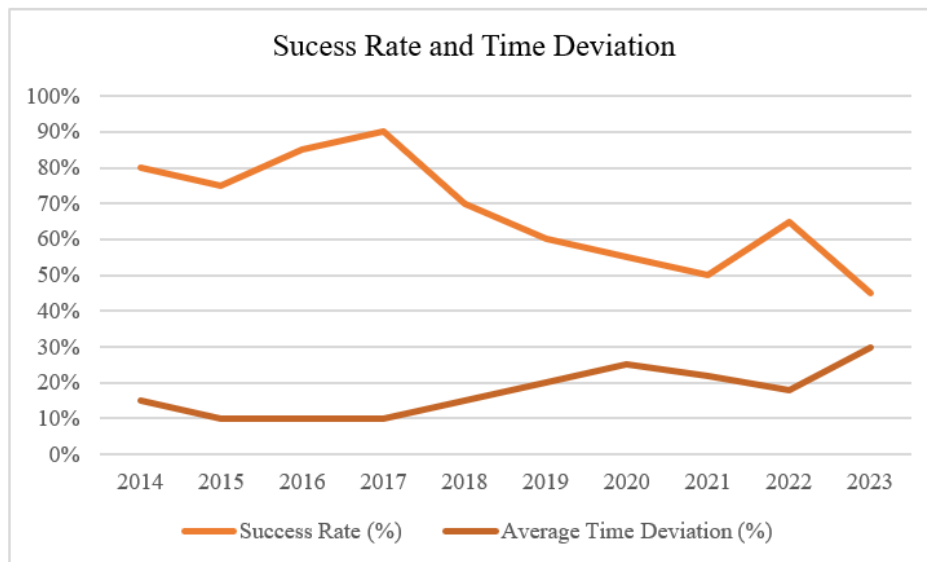


Figure 2: Success Rate and Time Deviation

Source: Internal data of the organization

So, the above discussed discernible trends underscore the compelling need to address the systemic issues pertaining to scope identification and management within the organization to reduce the failure rates of the projects. Based on internal data, the following challenges have led to project failures or delays:

1. Cybersecurity concerns causing project issues
2. Adoption of advanced technology without sufficient expertise, leading to implementation challenges and delays
3. Development costs borne solely by the organization, straining budgets and eroding profit margins
4. Lower customer satisfaction in some successful projects due to usability and accessibility issues

The study participants identified that the challenges were mainly caused by pre-sales pitfalls, which hindered successful project delivery. These issues often emerged during execution, leading to scope deviations, cost overruns, missed deadlines, client dissatisfaction, and financial losses.

Within IT project delivery, the pre-sales phase plays a pivotal role in shaping project outcomes, as it sets the foundation for project scope, expectations, and commitments

(Buzz/Tech, 2024). However, despite its significance, the pre-sales phase often presents challenges and pitfalls that can impact project success. The pitfalls frequently stem from insufficient time and effort being allocation during the pre-sales phase, leading to a cascade of issues during managing of the project delivery (Ondov, 2001).

The research problem centres on unravelling the pre-sales pitfalls in IT projects within an ICT service firm and understanding their impression on project outcomes. Further, the study aims to explore the challenges faced by the project managers who execute projects after pre-sales completes. With this context, as part of this qualitative study, the following research questions guide the exploration of pre-sales pitfalls in IT projects within the ICT service firm:

1. What are the common pre-sales pitfalls causing challenges for project managers during the project management phases of IT projects delivery?
2. What strategies can be employed to mitigate pre-sales pitfalls and enhance project success rates?
3. Why assessing pre-sales pitfalls is important at the start of project lifecycle of IT projects?

These questions also aim at exploring the experiences, perspectives, practices, and behaviours of IT project managers involved in the project management processes and pre-sales activities within the chosen organization. This study holds profound significance for the ICT service firm, as it addresses critical challenges during project management phases of IT projects caused by pre-sales pitfalls. By uncovering and understanding pre-sales pitfalls and their consequential impact on project success rates and organizational performance metrics, the study endeavours to furnish valuable insights and strategic recommendations for pre-sales practices and mitigating project risks within the organization and beyond. Through its empirical findings and actionable insights, the study seeks to catalyse transformative change and drive organizational excellence within the ICT service provider domain.

The Aim of the Study

While significant studies specifically focusing on "Pre-Sales Pitfalls Causing IT Projects" are limited, a substantial body of research exists on various other aspects and factors influencing IT projects. Consequently, this study explicitly aims to delve into the realm of Pre-Sales Pitfalls and their potential impact on these established areas and factors within IT project management. And this qualitative research employs an exploratory approach (George, 2023) to investigate the phenomenon of pre-sales pitfalls in IT project management within the context of an ICT service firm. Moreover, this research offers exploring insights into perceptions that can either prevent these typical issues or, at the very least, lessen the negative impact they exert on a project's scope.

Literature Review

According to the PMI Global Project Management Survey 2017, software projects in particular are notorious for falling short. A total of 14% are cancelled without any results, 31% do not meet their objectives, 43% exceed their budget and 49% exceed the agreed timeframe. Only 15% of projects are delivered as planned (PMI, 2017). According to reports from the Gartner Group, approximately 75% of ERP projects experience failure, while CRM projects face a nearly

identical failure rate while big data analytics projects also encounter a significant failure rate (Andriole, 2021). Moreover, digital transformation efforts fail approximately 70% of the time, with McKinsey indicating that only 30% of such projects lead to improved corporate performance (Garcia, 2022). The prevalence of project failures in technology is staggering, resulting in substantial costs for companies and executives involved, while major findings say that about 90% of these projects fail to deliver any measurable return on investment (ROI).

IT Project Challenges and causes to Projects failures

Numerous recent studies confirm that a wide range of issues in IT project management contribute significantly to project failures. However, analyses of the specific underlying causes remain limited, highlighting the need for more detailed investigation to inform effective mitigation strategies. For instance, (Ameer & Naz, 2021) found that project manager personality traits - particularly conscientiousness and extraversion - significantly influence project success, mediated by professional commitment and moderated by organizational maturity. Similarly, (Watanabe et al., 2024) emphasized that emotional intelligence enhances team cohesion and performance, mitigating failure risk in complex projects.

Common failure drivers identified in the literature include unclear objectives, poor planning, lack of stakeholder engagement, insufficient risk management, and scope creep (Trinetix, 2023). These findings echo older frameworks but reveal new nuances: Convoking4 (Convoking4, 2025) reported that 74% of IT projects fail due to a combination of incomplete requirements, stakeholder misalignment, and inadequate resources.

Governance and adaptive governance structures also matter. Frontiers in psychology journal (Zaman et al., 2022) argued that integrating project governance with high-performance work practices significantly improves delivery outcomes in software development environments. The Queensland Health payroll system exemplifies these multi-factor challenges: rushed vendor selection, undefined scope, outdated technology, and lack of testing—all recurring themes in modern failure case studies (Trinetix, 2023).

Additionally, The Standish Group's CHAOS report (Standish Group, 2014) identifies several common failure factors, including incomplete requirements, lack of user involvement, resource constraints, and unrealistic expectations.

