A MODEL TO OVERCOME CRITICAL FACTORS INVOLVED IN PROJECT OUTCOME

By

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DISSERTATION

Presented to the

Swiss School of Business and Management Geneva

In Partial Fulfilment Of the Requirements For the Degree

DOCTOR OF BUSINESS ADMINISTRATION

2024

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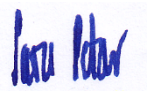
APPROVED BY



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DEDICATION

This thesis is dedicated to all the scholars and researchers whose work helps me understand the key factors that need to be looked into for the success of any endeavour.

ACKNOWLEDGEMENT

As the candle lighted forever, it is not the joy alone but the presence of those who played behind the curtain…..

From the very start of our survival, man has been in search of new knowledge and innovation-innovation to unravel the truth, to bring light to the darkness. Today, at the zenith

of my work done for this doctorate degree, I gratefully thank my parents, my relatives and all my well-wishers who have supported me throughout my journey of this program. Only one flower cannot decorate the whole garden, similarly I would have never been able to reach here without the full hearted encouragement and motivation of my beloved ones. I would like to thank all of them who helped me sail the boat through all the turmoil I faced during this journey.

First of all, on this occasion I would like to express my gratitude towards my esteemed guide and mentor **Dr. Minja Bolesnikov**, SSBM. His erudite guidance and suggestion, constant encouragement at my low times has made me achieve my goal. His in-depth knowledge and understanding of the core of subject has been a booster for me. He is the best that anyone could have asked for. I cannot deny the fact that he has profited me immensely during this whole dissertation process.

It is not the fire or the candles that can help you enlighten your life, only a spark is needed that can help you shine in the sky.

I will always be indebted to Dr Minja, due to whom I have reached a point where I always wanted to be.

There are some debts that you can never pay. No amount of thanks can be enough to tell parents that nobody could have done, what they have done for you. Every single moment of your life is because of your parents. So I would say, I am blessed to have parents like you. Mummy you have supported me throughout this journey by your selfless care, limitless love and affection. Your undeterred and unflinching support has made me give my 100% towards my work. Looking down from the sky, I'm sure my father was proud of me. I miss you a lot. I wish you could be here with me at this point of my life. Sachin, my brother, has always been

a true and the best friend that I got throughout my thesis process. Brother, prays and wishes you did for me has been answered now. My sister Meenakshi, the way you have impacted my life is beyond any measure. I can't thank you enough for being there for me always.

The one person, who was and is always is by my side, whenever I need him, is my beloved husband. Jiten, the ups and downs during this expedition has been a medley of dawn and dusk. It is because of you, I have been able to paint the sky blue. You have always been a reason to smile, even when the journey seemed tough. You inspired me, guided me, and listened to me during all pleasures and pains. The extreme faith that you had in me, made me cross the river that once seemed river of fire, like a flower bed. My two sweet daughters, Purvi and Anjita, are the charm of my life. They are my two eyes that make me see the beautiful colors of the world. Without them, this journey would have been nothing.

Last, definitely not the least, I pay my reverence from the bottom of my soul to father of all, kings of king, saviour, almighty GOD whose everlasting patronisation has been an elixir for me…

ABSTRACT

There are parallels between this world and even the simplest project. Humans are a relatively minor part of the universe. This vast universe is made up of numerous galaxies, and life dwell in one of them, known as the Milky Way. This Milky Way galaxy may contain a multitude of solar systems, with planet Earth having its own spot in one of them. In addition, while humans are a minor component of the earth, every minor component of the solar system has a

job to play. Not a single entity, large or little, has been self-sufficient. The presence of one affects the other. Similarly, numerous elements regulate or govern how projects operate. When it is believed that any of the aspects is unimportant or try to disregard its impact on the project, that component plays its part that could really change the entire performance of the proposal. When a project starts, the aim is always to accomplish the final goal of that endeavour, and in order to do so, impact of all the aspects must be examined that can influence the project. The ultimate goal that is being discussed is, success. Success can mean different things to different people and have different definitions at different periods of life, yet the value of success remains constant.

In this paper, first, several aspects that academics and researchers have investigated in the past are examined, and then critical evaluation is done, if the factors that have received all of the attention are important enough to overshadow other factors that have never been studied. What are the aspects that have never been discussed before but are extremely important will be the goal of this thesis work.

METHOD

This study included qualitative research approach, employing various case studies to help us better understand some other factors that have been overlooked and never discussed at length by any researchers. These case studies helped us understand the impact that these factors had on the projects that investors or stake holders put money into, believing it would be a huge success. This article also incorporated a logical approach via the questionnaire method. Main

goal was to incorporate people who play critical roles in project implementation. Two surveys, one containing solely the factors that have already been researched and the other containing the factors that will be discussed in this paper has been asked to rank in order to make any project a success.

