

Challenges in Project Initiation

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Abstract

There are various challenges which come in the way of successful project management. The success of any project is defined by how all challenges faced are dealt with. The challenges can even turn into opportunities with proper management and planning. Project management is the implementation of specific knowledge, skills, tools, and procedures to achieve the desired project goals. There are five stages for the successful management of the project. This paper presents the major challenges faced in the project management's step one- Project Initiation. The project initiation phase broadly defines the project goals. Organization comes up with many ideas through brainstorming and then through proper planning ideas are turned into concrete goals for which the whole plan is built up. Once the goal is set, stake holders are defined. There are many challenges faced even at the first stage. The few challenges are thoroughly explained in the paper. The major challenges faced during the project initiation stage are assignment of authority, list of task assignment, project cost planning, prioritizing goals and stakeholders list and their expectations. All are to be properly dealt with, else the success of the project is at risk. Few research papers are critically reviewed to support the arguments stated. One talks about the "Critical Issues Related to Metro Rail Projects in India " which specifically talks about the metro rail corridor in Delhi. It evaluated the challenges faced by the project manager during the initiation phase of the metro rail project in Delhi. The other is about the "Automobile Manufacturing Industry" where the automobile manufacturing industry in India is discussed. It covers the various challenges faced during the setup of a manufacturing plant. These both papers also illustrate the solutions to the problems faced.

Keyword

Project Management, Initiation Phase, Case Study, Challenges.

1.Introduction

Project management is one of the most crucial keys to the success of project development and completion. Any project's work may be divided into stages, each of which has a set of related activities and builds toward a significant deliverable, making it easier to plan for and manage. Once a project milestone is reached at the conclusion of each stage, the stage is considered to have been successfully completed. So, project management is categorized into five stages which are mentioned below in the Figure 1:

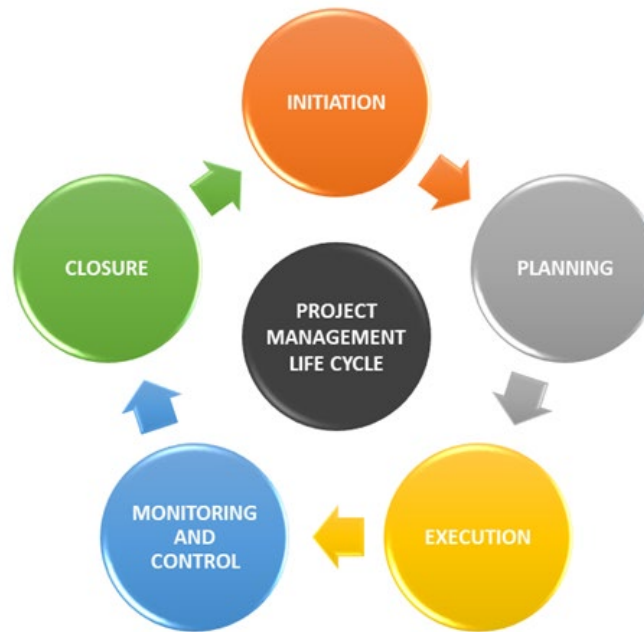


Figure 1. Life cycle of project management

All the stages in the lifecycle of project management are dependent on each other or are interdependent. Hence project initiation plays an important role in the project's lifecycle.

Project initiation is the most critical and foremost stage in project management. It is not only about having a solid idea but also developing a structured approach and understanding the barriers that will interfere with the project's success. Making ensuring the team has a clear understanding of what they are going to accomplish, what they are aiming to accomplish, and how they are going to do it is the first step. The project initiation phase includes tasks such as creating a project charter, defining success criteria, and setting goals for the project. Project initiation is also known as 'Broadly classified your project or the whole overview of the project.'

The challenge in this section is about how to get started with a project. One of the most popular ways is brainstorming which requires no pre-planning or preparation and can be done at any time or place with minimal resources needed. Many and varied challenges come out when we have faced the project initiation, but one of the most important is determining what needs to be done for the organization to reach its desired end goal.

Brainstorming sessions have many benefits such as providing insight into people's creativity and ideas, generating new ideas by combining existing ones, and promoting participation among team members. However, some drawbacks include a lack of structure and organization in brainstorming sessions which leads to ineffective use of time and effort spent on generating ideas that cannot be used later on.