Scope creep, the unauthorized expansion of project scope, stands as a significant challenge in IT projects. This phenomenon often leads to wasted resources, decreased satisfaction, and unmet project value. PMI's article - Top five causes of scope creep (Larson & Larson, 2009) - identify various causes of scope creep, including ambiguous scope definition, inadequate scope and requirements management, inconsistent processes for requirements gathering, lack of sponsorship and stakeholder involvement, and project length. To mitigate scope creep, Larson and Larson emphasize the importance of establishing clear scope definitions, implementing effective scope and requirements management processes, involving stakeholders throughout the project lifecycle, and minimizing project durations to reduce the opportunity for scope expansion.

Pre-Sales Pitfalls Causing IT Project Management challenges

While significant studies specifically focusing on Pre-Sales Pitfalls are limited, two distinctive studies conducted by Dingsøyr and Petit (2021) are worthwhile to note. According to a study conducted by (Ondov, 2001), number of factors associated with project initiation and pre-sales phases cause the challenges in project delivery, including:

1. Unclear business problem and/or success Criteria
2. Under-estimated scope and size of Effort
3. Unrealistic expectations of Commercial Off the Shelf (COTS) Systems
4. Predetermined project milestones without recognizing implication
5. Inadequate Requirements and
6. Lack of sponsor support.

A study conducted by (Dingsøyr & Petit, 2021) explores how risks are managed in large software. Their findings underscore the importance of early risk identification and mitigation strategies during the pre-sales phase to ensure project success. Additionally, a survey conducted by McLeod and MacDonell (McLeod et al., 2021) identifies several factors that influence software systems development project outcomes. Their research highlights the significance of clear communication and well-defined requirements during the pre-sales phase to prevent misunderstandings and scope creep during project delivery.

The literature reviewed in the preceding section suggests that pitfalls encountered during the pre-sales phase can significantly influence the challenges faced by project managers during project execution. These challenges, in turn, have a direct impact on project delivery outcomes - whether success or failure. Based on this understanding, the conceptual model presented in Figure 3 illustrates the hypothesized relationship between pre-sales pitfalls and project management challenges. This observed linkage serves as the foundation for the framework developed in this study.

The conceptual model is also directly informed by the research questions guiding this investigation. The first research question - "What are the common pre-sales pitfalls causing challenges project execution?" is reflected in the model's first link, which connects pre-sales issues to project management challenges. The second question - "What strategies can be employed to mitigate pre-sales pitfalls and enhance project success rates?" - addresses the practical implications of understanding this relationship. It supports the model's purpose as a diagnostic tool to inform proactive strategies aimed at minimizing risks and improving project outcomes. The third research question - "Why assessing pre-sales pitfalls is important at the start of the project lifecycle of IT projects?" - supports the model's emphasis on early identification of risks to strengthen project success.

Pre-Sales and Project Management (of delivery)

In the context of software and IT projects, the term "pre-sales" typically denotes the phase or activities preceding the signing of a contract with a client or customer (Suvorova, 2024). These activities are primarily centred around comprehending the customer's requirements,

showcasing the capabilities of the IT solution, and negotiating terms to secure the project (Oemig, 2015).

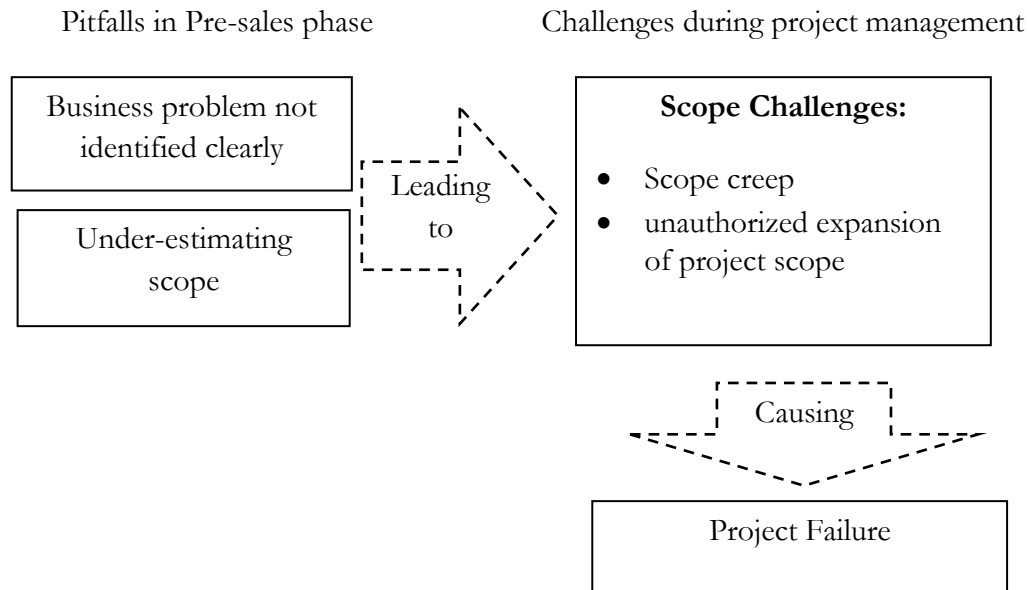


Figure 3: Relationship between Pre-Sales Pitfalls and Project Management Challenges.

Source: Researcher’s original context

Although pre-sales activities have traditionally been viewed as separate from formal project management delivery, recent studies underscore their critical role in project initiation. The pre-sales phase lays the groundwork for a project by defining scope, requirements, and client expectations. It involves collaboration among sales teams, project managers, technical experts, and other stakeholders to ensure alignment between the proposed solution and the client's needs, thereby enhancing the likelihood of successful delivery. For instance, a study by Siriram (2023) emphasizes the importance of integrating the front-end (FE) and project execution (PE) phases, highlighting that neglecting the FE phase can lead to project challenges. Similarly, research by Momeni and Martinsuo (2019) advocates for a broader view of project management that includes the FE phase to ensure comprehensive planning and coordination.

The Project Management Body of Knowledge (PMBOK Guide – Sixth Edition), published by the Project Management Institute (PMI, 2017), is a globally recognized standard that outlines best practices and guidelines for managing projects. It defines five process groups—Initiating, Planning, Executing, Monitoring and Controlling, and Closing, and ten knowledge areas including scope, time, cost, and stakeholder management.

While the PMBOK framework formally begins at the project initiation phase, it implicitly acknowledges the importance of pre-initiation efforts, particularly in the Initiating process group, which involves defining a new project or a new phase of an existing project by obtaining authorization (PMI, 2017). Key outputs such as the project charter and stakeholder register are often informed by information gathered during the pre-sales phase. In ICT service firms, these pre-sales activities such as requirements gathering, feasibility assessments, and solution design

serve as critical inputs that shape the initial scope, objectives, and constraints of the project. Thus, while not explicitly covered in PMBOK, the pre-sales phase plays an integral role in setting the stage for successful delivery aligned with PMBOK principles.

Importance of Pre-Sales

Comprehensive pre-sales activities play a pivotal role in the success of software and IT projects. Siriram (2023) advocates for a holistic approach that includes the FE phase to ensure comprehensive planning and coordination and underscores the significance of pre-sales in understanding customer needs, showcasing solution capabilities, and negotiating terms effectively. This phase acts as a bridge between sales and project management, ensuring alignment between client expectations and project deliverables.