RESULTS

The outcomes are determined by the number of examples analysed in depth and the influence of the elements that played a critical part in the project's delays, cost increases, revenue decreases, or, in some cases, the project's entire failure. In addition, a ranked questionnaire is used to determine how persons who previously did not consider the neglected aspect to be important now place a high value on it when confronted with various situations.

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1. INTRODUCTION

It's no surprise that human race is in the midst of the fastest growing economic period in history. And in this competitive environment, everyone wants to be better than the competition; therefore the human race is in rat race every minute. To achieve their objectives,

multinational corporations invest a significant amount of money and efforts in a variety of campaigns and projects designed to escalate not only just the growth of their company but also the growth of the country as a whole. According to PMI (2013), organisations which have projects with big-picture objectives bring overall development of the society that lasts for very long time. This is not a new phenomenon. It has been since the Middle Ages, and with every undertaking, comes growth. Therefore, success of a project is directly proportional to the economic growth of a nation. Now, in order to make a project a success, it is important to first comprehend what a project is and what aspects influence its success.

Anything that is being done to achieve the goal is referred to as a project. It might range from something as preparing breakfast in the morning to something as complex as sending a spacecraft into space. A team is assigned to complete the project based on its simplicity or complexity. When a project is taken, the team gets committed to it so that it can be finished within a certain time frame, otherwise it is pointless. According to Tuman (1983) "A project is an organization of people dedicated to a specific purpose or objective. Projects generally involve large, expensive, unique, or high risk undertakings which have to be completed by a certain date, for a certain amount of money, with some expected level of performance. At a minimum, all projects need to have well defined objectives and sufficient resources to carry out all the required tasks". When it is been said that a project is unique, it is referred to the fact that no two projects are same. Every endeavour has its unique set of difficulties or challenges. Even if the purpose, process or team participating in two projects is same, the end result would never be exactly the same. As a result, since each project is unique in its own manner, how can the variables that influence its success or failure be the same? Pinto & Slevin (1988) said a project has following characteristics:

- A defined beginning and end (specified time to completion)

- A specific, preordained goal or set of goals (performance expectations)
- A series of complex or interrelated activities
- A limited budget

A project will be delineate as “a temporary endeavour undertaken to create a unique product, service, or result” PMBOK (2017, p 40). When it is said that a project is temporary, it means that a project is something, which has an end to it once it achieves its objective, Maylor (2010 p 4). Shenhar,A. J., Dvir, D., Levy, O., & Maltz, A. C. (2002), defined project as a process in which number of tasks are performed with available or new resources to achieve the desired target. Nigel J.Smith (2002) explained the term "project" was defined by stating the six qualities of the project. To begin with, Nigel, like other academics, believed that the project always has a clear beginning and end. These are significant milestones in a project. Second, a project is always one-of-a-kind and realistic. By realistic, he meant an endeavour that can be accomplished with hard work. Third, every project that an organisation embarks on has a specific goal in mind. Fourth, projects are made up of a variety of activities, each of which is dependent on the actions of other projects. If one of the activities is harmed by a factor, it will have an impact on the other activities and, ultimately, the project as a whole. Fifth, any undertaking comes with a variety of risks and uncertainties. There can't be a project that has all of the variables in place. Frequently, something unexpected occurs that could not have been predicted or foreseen. These unforeseen events are referred to as risks. Finally, the fulfilment of every project necessitates certain financial and human resources.

According to Dinsmore & Cabanis-Brewin, (2010), unlike earlier when projects were considered only in construction sector, now they are part of every industry, be it high-tech product development, financing, education, agriculture or banking, projects are part of every

field. Gittinger (1972) explains a project to be a clear and distinct portion of a larger, less precisely identified program. Larger and more sophisticated projects, in general, necessitate more effort, preparation, finance, resources, and team members, while also expecting massive rewards. As a result, these projects are divided down into small portions, with a team assigned to each part that is responsible for their completion. Members of the project team are often given the goal by senior management, and the team members then devise a strategy or set of plans to achieve it. Their project manager monitors and scrutinises these plans on a regular basis. Examining the plans on regular basis not only double-check each strategy, but also assists in meeting the deadlines, which is one of the criteria of success according to *The Iron Triangle.*

2. KEYWORDS

Project, Project life-cycle, Project success, Project failure, Project manager, Success factors, Critical Success Factors, Risk Management.

3. DEFINATIONS

1) Project- In simple terms, a project is any task or job that has a defined start and end and requires the person conducting it to put in some effort in order to reach a certain goal.

2) Project life-cycle - A project's life-cycle is defined as the stages it goes through until it achieves its goal.

3) Project Success- A project is said to be successful if it meets its objectives of being completed on time, on budget, and to satisfy its end users.

4) Project Failure- A project that fails to meet the aforementioned criteria is considered a failure.

5) Project manager- A project manager is someone who plans, supervises, assigns work to team members, leads them, and ensures that the provider and the taker are on the same page.

6) Success Factors- Success elements are any factors that aid in completing a project's goal within the time span allotted.