To solve this problem a lot of research and analysis is required which not only consumes time but also requires resources like money, people, and materials. Solving this problem may also include selecting the best and viable alternative taking into consideration synchronization with current ongoing projects.

1.1 Objective

The project initiation pillar is one of the most salient pillars in the project lifecycle. The first step is to identify the need for a project and its objectives. These objectives are then used to create a scope statement and a work breakdown structure (WBS) for the project. Here some important challenges of project initiation are mentioned:

- Assignment of Authority

- List of Task Assigned
- Project cost planning
- Prioritizing Goals
- Stakeholders list & their expectations
- Assumption and constraints of the project
- Lack of focus and direction
- Poor prioritization
- Unrealistic expectations
- Unclear stakeholder participation

After overcoming all the challenges mentioned above in the project initiation phase, a project is forwarded to the project planning phase.

1.2 Challenges in project initiation

The process of project initiation is very important. It will determine the success or failure of the project. In the 21st century, project initiation is a process that is often characterized by ambiguity and uncertainty. This is because many projects have uncertain goals, unclear scope, and undefined outcomes. Many stakeholders have different interests in the project.

A recent study revealed that there are five main challenges in project initiation:

1.2.1 Assignment of Authority

When you think about starting projects, the very first thing you need to do is check for this point. Know who has the authority or right to have decision-making power over your project. It could be your boss, manager, or a friend who's willing to take on this task with you. The point is there must be someone who can make decisions concerning your project as well as have the ability to give out instructions to anyone working on it. This means there must be someone who can say yes or no in terms of changes in goals and development within a certain time frame.

1.2.2 List of Task Assignment

The second thing you have to do is make sure to create a list of all the people involved in this project. This is necessary so that you can make and track the progress in terms of who's doing what and how well they're doing it. The list could be a long one depending on how many people there are. At the same time, it would be good if you can break down the responsibilities for each person, including yourself. This way, everyone will know what he or she is supposed to do and in what order his or her part must take place for each stage of development before completion.

1.2.3 Project Cost Planning

With each project initiated, there will be a budget requirement. This means that you'll need to identify the project's budget amount. This can be done by calculating your initial objectives, the time required, and the cost. Then, you have to calculate the total cost of what will be needed for the project. Of course, this is not just for yourself; it's for all of your and other people's expenses involved as well as other necessary expenses that will occur as a result of your project.

1.2.4 Prioritizing Goals

With each goal in a project, you should prioritize them based on what's most important at this stage in time. This will help keep things organized and directed in a certain direction or task with minimum risk involved at any point in time.

1.2.5 Stakeholders list & their expectation

When you've completed the above steps, it's time to think about who will be affected by this project as a whole. You should have an idea in mind of who these people are and where they will be at any given stage of development. You must find out what their needs are, what they want, and the problems they've been facing with the current situation. Coming up with a solution to each of these issues will make any project more successful in the long run.

2. Case study-I

In this part, we took one example related to projects on metro rail in India. We chose one case study published by Niraj Sharma in 2013 under the topic "Critical Issues Related to Metro Rail Projects in India". The study was on the problems faced by the government when they propose the metro rail project in any particular city.

2.1 Topic

The topic of the case study is Rail Based Mass Rapid Transit System which has been very widely accepted as a solution for an environment-friendly and economic transport system. As a part of that please find attached one critical review of the case study on the metro rail corridor project in Delhi. Nowadays, there is metro rail construction going on in many mega cities of India, like Kolkata, Delhi, Mumbai, Hyderabad, Bengaluru, Ahmedabad, Surat, etc.

The advancement of a nation is reflected in its infrastructure projects, which are essential for that nation's growth. However, due to their characteristics, particularly size and type (particularly, urban context, site/location, etc.), the bulk of infrastructure projects are often connected to significant environmental and social consequences over the course of the project (namely, pre-construction, construction, and operational phase). These impacts may be good or negative depending on their capacity to improve or harm the immediate environment as well as the local community.

2.2 Scenario

Due to increased traffic demand and a growth in the number of cars on the road, road congestion, traffic accidents, and environmental pollution have all lately become worse in a number of urban areas. Most cities' public transportation systems in developing nations like India are woefully deficient and can be regarded as both insufficient and ineffective.