Recent studies show that pre-sales activities play a pivotal role in successful IT and software project initiation. Buchan et al. (2021) found that early alignment of stakeholder expectations, including product owners, development teams, and end users - reduces miscommunication during Agile development, establishing clear scopes and responsibilities from the outset. Moreover, Alnhari and Qureshi (2024) proposed a systematic framework for early stakeholder identification, engagement, and continuous feedback, demonstrating that structured pre-sales processes help prevent scope creep, build trust, and reduce project delays.

Additionally, Saleo's (2023) industry analysis highlights that well executed pre sales practices such as tailored demos, proof of concept development, and competitor analysis - enhance solution-market fit and shorten sales cycles. These findings underscore that strategic pre sales execution across technical, sales, and stakeholder teams is essential to set realistic scope, allocate resources efficiently, manage timelines, and mitigate risks. In sum, contemporary evidence confirms that disciplined, collaborative pre sales processes lay critical groundwork for project feasibility and long-term success.

While there were not many researched have been conducted on the context of pre-sales of software projects, key findings from the literature review providing an overview of factors contributing to IT project problems and the importance of comprehensive pre-sales activities.

The literature review revealed critical factors contributing to IT project problems, including scope creep, inadequate project management, and stakeholder involvement. These findings highlight the interconnectedness of pre-sales and project management, with comprehensive pre-sales serving as a critical precursor to successful project delivery. Subsequently, the literature review offers direction into derive a conceptual model for this study.

Methodology

This research adopts a qualitative research approach, specifically employing a case study strategy. Case study research is particularly well-suited for exploring complex phenomena within their real-life contexts and allows for an in-depth investigation of specific instances or cases (Yin, 2018). In this research, the interpretivist paradigm is adopted, aligning with the qualitative nature of the investigation. By embracing an interpretivist paradigm, this study acknowledges the

complexity and contextuality inherent in human experiences and organizational practices. Further, the interpretivist paradigm aligns with the constructivist epistemology, which posits that knowledge is actively constructed by individuals through their interactions with the social world (Guba & Yvonna S., 1994).

The case study focuses on an anonymous ICT service provider in Singapore, chosen for its expertise in IT projects, particularly software implementations, and its challenges in project delivery despite an established industry presence. The organization was selected for its relevance to the research problem and the rich data it offers for analysing pre-sales practices, project management processes, and outcomes.

The study sample included 12 key stakeholders involved in project management and pre-sales activities, such as project managers, project directors, sales managers, and technical experts. They were selected for their firsthand experience and insights into project challenges, pre-sales pitfalls, and outcomes, following purposive sampling criteria. As the responded for this study, all 12 stakeholders actively constructed their understanding of pre-sales pitfalls, and their impact to project management challenges based on their experiences, beliefs, and interactions within the organizational context.

Table 1: Summary of the Sample Profile

Participant	Role(s)	Years of experience in role(s)	Description of role
Participant 1	Senior Project Manager	4	Manages project delivery and maintenance, with focus on commercial Off-The-Shelf (COTS) platforms to cater rapid delivery in short timelines.
Participant 2	Project Director	7	Leads project delivery of bespoke financial systems.
Participant 3	Project Manager	3	Manages project delivery of bespoke financial systems.
Participant 4	Project Director, Sales Manager	5	Leads project delivery and pre-sales, with focusing on transformation of supply chain management processes using COTS (Commercial Off-the-Shelf) ERP platforms

Participant 5	Project Manager	6	Manages project delivery and maintenance of IT infrastructure systems.
Participant 6	Project Director	5	Leads project delivery of bespoke financial systems.
Participant 7	Sales Director	7	Act as one of the key sales directors
Participant 8	Senior Project Manager	4	Manages project delivery of bespoke systems focusing on education and retail sales domains
Participant 9	Project Manager, Scrum Master	5	Manages project delivery of bespoke financial systems.
Participant 10	Sales Manager	6	Act as one of the key sales managers
Participant 11	Project Manager, Technical Architect	6	Manages project delivery and assist in solution architecting, with main focus on helpdesk systems.
Participant 12	Project Director, Solution Architect	10	Leads project delivery and pre-sales, with focusing on transformation of supply chain management processes using COTS (Commercial Off-the-Shelf) ERP platforms

Source: Researcher's original context

Data collection involved semi-structured interviews, document analysis, and observations. In total 12 interviews were conducted, and each interview process involved one-on-one semi-structured interviews with selected 12 participants, using open-ended questions to explore their experiences with pre-sales activities, project execution challenges, and success factors. Duration of each interview ranged from 45 minutes to 1.5 hours, depending on various insights demonstrated by participants. Document analysis included reviewing Statement of Work (SOWs), sales proposals, sales contracts, project contracts, tender documents, project charters, project progress reports and project budgets. Observations took place during project proposal meetings,

project kick-off meetings, progress tracking meetings and other relevant interactions to capture real-time dynamics.

Data analysis used thematic analysis to identify patterns, themes, and relationships in the data. Ethical considerations were prioritized throughout the research, ensuring informed consent, confidentiality, and respect for participants. Data was securely stored, anonymized, and handled with sensitivity to minimize harm. Transparency and integrity were maintained, with no conflicts of interest, and the research followed all relevant guidelines and legal requirements. Ethical review and continuous reflection were integral to the study, addressing any concerns promptly and ensuring high ethical standards.

Some of the interviews were conducted via Microsoft Teams and recorded using a mobile voice recording app. Transcripts and interview notes were prepared in Microsoft Word, while Microsoft Excel was used to filter, sort, and consolidate coded data. A manual, inductive coding approach was followed, with themes emerging through iterative review of transcripts and meeting notes. Analytical rigor was ensured through several measures:

- A structured coding matrix in Excel supported consistency.
- Reflexive note-taking helped reduce interpretive bias.
- Triangulation was applied by cross-verifying interviews with project documents and meeting records.
- Detailed participant quotes were retained to support transparency.

While the study relied on a single coder, triangulation and careful documentation of the process contributed to the reliability of findings.

Limitations of the Study

While this study aimed to ensure the rigour and validity of its findings, several limitations must be acknowledged. First, the research employed a single-case study design, focusing on one organization within the ICT service provider landscape. As such, the findings may not be readily generalizable to other organizational contexts or industries. Second, the small sample size which is limited to twelve participants from within the same organization - constrains the breadth of perspectives and may not fully capture the diversity of experiences found across the wider IT project management community. Third, the study relied on self-reported data obtained through interviews, which introduces the potential for biases, such as selective memory, personal interpretation, or social desirability. Finally, time constraints limited the opportunity for broader participant recruitment and follow-up validation, which may have further enriched the data and strengthened the study's conclusions.

Data Representation and Analysis

The common pre-sales pitfalls causing challenges for project managers during the project management phases of IT projects delivery.

Previous studies identified issues causing IT project failures, but studies conceded specific to pre-sales pitfalls were not found to be significant. Based on discussions conducted with

interview participants (particularly IT project management professionals), pre-sales pitfalls causing challenges during project management phases (project delivery) were discussed under 9 themes (see Figure 4). While Inadequate Risk Identification was widely and explicitly demonstrated only by Participant 12, it was noted that various other themes are associated with importance of risk identification. The rest of the themes were found to be common for several participants.