7) Critical Success Factors- (CSF) are project factors that are extremely important throughout the project's life cycle. Deviation from any of the CSF can lead to project failure, even in its closing stages.

8) Risk Management- Risk management is technique to handle unpredictable hurdles while doing a project.

9) Project Management- Branch of management that is expert in handling of different projects.

4. LITERATURE REVIEW

Conducting research needs lot of dedication and zeal. This can be maintained by reading the work done by other scholars. Reading work of different scholars is like puzzle at the start but when you keep on reading the literature, you will get to know the gaps in the writing and then you can start your research to fill the missing gaps.

This section includes the literature review and the knowledge gathered from all the data that has been explored in the journey of writing this thesis.

4.1) Project Success

Success is a goal that everyone aspires to achieve. Nobody in the world would begin anything in order to demonstrate that it is a failure. But what exactly does it mean to be successful? Success is defined as the achievement of a goal at the conclusion of a task. It's not easy to evaluate success. It varies depending on the individual. Many researchers have given importance to *The Iron Triangle*, introduced by Dr. Martin Barnes, as a criterion of measuring success. According to him any project that achieves three criteria of cost, time and quality is said be successful. Turner (1993), regarded The Iron Triangle for measuring the success of a project as "the standard mantra for how we judge project success." That is, a project is considered successful if it is completed on schedule, on budget, and delivers a product that meets the needs of the end client. However, this was a very basic method of determining project success. Ika (2009), quoted "project success remains an ambiguous, inclusive, and multidimensional concept and its definition and measurement are bound to a specific context." According to Young (2016), measurement of success of a project is not something which can be done by a particular set of member. It depends on who is measuring the success and at the same time at which stage of project, the success is being measured. De Wit (1988), stated "with such a multitude of objectives and factors that project actually have, one cannot measure the success of a project." Meskendahl (2010), refers to projects as the central building block used in implementing strategies, therefore business success is determined by the success of the projects. "Most projects have multiple stakeholders with different views on the project's purpose and different expectations of what the project must achieve" Lyytinen & Hirschheim (1987). According to Atkinson (1999), the iron triangle for measuring the success of a project is old and unrealistic. Shenhar et al (1997), introduced four other factors according to which a project can be judged as a success or a failure. The

dimensions that they introduced are: efficiency of project, impact of end product on the customer, business and direct success, and its impact on future. Globerson & Zwikael, (2004) also added one more factor while considering success parameters. According to them high customer satisfaction should also be considered in addition of time, cost and quality of product. Baker et al. (1988), considered satisfaction of customers, stakeholders as an important criterion for judging a project success percentage. Other aspects that were added in addition to the prior ones were, achievement of strategic objectives of the client organization that initiated the project, satisfaction of final users, and satisfaction of other stakeholders (Baccarini, 1999; Shenhar et al., 1997). When the outcome of project matches with the objective of the project, then a project can be said to as a successful project, Serrador and Rodney Turner (2015).

As a project is an endeavour that has an end to it, so a project is marked as successful or a failure only at the end of it. Project might be comprised of number of stages and each stage can individually be marked as a success or failure, but on a whole, the final stage or the concluding phase is the only phase where it can be said that if the goal of a project has been accomplished, then that project is a success.

4.2) Success factors Vs Success criteria

Without even realizing it, everyone is a project manager in his or her own lives. In order to achieve goals, everyone tries to go to any length. Everyone is working on a project in his or her own way. From an illiterate to a scientist, from a child playing a game to the CEO of a company, from a homemaker preparing a meal to an IT specialist developing complex IT software, everyone has a project to handle at their own level. Nobody wants to fail in his or her endeavours. Everyone aspires to be the best in their area. However, in order to thrive in

that area, what exactly must be done? What are the issues that need to be addressed? What happens when the team strays from those parameters? These are the question that ponder when the team is at work. These are some of the questions that rattles the mind when team is just starting out a project. A project that has been running smoothly from the beginning can fail at the last stages. The factors that affect the success or failure of a project are known as success factors. These factors need to be researched thoroughly. Factors determining success might alter at any time in this dynamic universe. A combination of factors determine the success or failure of a project and influencing these factors at the right time makes success more probable (Savolainen, 2012). Success factors are those main variables associated with the project that influence the project to a great extent. They can lead to success or failure of the project. Hence, they need to be studied properly before starting the project, (Dvir, 1998). Westerveld, (2003) named success factors as levers, which are operated by project managers in order to achieve the overall objective of the project.

