IT Project Management Challenges

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Abstract: **IT has been for many years a fundamental part of any organization. Medium to large sized companies spend a substantial amount of money in their IT infrastructure and Projects. While Project Management as a domain is very robust and mature, it still poses different challenges in the implementation, this is especially true for IT projects. IT projects have unique challenges due to various factors that will be address through this paper.**

Keywords: **fundamental part, IT infrastructure, IT projects.**

1. INTRODUCTION

Failure rate of IT projects has been a debate over the years, according to Project Management Institute (PMI) report in 2017 (Figure 1), 14% of IT projects failed. While the percentage could be viewed as relatively low, those are the projects deemed outright failure. Projects that went beyond their schedule, budget, or scope are much higher.
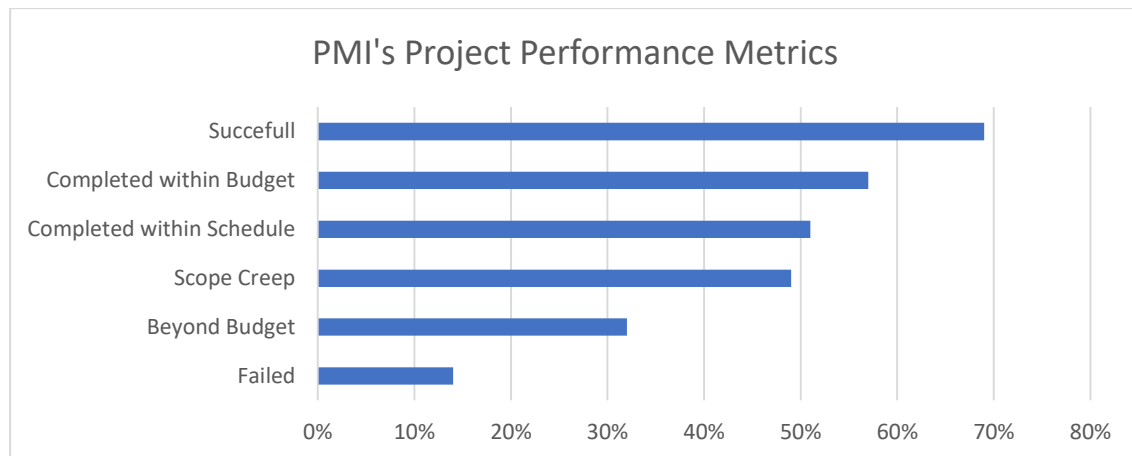
Figure 1: PMI's Project Performance Metrics. Source: PMI

In this paper, the requirement collection phase will be studied thoroughly while recommending some tools and techniques to minimize the impact of such challenges.

Inadequate Requirements

Inadequate requirements are one of common reason for IT project to fail considering it is one of the corner stone in the project management phases. IT project manager and system analyst need to shift their approach from requirements collection to requirements development. End user or project sponsor might not have the full clear picture of what they are looking for. This is especially true for IT project where it is extremally difficult for the user to visualize the end result of the system and how it would work.

Another reason for requirement inaccuracy is writing the specification documents in vacuum. Not involving the all stakeholders in the loop while collecting the requirements, can lead to missing requirements. Discovering a requirement later in the project while implantation is very costly and can lead negative impact on the quality, time, or cost.

Stakeholder analysis need to be developed and updated regularly, especially in the beginning of the project to capture all relevant stakeholders to the requirement, their role, impact, etc. in addition, certain tools can be used such as prototyping that enables the user to visualize and stimulate the thinking to collect a detailed requirement.

2. METHODOLOGY

PMI report showed 37% of companies used the Waterfall approach, while 21% took the Agile approach, 20 % with Hybrid, and finally 23% Other approaches. The methodology usage is major factor in determining the success of the project and meeting the expectation of the customers. While Waterfall lock the scope and time of the project after the blueprint phase, the Agile approach goes through rounds of design sessions and incremental scope implementation. Depending on the project nature and reediness of the requirements, the appropriate approach should be used to minimize the risk of failing the project from meeting it objective.

The design/specification document is particularly important phase that often overlooked or understated while planning the project. High level requirements can lead to major dispute at a later stage in the project. The requirement must be filtered through the SMART (Specific, Measurable, Attainable, Relevant, and Time-Bounded) criteria to minimize scope creep, ease the development, ensure better estimation of effort and cost required, and most importantly higher chances of succeeding in the project implementation.

Managing Risk

Risk management in IT projects is often viewed as a key factor to improve the success rate. Knowing the risk associated with the project is not an easy task, the project manager must have an outlook of future and analyses the threats and opportunities that may arise during the lifetime of the project. The risk can come from different factors, such as people, technology, management, and or processes. Risk management helps the project in identifying potential problem, how it might impact the project and the probability of occurring. Risk Registrar (Figure 2) is the most common tool used to capture and manage the risk. It is also important to keep the Risk Registrar update since risk is dynamic.

Risk ID	Description	Category	Priority	Probability	Impact	Score	Plan

Figure 2: Example of Risk Register

3. CONCLUSION

Companies are facing challenges while managing their IT projects, this paper covered key aspects of project management that often overlooked. Inadequate requirements have a huge impact on the success of the project since it the base for development and estimation. The methodology used in the project also plays an important factor, the project team must identify the appropriate approach based on the nature of the project and the available technology. Finally, managing risk is critical since risk is related to all project management aspects, such as people, technology, processes, management, etc. managing risk is step in planning forward and anticipating any potential opportunities or problems and how to deal with that situation.

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