Unclear business objectives during the pre-sales phase pose significant challenges in the delivery of IT projects. This pitfall is portrayed by a lack of clarity in defining client requirements and success criteria, leading to misunderstandings and misalignment between project deliverables and client expectations. For example, during an internal project review meeting concerning a financially unsuccessful project, it was observed that a significant cost overrun stemmed from a clause in the sales contract which stated: "The vendor to supply, commission and maintain cloud infrastructure hosting the application system." In accordance with this clause, the vendor (i.e., the organisation under study) provisioned and managed the required infrastructure up to the point of system go-live. However, the client subsequently expected the vendor to continue absorbing infrastructure costs during the three-month post-production support period. The clause's open-ended wording failed to specify a clear timeframe for the vendor's responsibilities, leading to ambiguity regarding the duration of service provision. Consequently, the associated costs were not anticipated or included in the project delivery forecast, contributing to the project's financial loss. During the study interview, Participant 7 highlighted the impact of this challenge, stating that "unclear business objectives have been a significant challenge in some projects," resulting in scope creep, missed deadlines, and dissatisfaction among stakeholders. Participant 2 also rebounded this sentiment, mentioning that "the pre-sales or the account servicing manager actually is more interested in getting the project than to actually scope out a project properly." This rush to secure projects without proper scoping leads to insufficient estimation and a lack of contingency planning, as noted by Participant 2, resulting in "scope creep or time creep" during project execution. Furthermore, Participant 12 emphasized the detrimental effects of scope ambiguity and high-level requirements during proposal stage, indicating the critical need for detailed and well-defined client objectives. And he further emphasized the widespread nature of this issue across project management roles.

Inadequate functional requirements gathering during the early phases is a key challenge for project managers in the delivery of IT projects. It's characterized by a lack of thoroughness in understanding and documenting client requirements, leading to misunderstandings, scope discrepancies, and increased costs during project execution. In several cases, discrepancies were noted between the initial proposals and the final Statements of Work (SOWs), aligning with participants' accounts of scope mismatches and client dissatisfaction. These documents reinforce the conclusion that inadequate requirements gathering in the pre-sales phase contributes to delivery challenges. Participant 1 highlighted this challenge, stating that when requirements are not properly understood or clarified upfront, "the cost of change will be more" and the project may encounter delays and increased expenses due to the need for modifications during project lifecycle. Participant 2 contributed to this understanding by mentioning "the requirements are given in a very high-level kind of proposal", and described how it leads pre-sales teams to overlook crucial details and nuances of the project scope. Participant 5 described a scenario

where the SOW did not align with later-identified project requirements, causing discrepancies and client dissatisfaction during execution. This theme also contributes to the broader issue of inadequate risk identification, as insufficient functional requirements gathering - frequently observed across multiple projects - limits the ability to anticipate and plan for related risks during the pre-sales phase.

Inadequate technology feasibility assessment during the front-end is exemplified by instances where pre-sales teams fail to thoroughly assess the technical requirements and constraints of proposed solutions, leading to implementation challenges and unexpected costs during project execution. Participant 4 shared an example where the pre-sales team underestimated the complexity of building a data pipeline for multiple applications, resulting in integration challenges and the need for separate pipelines for different systems. This oversight has led to delays and additional expenses. “In a project involving the integration of new technology into an existing infrastructure, the pre-sales team did not adequately assess the compatibility of the new technology with existing systems”, given as an example by Participant 7, which has led to integration issues during the delivery phase, causing delays and additional costs to resolve. Similarly, Participant 6 recounted a CRM project where the pre-sales team overlooked the costs associated with setting up a development environment, resulting in unexpected expenses and project delays during implementation. This theme also contributes to the broader issue of inadequate risk identification, as insufficient functional requirements gathering - frequently observed across multiple projects - limits the ability to anticipate and plan for related risks during the pre-sales phase.

Inadequate attention to non-functional requirements presents significant challenges for IT project delivery, potentially causing project failures. This pitfall is exemplified by instances where pre-sales teams fail to sufficiently specify non-functional requirements, such as performance expectations, security measures, scalability, and compliance standards. During project execution, these omissions led to challenges in meeting performance expectations and ensuring system availability under load. Participant 1's experience highlighted the consequences of overlooking non-functional requirements, where failure to specify the compatibility of software versions resulted in significant delays and additional costs during project implementation. Similarly, Participant 2's account underscored the risks associated with inadequate consideration of hardware and software lifecycles, leading to obsolete technologies and unexpected expenses post-implementation. Participant 3's insights further emphasized the importance of considering compliance requirements upfront, as failure to comply with regulations can lead to costly adjustments and legal implications during project execution. Participant 6's highlighted the repercussions of neglecting cybersecurity requirements and scalability requirements where the absence of proactive planning during the early phases led to implementation challenges and frustration among project stakeholders. Participant 6's demonstration was further substantiated through review of blueprint of two projects undertaken by the organisation. Participant 5, Participant 7 and Participant 8 commonly demonstrated that in projects delivered by them, expected performance metrics for to-be system were not specified during tender stage. But having open ended tender clauses stating that to-be system should cater intended performance, led user dissatisfaction during UAT phases. “When we were implementing a school administration system, the pre-sales team failed to adequately specify the performance

expectations for the system. This led to gaps between what is agreed against actual performance of the system during verification phase.” (Senior Project Manager, Participant 8).

Underestimating effort during the pre-sales phase exemplified by instances where pre-sales teams fail to accurately assess the scope and scale of projects, resulting in unrealistic estimations of time and resources required for successful implementation. This pitfall poses significant challenges for project delivery, often leading to resource shortages, missed deadlines, and budget overruns. "They don't want to put the right effort or what a feature probably if it says let's assume if it is 15 man-days of effort, probably they will go to 10 or 15 or 20 as an effort." (Senior Project Manager, Participant 1). His observation highlighted the tendency to underestimate effort by reducing the allocated manpower or duration for project tasks, leading to potential discrepancies between planned and actual resource requirements. Similarly, Participant 4's experience underscored the consequences of inadequate understanding of project complexities, stating that "They just took one or two sample applications from the customer side, but they did not understand that different applications have different ways of extraction." This issue was also evident in the document analysis. For instance, a reviewed project proposal estimated only 12 man-days for a module that ultimately required 28 man-days, as recorded in the delivery phase's forecast. The proposal lacked a detailed breakdown of effort across different components, failing to reflect the complexity variation that Participant 4 described. This discrepancy between initial estimates and actual implementation effort highlights the risk of relying on limited scope understanding and reinforces how inadequate effort estimation can result in project delays and unplanned resource demands. Furthermore, Participant 5 mentioned about the consequences of underestimating effort, where failure to adequately assess stakeholder needs and support requirements led to gaps in project execution, necessitating additional resources and efforts to address unforeseen challenges during delivery.