To improve the public transportation system, the Mass Rapid Transit System (MRTS) has been made publicly available or is being developed in a number of locations throughout the world. Even while most wealthy countries have previously implemented MRTS in their major cities, most developing countries, including India, do not.

2.3 Critical issues

Here the author mentions many critical issues related to the Delhi metro project as follows:

2.3.1 Underground versus Elevated Corridor

The first issue that arises during the project initiation phase is the design of the metro line, whether it should be underground or elevated. There are several pros and cons to both designs. Underground corridor design in a crowded city is very difficult. Next, for elevated corridors, a large part of the bridge structure is above the ground and more construction material is required to construct elevated corridors. Also, an elevated corridor is not suitable for the hilly area as construction cost is very high in hilly area elevated corridor. Further, privacy-related issues also arise when the elevated metro line passes through small tenements. The designer, stakeholder, and project manager critically analysed and concluded that they will go with an elevated rail corridor design (Babu, 2019; Sharma et al., 2013).

2.3.2 Overstatement of Ridership and Traffic Demand Forecasts

When compared to bus rapid transit, the mass rapid transit system is one of the finest solutions. In order to meet the financial viability requirements, it is required to determine the travel demand, how many people travel every day, and what the average occupancy rate is (Shekar Lokku & Prasad, 2018). In order to determine the travel demand for the Delhi Metro Rail Project, a base-level study is conducted. According to one research, the cost of about 72% of metro line construction is overstated by more than two-thirds. So, while constructing the metro line project, traffic demand assessment is a crucial component (Sharma et al., 2013). Demand projections for metro rail projects in India have also shown to be inaccurate since they depend on a variety of variables. The project manager must appropriately plan as a result. If he overestimates demand, there will be a cost issue, and if he underestimates the capacity of the metro train corridor, there will be an overcrowding issue, which will cause numerous issues for people, such as not getting to their destination on time.

2.3.3 Issues Associated with Land/Property Acquisition and Resettlement and Rehabilitation (R&R)

Developing nations like India have highly populated metropolitan cities with little land available for such large-scale infrastructure projects. Any large infrastructure development project has always included the acquisition of land and property as a necessary component. To reduce its socioeconomic effects, land and property acquisition is always attempted to a minimum. Due to technical factors (particularly those connected to ridership), environmental considerations, and financial limits, the acquisition of land and property in specific regions along metro routes is occasionally unavoidable and requires minimal R&R impacts. To identify the people/families who will be impacted by the project, proper socioeconomic and R&R surveys must be conducted before the issue of acquisition of land/property acquisition (Sharma et al., 2013; Soni & Punjabi, 2008).

2.3.4 Loss of Trees/Green Cover

Many times, trees need to be taken down during the construction phase of metro rail projects, reducing the amount of greenery along the rail lines. On the median and/or the sides of the current road, the majority of these trees are part of a roadside/linear plantation (s). The area's aesthetics and microclimate may both be impacted by the removal of trees and green cover. According to estimates, the DMRC cut down 25,507 trees in Delhi during Phases I and II of its development. Following the Delhi (Preservation of Trees) Act of 1994, the DMRC planted ten more trees for every tree that was removed.

Nearly 30% of the trees on the metro train tracks have been spared thanks to proper maintenance and thoughtful route design. The Department of Forests, Government of Delhi (the nodal agency) is planting trees on the designated site outside of Delhi on behalf of the DMRC. It is usually controversial that when trees are cut down close to a project site, their replacement afforestation has been carried out far from the project site since there isn't enough space to grow new trees. It is preferable and should be ensured that afforestation be done around the project site itself, if at all feasible and after discussing with local authorities or departments. Consequently, it is also a highly important problem in the project initiation phase (Sharma et al., 2013; Ziemiańska & Suchocka, 2013).

2.3.5 Issues concerning noise pollution and vibration

One of the main problems that could be a problem throughout both the building and operating phases of the project is noise and vibration-related problems along the corridor(s). Heavy machinery and building equipment may produce vibrations and raise background noise levels during the construction process. Construction-related vibrations may have several negative effects, such as cracks appearing on nearby structures, which could seriously threaten their

structural safety. Rail-wheel interactions with rails during metro rail operation cause noise and vibration. The noise and vibration levels inside the coaches as well as outside the metro rail route are further elevated by the engines, cooling fans, and generators. And this noise also affects the nearby housing society and people and due to this reason, the project manager has to plan accordingly to overcome such problems in the project initiation phase only (Sharma et al., 2013; Zou et al., 2020).