Bhoola et. al (2015), mentions that important factors that impacts a project success can change from time to time because of possible risks involved, which are- project specific, human resource related, environmental or associated with organisational culture. When team deviates or do not ponder heed to these factors, the team do not pass the success criteria of a successful project. There is now a significant distinction between the elements that influence project success and the criteria that are used to determine whether a project is a success or failure. Every project's success is determined by a variety of circumstances, and the criteria that is used to determine whether a project is a success or failure, varies. For example, if a group of mountaineers is travelling to the top of a mountain, and someone wants to take the first place, he should consider things like navigating properly, carrying an oxygen cylinder, sufficient food, drinkable water, and other critical items that will allow him to survive in the

cold weather of the mountains. All of these are the factors that will aid him in his ascension to the top and hoisting the flag before everyone else is the criterion that will determine whether he will be able to make it to the summit or not. This is the criterion.

Morris and Hough, (1987) explained the difference between the two as:

(1) Project success factors are elements that have a direct impact on a project's performance and consequently raise the likelihood of a project's success.

(2) A scale used to measure or judge a project's performance is called a project success criteria. The parameters of success criteria are used to determine if a project was a success or failure.

Shenhar,A. J., Dvir, D., Levy, O., & Maltz, A. C. (2002), explained the difference between success factors and success criteria as, success factors are those parameters that if followed, effects the outcome of a project and leads to achievement of the goal. On the other hand success criteria are those standards under which the outcomes of a project are reviewed.

To avoid failure, much study has been conducted to determine the characteristics that determine a project's fate. Constantino et al. (2015, p 1747) describes these factors as “main factors that increase the ability of organisation to carry a project through its full implementation.” Chan et al. (2002), gave importance to the commitment by which the team members put their efforts in the project, competencies of contactors, the capability of project manager by which he can assess the liabilities and risks involved with the project, constraints and needs of the end users involved. According to Lewis, et al. (2002), factors affecting the success of a project, changes with every phase/stage of a project. So in order to make a project success, each factor must be concentrated upon accordingly. Rockart (1982), emphasise on the knowledge of success factors because he thinks that these are the factors

through which the project manager can gain desired results. When a manager has in depth knowledge of these factors, he can plan and manage the project wisely on daily basis. According to Belassi and Turkel (1996), the four areas that should be meticulously studied and these factors are: the project (size of the project, uniqueness, and its urgency), the type of organization doing the project (structure, management support), external environment (political, financial factors) and the project manager and his team. Kendrick (2015, p 4-5) considered risk management as one of the important factors for a successful project. After that, Nugroho (2018, p 84) in addition to risk management added four other factors namely, project innovation, team performance, resource controlling and schedule monitoring. For a project to succeed, a lot of emphasis has been placed on project managers and their leadership abilities. Davis (2014), gave a list of nine factors which she thinks are important to consider while planning a project. These were-

1) Objectives of a project should be clear to the team.
2) Budget allocated to the project,
3) Co-operation and communication between all the team members involved,
4) Timing to deliver the product,
5) Stakeholder satisfaction should also be considered,
6) End product acceptance and its uses,
7) Project manager's role and his skills,
8) Future aspects and scope of the project taken under consideration

   Last but not the least,

9) Top management support.

According to Schopp et al. (2019, p 5) "a qualified team, technical and management competence of project manager and clearly defined goals" are the three factors that influence

a project a lot. Top management support, project manager qualification, user engagement, risk management, thorough understanding of the project, and establishing the timetable are a few of the elements that take the top spot in the list of factors determining the success of a project, according to a number of studies.

Any project's turning point is determined by these factors. When these elements are thoroughly investigated, a better understanding of the project is gained from the inside out, allowing us to address any potential flaws. Many researches have been conducted to determine the factors that influence the outcome of the campaigns.

Success criteria are defined by Muller and Turner (2007) defined success criteria keeps on changing according to type of project and thus they are those variables that are used to measure success of a project. Initially when Iron Triangle was introduced, organisations treated these as main criteria to judge their project on success level scale but eventually this trend diminished and management understood that in addition to this triangle, there are few more aspects that has to be brain stormed in order to find whether the project has been successful or not. Eventually Stakeholder satisfaction became one of the top priorities of organisations. De Wit (1988), also emphasized the addition of objectives of stakeholders that are connected to that project. He added that at all level of hierarchy and in every phase of life cycle of a project, these objectives should be considered while measuring the success of a project. Davis (2004), formulated “success criteria should be agreed on with stakeholders before the start of the project, and repeatedly at configuration review points throughout the project.

4.3) Life cycle of a project

A project, no matter how little or large, goes through several stages. The length of these stages varies by industry; for example, the duration of the project, the type of project, the number of team members assigned, and so on. PRINCE (2002), defines life cycle of a project as, "a sequence of phases which a project must pass." The length of these phases varies depending on the project type. Wideman (1987) explains that the way each project is unique, the very same way each phase of project is also unique in its own way. Every phase of a project has different budget allocated to it, work force handling each phase is different, and each phase gets its own time for completion. In certain projects, the initial preparation takes the most time, while in others; the operation and execution require the most time. Ngang (2009), divides the project cycle into- Project Identification, Preparation, Appraisal, Implementation, Operation and maintenance, and evaluation. As advocated by Archibald & Voropaev (2003), divided a project life cycle into four phases. Each phase was internally divided into sub-

1) Concept (initiation, identification, selection.)
2) Definition (feasibility, development, demonstration, design prototype, quantification.)
3) Execution (implementation, realization, production and deployment, design/construct/ commission, installation and test.)
4) Closeout (termination, including post-completion evaluation.)