Underestimating non-manpower costs during initial stages can lead to unexpected expenses, budget overruns, and strained resources. This occurs when teams fail to accurately estimate costs like licensing, development tools, and third-party software. For instance, Participant 2 highlighted the oversight of not including costs associated with development and testing services, stating, "sometimes the cost of the development and testing service are not included." indicating a gap in understanding the full scope of project expenses. Participant 6 discussed a project where costs related to development tools, source control systems, and hosting were underestimated, leading to budgetary discrepancies and financial strain during project execution. Similarly, stating, "Another challenge I've faced is underestimation of non-manpower costs during the pre-sales phase. This includes expenses such as licensing costs, development tools, and test tools.", Participant 7 shared the experience where underestimation of non-manpower costs, resulted in unexpected expenses and budget overruns. Participant 9 and Participant 11 echoed it, citing instances where failure to accurately estimate licensing fees for essential development tools led to financial strain and forced renegotiation of contracts with vendors, ultimately impacting project delivery schedules. Additionally, Participant 8 highlighted the consequences of underestimating non-manpower costs, citing a project where underestimated tool expenses led to budget overruns and strained finances. As part of document analysis of project budgets in 5 projects confirmed that non-manpower costs were often underestimated or omitted during contractual stage. In one case, license expenses increased by over 40% due to

unplanned renewals. These findings align with participant reports and observations from project meetings, highlighting how such underestimations contribute to budget overruns and schedule delays.

A prevalent pre-sales pitfall that adversely affects project delivery is the poor assessment of delivery process and methodology needs. It arises when there is a lack of thorough evaluation and understanding of which project management methodologies align best with the project's requirements. Participants highlighted instances where clients may lack familiarity with agile methodologies, leading to misconceptions about its flexibility and potential scope changes. For instance, Participant 3 mentioned, "they think that Agile would allow you to keep on changing the requirements," illustrating a common misunderstanding that can lead to scope creep and project delays. Similarly, Participant 8 reflected on a scenario where the chosen agile methodology, requested by the client, proved unsuitable for the project's needs, resulting in inefficiencies and delivery delays. The challenges resulting from poor assessment of delivery process and methodology needs are multifaceted. They include confusion among team members, inefficient resource allocation, and delays in project delivery. Participant 8 noted that the mismatch in methodologies caused confusion among the project team and stakeholders, leading to inefficiencies and delays in project delivery. Document analysis supported this theme, revealing that some proposals referenced agile delivery without detailing sprint structure or stakeholder roles. In one case, this led to confusion and delays during execution, as teams were unclear about how to apply the methodology. This aligns with Participant 3 and Participant 8's accounts, highlighting how poor assessment of delivery approaches can impact project performance.

Inadequate risk identification during the initial stage, as highlighted by Participant 12, leads to cost overruns and delays. He emphasized that risk identification is crucial for early allocation of contingency reserves, which help mitigate unforeseen risks. Failing to identify risks upfront results in lower contingency reserves, and not budgeting for associated costs can cause challenges during execution. He further elaborated on the implications of risk materialization, noting that mitigation efforts may incur additional time and cost. Similarly, Participant 2 noted that contract discussions often neglect risks related to technology integration and client readiness, stating that "there is very little discussion about what could go wrong technically or operationally." The limited emphasis on this theme among participants may indicate an organizational tendency to view risk assessment as a delivery-phase task, or early-stage contract discussions focus on winning opportunities over evaluating potential risks. This was further supported by document analysis, which revealed that risk registers appended to sales contracts were often incomplete or lacked sufficient detail, indicating gaps in risk identification during the pre-sales phase.

The tendency to set unrealistic expectations and overpromise during the pre-sales phase can significantly impact project delivery, as highlighted by several participants. Participant 6 and Participant 7 highlighted how pre-sales teams may overpromise during proposals, creating unrealistic client expectations. This leads to pressure on the project team, delays, increased costs, and strained client relationships. The challenges are worsened when clients expect unrealistic timelines or features without understanding their impact, which severely affects project delivery. Additionally, Participant 3 discussed the importance of gauging the depth of commitments made

during pre-sales, particularly regarding the use of standardized tools and addressing security vulnerabilities. Failure to accurately assess these commitments can result in downstream impacts, such as extended project timelines and unforeseen costs. These concerns were also reflected in several project meetings observed during the study, where delivery teams raised challenges stemming from commitments made without full technical validation. For instance, in one meeting, project managers expressed concerns over a promised integration timeline that lacked feasibility due to overlooked third-party dependencies. In another, client frustration was evident when expected features committed during proposal stage - were later deemed out of scope by the technical team. These observations support the view that overpromising during pre-sales not only sets unrealistic expectations but also disrupts delivery execution and stakeholder trust.

Strategies can be employed to mitigate pre-sales pitfalls and enhance project success rates.

Six themes were identified as strategies suggested by various participants to mitigate sales phase issues and enhance project success rates (see Figure 5).

Multiple participants emphasized the importance of involving project managers and delivery team leads early in the pre-sales process to provide realistic estimates, identify challenges, and mitigate risks for smoother project execution. Participant 5 recommended, "So, what I feel is the project manager involved in the project should also be involved while signing the SOW because you know the project managers are the one who are going to implement.". "Overall, identifying and assessing pre-sales pitfalls at the outset of a project is essential for minimizing risks, maximizing efficiency, and ultimately delivering successful outcomes for our clients and stakeholders." (Project Director, Participant 6).

Participant 3 highlighted, "Initial identification might come with experience, where we have to look back on and do an analysis of our previous pre-sales that we've done, and the previous issues that we've had, so to ensure that we don't repeat the same mistakes". By leveraging insights from past projects and maintaining a lesson-learned registry, organizations can avoid repeating past mistakes and improve pre-sales processes to achieve better project outcomes.

Multiple participants recommended conducting thorough risk assessments during pre-sales and promoting transparency and collaboration between pre-sales and project management teams, which helps identify and mitigate risks early, leading to more successful project outcomes. Participant 7 emphasized, "conducting comprehensive risk assessments during the pre-sales phase, involving project managers to provide realistic estimates and identify potential challenges, and fostering a culture of collaboration and transparency ". This approach helps identify and mitigate risks early, leading to more successful project outcomes

Validating assumptions and understanding dependencies upfront reduces project complexity and minimizes challenges during project delivery. Participant 12 recommended, "it's important to understand the risk as well, another important thing is the assumptions being made and verified, as well as the dependencies".