2.3.6 Issues concerning Traffic During the Construction Phase

The majority of metro rail corridors are being constructed alongside or inside the existing right-of-way of the highways. Traffic must therefore temporarily be redirected to facilitate construction activities and prevent accidents involving construction machines or equipment. This traffic rerouting away from the existing road corridors during the project's building phase increases the traffic loads on the neighbouring roads, producing congestion and traffic jams during peak hours. The scenario may worsen during the rainy season due to water logging difficulties at the project site. Traffic police and municipal authorities need to be informed before construction starts on the deployment of traffic diversion methods, such as fencing off the project site, to handle traffic when the project enters the beginning phase (Hyari et al., 2015; Sharma et al., 2013).

2.3.7 Initiating the project at the wrong time

Poor planning results in the lack of a fixed schedule for the team members to follow. Many times, they work on the projects but are unaware of what is expected of them. There won't be any deadlines to meet, which will make the team members leggy. Now in the metro rail project, we assume that the project has to start in May but due to some financial reasons the project starts in June. Due to the monsoon season, no construction and digging work are possible for three months and the project is delayed due to this. Therefore, the project manager has to take into account all such challenges and take due care in meeting the deadlines in the project initiation phase itself (Hussain, 2014).

3. Case Study-II

The project initiation phase is the first step of project management, as it involves developing a new project. The initiation phase includes an understanding of the business problem, identifying the opportunity, proposing a solution, forming a project file, appointing a project manager, creating a project team, and delivery of the solution to the stakeholder. A business case study is developed and the problem is defined and the opportunity is discussed in detail and the preferred solution is identified for an application.

The project's objectives must be determined jointly by managers and those who perform the work to ensure they are achievable and realistic. Because the people who will do the work understand what it takes to complete a specific task, realism is introduced. Furthermore, this process ensures that there is some level of commitment on all sides: management expresses its commitment to supporting the work effort, and workers demonstrate their willingness to do the work.

Taking the Example of the Automobile Manufacturing Industry in India, we acquired information and then studied the various aspects of the factors affecting the establishment of the entire plant. The example covers the various aspects affecting the setup of the Manufacturing Plant.

3.1 Scenario

One of India's most significant financial drivers is the automobile sector business, which engages significantly in global chains of value. Significant government support has exacerbated this sector's expansion, allowing it to carve out a distinctive route among India's manufacturing sectors. The country's automotive industry stands out from those of other auto-producing nations in that it serves to the requirements of low- and middle-income groups of the people. The importance of infrastructure, infrastructure policy, and other enabling factors to the expansion of the vehicle and automobile component industries in India. India has evolved to be the fourth-largest automobile market globally, and both local and international markets are seeing an increasing demand for Indian cars. After the technology has progressed, digitalization, and automation have engrossed with manufacturers, companies can attempt to predict consumer demands (including those for electric cars) and keep up with the competition (Biswas & Das, 2020).

3.2 Critical Issues

The following mentioned are the critical issues that should be kept in mind while establishing Automobile Manufacturing Plant.

3.2.1 Land Acquire

The first important part of the project initiation phase is the acquisition of the land. The Project Manager should keep many factors in mind while choosing the land. The most important factor is the Geometrical situation of the land. The land should be away from the residential areas and the chosen land should be non-agricultural land. As a manufacturing plant creates a lot of noise and occupies the land for years. Further, the land should be capable of bearing and sustaining the manufacturing plant, and the acquired land should be hard enough so that plant could be operated for years. The basic requirements of the manufacturing plant such as water and electricity must be available easily. Another important factor is the availability of raw materials should be easily available so the transportation cost should be minimal. Therefore, the land for the automobile manufacturing plant should be acquired wisely so that it can provide benefits in the future to the company/stakeholder (Choudhary, 2009).

3.2.2 Availability of Machines

The functioning and operation of the manufacturing plants are only possible when the appropriate machines are available for the production of the parts. For the initiation of the automobile manufacturing plant, pre-required machines are welding machines, assembly lines, painting sprays, compressors, etc. For the Project Manager, it is essential to check the availability of proper functioning as well as the good quality of the machines so that production is carried out easily. The geometric tolerances, surface roughness, and quality of the produced part obtained from the machine decide the efficiency of the machine, which should be good and should be checked by the Project Manager (*Justification of TPM Pillars For Enhancing The Performance of Manufacturing Industry of Northern India | PDF | Survey Methodology | Structural Equation Modeling*, n.d.).