Not all the project has same number of phases. Life-cycle of a project varies with type of project, type of industry, length of project, external factors prevailing and many more. Kerzner (2003), generated the sequences from the very start till the end of that project. This sequence is almost same in the entire project.

- Conceptual

- Planning
- Testing
- Implementation or Execution
- Closure

Adams and Barndt (1983), explained in detail each phase of life cycle of a project.

1) Conceptualization- It is the very start of the project. It is this phase in which a project is conceived. During conceptualization, the project is thoroughly studied and accordingly planned, so that the goal/objective of starting the project can achieve.
2) Planning- This phase includes detailed planning not only in air but also on papers. Period, work force allocation, budget sanction, all these stages fall under this phase.
3) Execution- Execution is the stage when the project comes out from papers to reality. This is the phase in which the actual work starts. During execution phase, material procurement, takes placed.
4) Termination- termination included, what has been produced is handled to the end consumer.

4.4) Critical Success Factors

To discover these elements, a great deal of research has been done. Even after so much effort has been made to determine a project's CSF, this question remains unsolved. Any project's critical success criteria are determined by the project's type, budget, and human resources, as well as the risks, end users, and communications involved. Any industry must first define its crucial success factors and the contribution of the organisation and individuals involved in addressing those factors.

As Erling et al (2006) defined critical success factors as "those factors which have been identified as necessary to be achieved in order to create excellent results: if the critical factors are not present or not taken into consideration, one can largely expect that problems will be experienced which act as barrier to overall successful outcome". "Main factors that increase the ability of organisation to carry a project through full implementation" Constantino et al. (2015). Mobey and Parker (2002), stated that if any organisation wants to increase its chances of success then it needs to understand what the critical success factors are for that particular project so that they can systematically and quantitatively assess these critical success factors and accordingly anticipate possible effects, and then can choose appropriate ways to deal with them. Andrew C Botnton and Zumud R W (1984), defined Critical success Factors are few such things that must go well to ensure success of manager or organisation, and therefore, they represent those enterprise or managerial areas that must be given special and continual attention to bring high performance in current operating areas and future success. Baccarini and Collins (2003), describes critical success factors as combination of important variables which have great positive impact on outcome of a project.

Rowe, Mason and Dickel (1982) states that CSF as those factors that helps the organisation to understand that should they invest in ventures even if they have to face, environmental uncertainty, and internal politics and constraints". Thomas et Anu Thomas (2017), gives a list of six factors that are critical for success of a project. This list includes selecting the right project, end user satisfaction, project team that should be capable and strong enough to handles the ifs and buts of a project, scope of project and its input for the society, value for money and quality for workmanship. According to Crisan, Borza (2014), it is not easy to segregate a list of critical success factors but still lots of researchers are trying to identify CSF due the fact that all the organisations wants their project to be successful in order to compete

in this global market. Identification of CSF is an ongoing process as it is a dynamic world and the CSF changes with the changes around the project. There cannot be a rudimentary way to categorize any factor as CSF, so a creative and innovative way to study the project in order to identify CSF related to that project is required, Salanta, Popa (2014). Each phase of a project has different activities and each activity has number of factors that affect them. For example during initial stages of a project, the role of top management can be critical but during execution the top management role can take the back seat and the command comes in the hand of project manager and team involved. Hence, it can be said that CSF changes at every stage of a project

Slevin and Pinto (1987), has led to ten critical success factors:

1) Project Mission
2) Top Management Support
3) Project Schedule/Plans
4) Client Consultation
5) Personnel
6) Technical Tasks
7) Client acceptance
8) Monitoring and Feedback
9) Communication
10) Trouble-shooting.

4.5) Project Manager

A project that is properly designed, taking into account all factors, has a better chance of succeeding. Now the question arises, who is accountable for looking into these things? The

project manager is in charge of this. The competencies of project manager are a strong bridge between the initial stage and final successful stage of a project. Muller & Turner (2007) stated “it appears that the project manager in most settings, who has high degree of emotional intelligence, finds higher success rates than those mangers with low level of these traits”. Unquestionably, a project with a strong leader has a better chance of succeeding. The way The Iron Triangle is used to measure the success of a project, similarly according to PMI there is Talent Triangle to judge the qualities of Project Manager. These skills are:

- **Technical project management**. This competence assesses a project manager's technical understanding. This competence scales his qualifications, expertise, and attitude toward a specific project, among other things.
- **Leadership**. The way a project manager leads his teams is referred to as leadership. The team may require motivation at times, particularly when a project is lengthy or encounters challenges during the execution phase.
- **Strategic and business management**. Making strategy while the project is in progress, dealing with top management, and bridging the gap between top management and team members are just a few of the qualities that a project manager can possess to make the project more manageable for him.