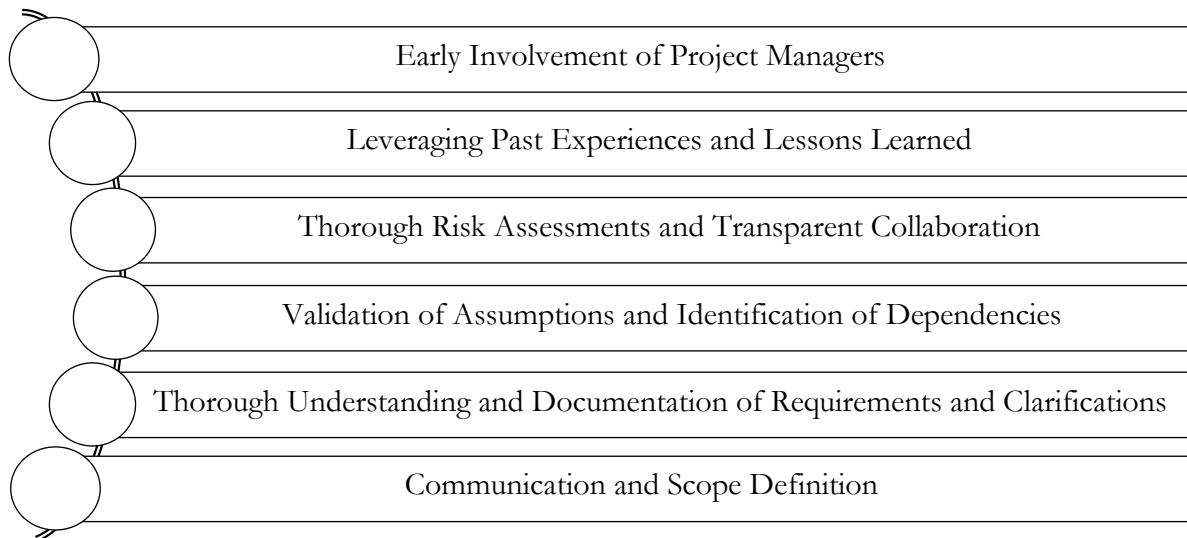
<u>Pre-sales Pitfall</u>	<u>Summary of challenges led during project delivery</u>
Unclear Business Objectives	• Scope creep due to constantly evolving project goals • Difficulty in defining project success criteria leading to ambiguity in project outcomes
Inadequate Functional Requirements	• Misalignment between delivered solution and client expectations • Increased likelihood of rework and scope changes during
Inadequate Technology Feasibility Assessment	• Delays and rework due to unforeseen technical challenges • Inefficiencies in solution design and implementation resulting from mismatched technology capabilities
Inadequate Non-Functional Requirements	• Performance issues and system failures due to unaddressed non-functional requirements • Increased project costs and delays resulting from retrofitting solutions to meet overlooked requirements
Underestimation of Effort	• Missed deadlines and project delays due to insufficient resource allocation • Quality compromises and increased stress on project team
Underestimation of Non-Manpower Costs	• Budget overruns and financial strain due to unanticipated expenses • Reallocation of funds from other project areas impacting
Poor Assessment of Delivery Process and Methodology	• Inefficiencies in project execution due to mismatched methodologies • Confusion among project team and stakeholders leading to delays and decreased productivity
Inadequate Risk Identification	• Cost overruns and project delays due to unmitigated risks materializing during project execution • Increased strain on project resources and stakeholder relationships due to unforeseen challenges
Unrealistic Expectations and Overpromising in Proposals	• Project delays and increased costs resulting from pressure to deliver beyond scoped requirements • Strained client relationships due to failure to meet unrealistic expectations set during the pre-sales phase

Figure 4: Summary of Common Pre-sales Pitfalls

Source: Authors' original data

Significance of thorough understanding and documentation of requirements and clarifications was emphasised by Participant 1 and Participant 10. It helps ensure alignment between proposed solutions and client needs, thereby reducing the likelihood of misunderstandings and scope creep during project execution. Participant 10 emphasized, "ensuring comprehensive documentation of client requirements and expectations can help prevent misunderstandings and mitigate risks". Clear documentation helps ensure alignment between client expectations and project deliverables, reducing the likelihood of scope creep and project delays

Effective communication and scope definition, as emphasized by Participant 4, ensure alignment between client expectations and project deliverables, reducing the risk of overpromising and underdelivering. Participant 4 emphasized, "It's very important. Even before the project stage, even when you are doing some pre-sales to customer, you need to understand what customer is doing, what is their business and how they operate. So, understand that first and then do the pre-sale. So, pre-sale is, I would say, I will limit it to the product demonstration, product demo. But when it comes to the commercial things or scoping of the project, talk to your delivery team because".

**Figure 5:** Summary of Strategies

Source: Authors' original data

Importance of assessing pre-sales pitfalls at the start of project lifecycle of IT projects

Analysing pre-sales challenges helps organizations mitigate risks, set realistic expectations, and plan effectively, improving project success and stakeholder satisfaction. Six themes were identified (See Figure 6).

Participant 12 discussed the importance of clarifying assumptions, dependencies, and project scope during the handover from pre-sales to delivery teams. He mentioned, "After the contract being awarded, the project has to officially be handed over from the pre-sales team to the project delivery team... It's important to go through, to understand the scope, the cost, the time, and any specific requirement, the contract, to understand what this project really is".

Participant 1 emphasized the importance of assessing initial pitfalls to avoid project delays and financial losses. "If we pay attention to the requirement, there may not be any crumbling. I mean the project can be completed...So, the pitfalls, if they can be avoided, the company can survive, get more projects, bigger projects." (Participant 1).

Participant 2 stressed the significance of understanding resource requirements and timeline estimation based on past experiences. Early involvement of project managers in pre-sales activities allows for better resource planning, sequencing of tasks, and estimation of project timelines, leading to smoother project execution.

Participant 3 highlighted the need for identifying initial pitfalls to mitigate risks and ensure clarity in contractual agreements. Understanding past issues and analysing previous pre-sales experiences enable organizations to protect both parties involved, set clear expectations, and avoid potential legal and financial challenges.

Building Client Confidence and Trust was discussed by Participant 4 and Participant 12 emphasizing the importance of detailed discussions between pre-sales and delivery teams to provide clients with a comprehensive understanding of project requirements. Participant 4 said, "So, need to sit together, communicate with both departments...When they see that complete picture end-to-end, how the project will get delivered, they will get confidence and they will start trusting you"

Various participants underscored the significance of aligning expectations and mitigating surprises by identifying challenge causes, early in the project lifecycle. "Identifying and assessing pre-sales pitfalls at the start of a project is paramount for several reasons. By understanding the potential challenges and risks... we can better prepare ourselves and our stakeholders for any hurdles that may arise during the project lifecycle." (Project Director, Participant 6).

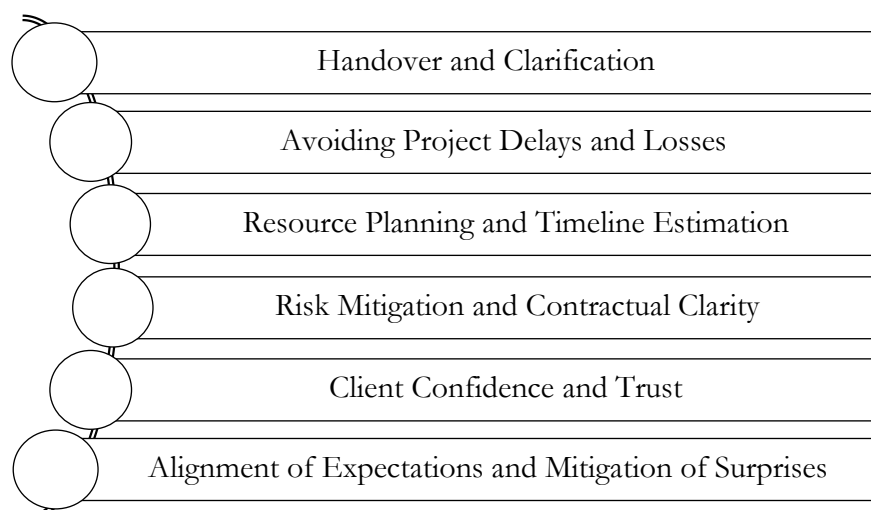


Figure 6: Summary of Importance of Assessing Pre-Sales Pitfalls

Source: Authors' original data

Relation to Existing Literature

This study demonstrates that critical IT project delivery challenges often originate in the pre-sales phase. By examining nine recurring pitfalls, ranging from unclear business objectives to overpromising - the research highlights a systemic gap between pre-sales commitments and delivery realities. While existing literature emphasizes delivery-phase issues, this study shifts the focus upstream, showing how inadequate scoping, planning, and risk evaluation during pre-sales directly lead to delays, cost overruns, and stakeholder dissatisfaction. To enhance project outcomes, organizations must embed delivery expertise into pre-sales activities, adopt more rigorous assessment practices, and foster a culture of realistic, value-driven commitments. Addressing these early-stage missteps is key to improving project predictability and client satisfaction.