3.2.3 Lack of Human Resource

Successful Operation of the Automobile Manufacturing Plant requires a good number of Human Resources who handle the various departments and proper running of the production line. The Appropriate person should be appointed to carry out the specific task. A trained person should be hired, if the training is required then the person should be provided with the appropriate training. It is an important duty of the Project Manager to assign the appropriate people with the right skill to do the right task assigned to them within the Manufacturing Plant. If the proper allotment of Human Resources is not done conveniently then it leads to the failure of the Manufacturing Plant (James & Jones, 2014).

3.2.4 No Stakeholder support

Stakeholders or business owners who have an interest in or are influenced by the project's success are considered key stakeholders. As they are approving the project's start and making significant investments, they should provide all relevant facts. Stakeholders are involved from the beginning of your project since they determine how much funding will be provided to it, and you cannot execute the project without their endorsement. The project manager should keep the stakeholders informed on a regular basis to make sure proper functioning under their guidance. (Sharma et al., 2013).

3.2.5 Availability of Raw Materials

The raw materials are extremely important elements for the product, the raw material should be of high quality so that the output product is not compromised. The Project Manager should be aware while purchasing the raw material and he should check whether the quality of raw material is up to the standards or not. The Project Manager should keep the finances and quality of raw materials in mind so that it doesn't become too expensive and also the quality isn't conceded (Serpa et al., 2022).

3.2.6 Trained Professionals

The most crucial aspect of the Manufacturing Plant is the Hiring of trained professionals i.e., Engineers. The right skilled Engineer should be chosen for a specific domain. Different types of engineers should be allocated to the work-specific domain of the engineer. The hired engineer should have years of experience in the particular field so that the allocated task is carried out smoothly. The Project Manager should hire engineers, technicians, and workers precisely with the right skills as per the project demands.

3.2.7 Environmental Clearance

Another important thing is to keep up with the pollution control norms and keep the emissions under control according to the mentioned standard. If the Automobile Manufacturing Plant is not maintaining the emission levels, then the Project Manager should inform the environmental emission department regarding the emissions level and they should control it. The Project Manager should regularly keep a check on the emissions level and be updated about the level of emissions (Rathi, 2021).

4. Conclusion

The life cycle of project management is broken down into five stages. Project initiation is the most critical and foremost stage in project management. The process of project initiation is very important. It will determine the success or failure of the project. A recent study revealed that there are five main challenges in project initiation. Know who has the authority or right to have decision-making power over your project. Also, make sure to create a list of all the people involved in this project. With each project, you'll need to identify the project's budget. Next, you must think about who will be affected by this project as a whole. Find out what their needs are, what they want, and what problems they're facing. A successful project is one where all the challenges faced are duly taken care of.

Over here as you can see, we took one example of the Delhi metro rail project. Now as we discussed, project management has main five aspects like project initiation, project planning, project execution, project monitoring and control and last is project closure. The project initiation phase is the most crucial phase of any project management. Because successful completion of the project entirely depends on the project initiation phase, if the project manager makes a mistake in the project initiation phase the entire project is affected due to the same. Over here in this review, we assessed the challenges that occur in the project initiation phase of the metro line project in Delhi. Also mentioned the types of challenges that occurred and various solutions taken by the project manager.

Project management turns out to be one of the most crucial aspects of any industry. Lack of management skills and incapability in implementing all the individual steps will lead to a decline in production and eventually closure of the plant. An elaborate study was conducted and five to six similar kinds of case studies were analyzed to obtain the details presented. All the steps from land acquisition to environmental clearance need to be followed for the successful implementation of any plant. All these build a foundation on which the future of that particular industry relies. Thus, it can be concluded that by observing all the associated norms and consistently following all the required steps, one can expect the establishment and initiation of an industry with a strong ground hold.

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Biographies

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Mahatma Patel is a fourth-year mechanical engineering student at the Pandit Deendayal Energy University (PDEU) with a CGPA of 9.33. He has a keen interest in the field of aerodynamics, automobiles, project management and designing domain. Projects related to similar tropics are being approached by him and he aspires to retain those for his future works.

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