According to Scott-Young & Samson (2004), “Research has identified that people management drives project success more than technical issue. Krahn & Hartman, (2004), states “The combination of a changing organizational environment and changing project characteristics make the role of the project leader difficult.” Ammeter & Dukerich (2002) emphasized that in this changing environment only a manager who is competent enough to get adapted to it and adopt it is the one who can make a project a success. According to

Rickards (2001), project manager not only plans the stages but is also responsible for motivating the team members involved. Klein et al., (2015) added that a project manager uses different tools and techniques to improvise in between the project, depending on the need on it. This ability of project manager to improvise is not something that can be studied, this quality is gained with experience and his abilities to adapt and adopt in an environment. This is slow process but can groom a project manager in a way that he can turn a failing project to a successful one.

De Wit (1988), explains the role of project manager in life-cycle of a project. As project is divided into different phases and each phase is further divided into sub-phases, depending upon the type of the project, the project manager in order to handle the project successfully needs to understand each phase and he should be able to make fair evaluation while taking the decisions. He exemplifies this by quoting "during the early phase of the project the scheduling is important and in the middle phase focus will be on costs. After the project is completed those will easily be left beyond and more emphasis is put on the quality". Project manager should be able to prioritize the goals and therefore, should be able to work on them accordingly. Drucker (1955), laid stress on social skills that a project manager must acquire which was then supported by Goleman (2001).

Keeling (2000) defines one of the characteristics of a project manager to be that the manager needs to be the coordinator of different activities taking place while the project is in pursuit. He should be able to maintain the smooth flow of every activity. "Project leaders are often so focused on task responsibilities that they can miss social-psychological problems" (Cobb, 2006, p. 125). In PMBOK (2013), role of project manager is not only to manage the budget allocated to project, time given or quality aspects of the project but also to manage the risks involved, maintain communication

between different team members, manage human resources and to procure the material. He or she is the one on whom the success of project is dependent.

According to Field and Keller (1998), the project manager plays very vital role in a life-cycle of a project. He can ensure the success by understanding the project that has been undertaken and should be able to make the decisions quickly and wisely when the situation demands so. For that to happen, he should have in-depth knowledge of the project and different parameters on which the project will be executed. The manager needs to lead his team in abnormal circumstances. He needs to be the backbone of the people working under his supervision. Taherdoost (2018), mentions, to achieve a project that is error free or with zero defect should be what a proficient project manager should aim at and for that he should use well defined and upgraded project management methodologies and techniques. Besteiro et al. (2015), describes the role of project manager for a successful project. A project manager should be able to communicate with his team members, he should be able define a schedule all the activities according to the priority of stage and should be able to define goal and objectives of project to his team members to get the desired goal. Project manager who owns soft skills of communication with its team members, can greatly influence the members positively, Smith et al. (2018). According to Mingus, (2002), and Dvir et al. (2003) project manager if wants, can present the project as profitable endeavour in front of stakeholders by proving them formal designs and planning documents.

Peter F. Drucker (1955), says that a manager's role in a project is like an engine. He is the one who turns the resources into production. Without a manager, a project cannot be run successfully. He is the main bridge between the plan and success of a project. He also adds the role of him as a leader of his team. PMBOK (2017, p 73) explains leadership

skills involve how a person is able to lead his team by motivating them, guiding them and directing them when ever needed. The one who is leading a team should have the capability like problem solving, risk management, negotiation, resilience, communication, critical thinking, and interpersonal skills.

4.6) Project Management

According to Lock (2003), a long project contains a number of sub-phases, each of which has a number of tasks that must be completed in order to acquire the main objective. All activities, from the very beginning of the project, be it conceptualization, planning, procurement, implementation, to the final stages of the project, i.e. delivering the finished goods or services to the client or end customer, should run smoothly in order to deliver what is promised to the clients. The proper running of these operations necessitates teamwork and connection. To fulfil the deadline while staying within budget and delivering a product that meets expectations, the organisation will need advanced management tools and processes to plan and optimise project activities. Pinar and Onur Demirors (2019), elaborates the aim of project management. According to them the motive of managing a project is make it a success by delivering what has been planned, within the time allocated, and quality specified during the initial stages of the project. This scope is what has been supported by The Iron Triangle. PMBOK (2017), describes the importance of project management by describing its role on attainment of the ultimate goal of the project by applying different tools, techniques, skills and knowledge in different activities involved in a project. With help of this branch of

management, the organisation is able to achieve its objective efficiently and effectively. In this competitive world, where new technologies, new products are emerging every day, companies have started embracing project management to make their place and to sustain that position for in the market longer period.