Conclusion and Recommendations***Conclusion***

The study's success hinges on attaining the research objectives, which were assessed through three aspects of research questions.

Identifying the pitfalls encountered during pre-sales phase within the ICT service firm: the key objective of the research met by finding 9 pitfalls during pre-sales stage, as listed in the first box of integrated model (Figure 7). All 9 pitfalls were identified through interviewing participants under this study and were not found in past studies specific to as causing challenges for project managers during the project management phases of IT projects delivery.

Examining of these pitfalls leading for project outcomes: Exploration and discussion on 'importance of assessing pre-sales pitfalls at the start of project lifecycle of IT projects' helped examining various challenges surfaced during project management phases, led by 9 pitfalls. An illustration of such challenges is shown in the box 'Challenges' under integrated model (Figure 7).

Conceptual model for explaining the challenges and consequences: Figure 7 summarises the key objectives achievement as "Integrated Model of Pre-Sales Pitfalls Causing Failure of IT Projects". The researcher emphasises all pre-sales management professionals and IT project management professionals to consider Figure 7 and be concerned of potential front-end issues and project delivery challenges.

Proposed strategies and recommendations for mitigating pre-sales pitfalls and improving project success rates within the organization: The study emphasizes the importance of addressing pre-sales issues in IT projects, as failure to do so can result in cost overruns, delays, stakeholder dissatisfaction, and project failures. In addition to Figure 7, the researcher urges pre-sales and IT project management professionals to consider the 'Mitigative Actions' in Figure 8 to prevent such pitfalls.

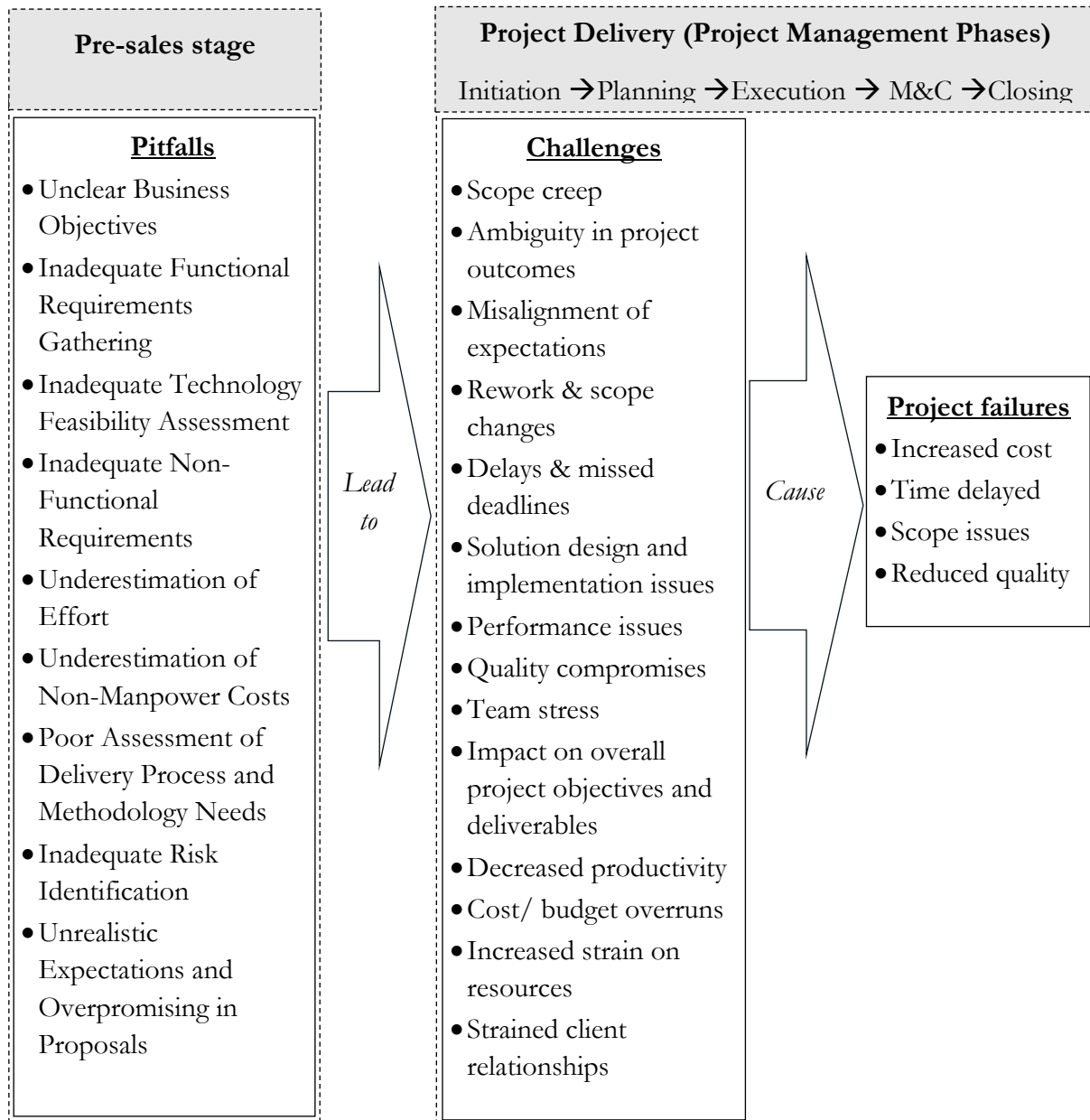


Figure 7: Integrated Model of Pre-Sales Pitfalls Causing Failure of IT Projects

Source: Authors' original data

Recommendations

Consolidated view of applying mitigation strategies and corrective actions is summarized under Figure 8 and the first box 'Mitigative actions' emphasises what strategies can be employed during pre-sales stage to mitigate potential pitfalls, and preliminary recommended for the organisation to follow them to enhance project success rates. While these mitigative actions were widely discussed in research interviews, three of them were also found from literature.

Early Involvement of Project Managers: Engaging project managers early before project delivery starts allows them to provide valuable insights, identify potential risks, and align the project scope with realistic timelines and resources from the start.

Leveraging Past Experiences and Lessons Learned: Drawing on previous projects helps identify recurring issues and successful approaches. This can guide decision-making and help avoid common pitfalls by applying lessons learned to new projects.