Managing all the activities of a project is tedious job. All the aspect need to be carefully studied to avoid failure in future. Especially when it comes to ever changing environment, the factors that need to be looked into, changes and so do the criteria. Team involved in managing the projects need to have diversified knowledge. Project management not only prepares us to deal with the present environment of the project but also makes us aware of the future risks and also teaches us to handle those risks.

In this ever changing environment where conditions change by the minute, project management is opting for a more aggressive strategy rather than the traditional dormant one, according to Seymour et al. (1992). This necessitates a strategy that they must devise. Project managers are critical in inspiring team members and assisting them in surviving an organization's difficult and confusing environment. The project manager's task is to assist in the adoption of new approaches and the adaptation to changing environments. Duncan Haughey (2013) add

a) Project management is not something to be underestimated.

b) Project management, like any other project, has a beginning and an end. It begins with the start of the project and concludes with the completion of the project.

b) At all stages of the project, project management use upgraded tools and methodologies to monitor, notify, and plan the project.

d) Project management reduces risks through appropriate planning and strategy development, increasing the likelihood of a project's success.

According to Kerzner (2003), project management entails a variety of tasks such as planning the project, organising activities, distributing jobs to team members, maintaining communication between team members and top management, and understanding the needs of the end user. All of this is done in order to achieve the intended result. When a project needs to be managed, it necessitates a wide range of talents, expertise, and approaches.

Nijkerk (2006) “Project management is planning, organization, monitoring and control of all aspects of project, with motivation of all included to achieve project goals on safe manner, within agreed schedule, budget and performance criteria”

Project management, on the other hand, can be defined as the process of measuring and managing the outcome of the project. The aim of project management is to identify the task requirements, organize the task for execution, monitor the progress and performance, and adjust discrepancies. These two descriptions may appear to overlap at first. Indeed, project management success is one of the components of project success, as the latter is impossible to achieve without the former, Shenhar, A. J., Dvir, D., Levy, O., & Maltz, A. C. (2002). Lock (2017) describes project management as a branch that aimed and planning, execution, communicating goals and objectives, and controlling other important activities of project that helps to overcome challenges in the project and pushes the project to completion effectively. Therefore, it can be comprehended that by using different tools and methods of project management, objectives of any project can be achieved easily.

4.7) COMMUINICATION

The word "communication" comes from the Latin word "COMMUNICATIO," which meaning "to share" or "to transmit." It refers to when you accurately convey your thoughts with someone and the other person interprets them in the same way you did. You may be sharing your thoughts, but the way they are received is quite different. Proper communication is critical since it aids in the reduction of errors, the development of healthy interpersonal relationships with the co-workers, and the consequent increase in organisational efficiency. Communication is vital not only within the organisation, but also outside of it. People working on a project must be aware of the entire arrangement. They need to know who the stakeholders are, who the team is, and who the end users are. The proper flow of information is necessary. Pacagnella et al. (2015) highlight the importance of communication by stating that it is critical to analyse all persons who are directly or indirectly involved in a project since they have the ability to influence the project's outcome. It's also crucial to communicate with these individuals and understand their driving factors so that beneficiaries can work together to maximise profits. Besteiro et al. (2015), in his research emphasised that communication is one of the critical success factors as it add to productivity of team members. DuBois et al. (2015), also states the same as effective and proper communication between the team members and team manager helps to eradicate the hurdles and helps to achieve success. According to Li and others (2019), efficient communication and cooperation can boost the chances of success. Projects and campaigns can entail a large number of individuals. As a result, it's critical to keep everyone informed about the latest developments. This assists in overcoming obstacles and ensuring that team members are aware of their obligations. According to Frank Cerone (2014), storey telling is one of the most efficient techniques of communicating since it is simple to entice team members by giving important information by citing it in a storey, therefore making them good listeners. Projects are divided

into phases, each of which involves various people at different times. It is critical that that specific group of people participate in that particular phase. Missing out on communication might be inconvenient at times. For example, at the conception stage, it is critical to include stakeholders and people who have invested in the project. Communication between senior management and the team manager is critical during the planning and execution phases. It is critical for top management to communicate the project's objectives to those who will be involved in the execution phase at this phase. As the project nears completion, proper information delivery between the organisation and the end users is critical. Schopp et al. (2019), emphasises the importance of communication between both internal and external participants involved in the project. According to Wu et al. (2017), communication and conflict management are two important factors for a successful campaign. Communication maintains the smooth running of project, as it helps in transfer of information timely and effectively, which helps to overcome problems and plan strategically. Stakeholder's involvement must be considered at every point as they have their own objectives and goals from the project and in order to have the exact idea of their expectations from the project is important to consider it as a success, Frank Cervone, (2014). PMBOK (2017 p 292), describes communication in two phases:

a) The first part involves making strategies that included ways by which communication can be done effectively between all the members involved in the project
b) The second part is execution of planned strategies to maintain the effective and accurate information in order to avoid hurdles in the path of project.