Thorough Risk Assessments and Transparent Collaboration: Conducting comprehensive risk assessments early on, coupled with open communication between pre-sales and project management teams, helps identify potential challenges and create actionable plans to mitigate them. This collaborative approach ensures that all stakeholders are aligned and prepared to address challenges effectively (Flyvbjerg & Techn, 2006).

Validation of Assumptions and Identification of Dependencies: It's crucial to validate assumptions made during the pre-sales phase, ensuring they align with real-world conditions. Identifying interdependencies across teams and tasks helps prevent misalignments and unforeseen obstacles.

Thorough Understanding and Documentation of Requirements: Ensuring a deep understanding of client needs and documenting these requirements in detail reduces the chances of misunderstandings later in the project. This clarity helps in managing client expectations and reduces the risk of scope creep (Balut, 2024).

Communication and Scope Definition: Establishing clear communication channels and defining the project scope early in the pre-sales phase are essential for aligning stakeholder expectations and preventing misunderstandings. This alignment ensures that all parties have a shared understanding of project objectives and deliverables (Flyvbjerg & Techn, 2006).

If pitfalls do not arise during pre-sales (as a result of mitigating), associated challenges wouldn't occur subsequently during project management phases also known as project delivery. However, it is important to note that mitigating pre-sales pitfalls fully wouldn't be feasible due to various reasons such as organisation factors, environmental factors, and human factors. Hence, it stresses that the need of identifying and assessing pitfalls occurred, early in the project delivery, and the researcher recommends to all IT project management professionals to consider 'Corrective actions' depicted under Figure 8 which help enhancing project success.

Clear and structured handovers ensure that critical information from the pre-sales phase is accurately conveyed to delivery teams. This minimizes misunderstandings, aligns stakeholder expectations, and helps maintain continuity, which is essential for a smooth project start and long-term success. Abdulaziz Alnhari & Qureshi (2024) highlight that early and continuous stakeholder engagement throughout the project lifecycle is essential for effective communication and project success. Implementing proactive strategies to identify and mitigate potential delays can prevent cost overruns and ensure that the project is completed within the agreed-upon timeframe, thereby enhancing client satisfaction and project success. Identifying potential risks early and ensuring clear contractual agreements create a solid foundation for managing

uncertainties. This fosters accountability, protects both client and vendor interests, and enhances the project's resilience to change. Building and maintaining client confidence and trust is vital. This involves transparent communication, meeting commitments, and addressing concerns promptly, which fosters a positive relationship and contributes to project success.

While above four strategies were widely discussed by research participants, following two strategies were found to be broadly discussed by PMI UK (2023).

Accurate forecasting of resource needs and setting realistic timelines are crucial for avoiding bottlenecks and burnout. These practices improve efficiency and help teams stay focused and productive, directly contributing to on-time, on-budget project delivery. Ensuring that all stakeholders have aligned expectations helps in minimizing surprises during project delivery. This includes regular updates and feedback loops, which support smoother execution and foster a sense of shared ownership.

For more accuracy, project managers would initiate the assessment during handshake of pre-sales team to project delivery team. “So, the best opportunity during the handshaking, which is to go through thoroughly, understand, and get the information needed. And if there are any gaps or loopholes, bring it up and finalize at that stage itself.” (Project Director, Participant 12).

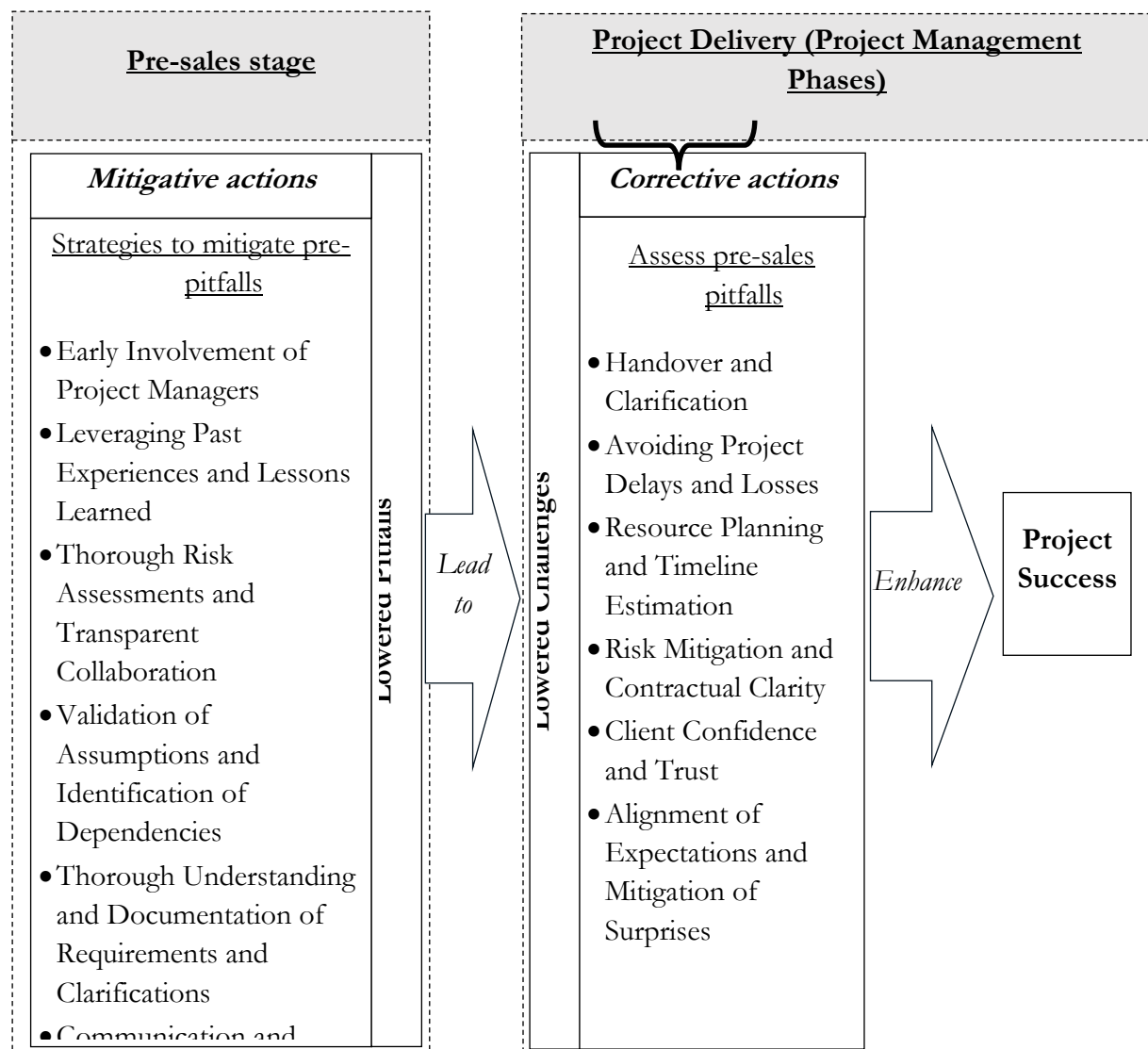


Figure 8: Integrated Model of Pre-Sales Pitfalls**References**

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