It also divides the communication process into three parts:

1) Plan Communications Management—The process of developing an appropriate approach and plan for project communication activities based on the information needs of each stakeholder or group, available organizational assets, and the needs of the project.
2) Manage Communications—The process of ensuring timely and appropriate collection, creation, distribution, storage, retrieval, management, monitoring, and the ultimate disposition of project information.
3) Monitor Communications—The process of ensuring the information needs of the project and its stakeholders are met.

Informing, motivating, controlling and rewarding are the four actions in which communication was divided by Stanciu et al. (2016). Effective communication can be done in various ways for example verbal communication, group meetings, memos, conversations and speeches, presentations etc.

4.8) RISK MANAGEMENT

Every project involves a lengthy procedure and a large number of actions. These tasks are scheduled in such a way that the project's goal is met within the time and budget constraints. Despite all of the planning, the team is frequently confronted with issues that were not anticipated or prepared strategically. These variables cause the project to stray from its original objectives. It does not always result in the project failing, but it can lead to time overruns, delays, quality compromises, and over budgeting. Risk factors are the elements that cause the strategy to fail. Risk management is critical for overcoming these obstacles. In simple terms, risk management is identifying, monitoring, and managing the project's

hazards. According to Buganova (2019), risk management is the field of management that assists in identifying risks in advance and enhances the likelihood and reach of potential occurrences. Risk management aids in the development of methods for dealing with risks that may arise. This necessitates team members who can predict or foresee project-related risks. Every enterprise entails its own set of dangers. The more complicated a project is, the greater the risk involved. According to Kendrick (2015), because each project is unique, it is difficult to foresee which variables, if not followed, may result in potential risk. Risk is not something that can prevent a project from achieving its goal rather it is the lack of risk management that can prevent a project from accomplishing its goals. Unpredictable risks can result in a slew of negative consequences. Project delays, over budgeting to manage these, and contractual disagreements are just a few of them Serpella et al (2014). Shojaei et al. (2019) explains the drawbacks of failing to manage risk. In his research, he explains that project failure is a possibility if risks are not managed appropriately and in a timely manner. He also emphasises that project managers should employ enhanced models and trainings to detect and anticipate these risks and devise a strategic plan to address them. According to Muriana and Vizzini (2017), not only preventive but also remedial steps are required to successfully complete a project. If faults or mistakes are not fixed in one phase of a project, they might spread to the next phase, resulting in poor performance and, finally, project failure. As a result, it is the project manager's obligation to anticipate and manage the risks that are inevitable. During this phase, proper delegation of roles and tasks to team members is critical.

In PMBOK (2017 p 316),

The Project Risk Management processes are as follows:

1) Plan Risk Management—this entails developing methods for managing risks that arise during the course of a project. This need study of previous project that are similar and to study the risks that were encountered during that project.

2) Identify Risks— this step entails identifying the risks that may be present in a project and adequately recording them in order to develop ways to address them.

3) Perform a Qualitative Risk Analysis—this procedure include determining the likelihood of a risk occurring as well as its impact on the project.

4) Perform a quantitative risk analysis—this aids in quantifying the total effect of specific project risks as well as other project-related uncertainties.

5) Plan Risk Responses—inevitable hazards must be addressed if the team is to meet the project's final goal. This procedure aids in the planning of strategies and the collaborative efforts of the team members participating in the development of possibilities, as well as the treatment of project risks.

6) Implement Risk Responses—planning alone isn't enough; plans must also be carried out efficiently in order to achieve the desired objectives. This step entails putting those plans into action.

7) Monitor Risks—The risk response plan must be monitored, with proper tracking of foreseen risks and an attempt to evaluate new risks that could prove to be a stumbling block in the project's execution.

4.9) TOP MANAGEMENT SUPPORT

Denis and Denis (1995), described people who come into the category of top management are the individuals who hold the posts of CEO, Director, President, Vice-President, Chairman, or top executives in the office. These are the folks who have a lot of authority and are responsible for many things. As a result, it is correct to say that enormous power comes with great responsibility. Top management personnel have strong qualifications, abilities, and leadership qualities, all of which are required in any organisation.

Top management's responsibility is not limited to goal-setting, policy-making, or dealing with stakeholders; they also have an impact on the workplace's working environment. Understanding their job and how it affects team members allows them to make required changes in how they interact or establish company culture. The persons in top management are in-charge of formulating the goals and then communicating them to the stakeholders and team members involved in the project in a clear and concise manner. The distribution of responsibilities to the team or project managers is the responsibility of top management. They have the flexibility to alter responsibilities as the project requires. Every project must be completed within a certain time period, which must be communicated to the team. Only top management should adequately explain the time limitation to the team concerned. They are supposed to guide the members on how to handle the project and devise solutions to control the risks if there are any. Top management is also responsible for improving working conditions, methods, and techniques from time to time.

Higher-ranking employees possess traits that enable them to motivate team members and project participants to achieve the project's objectives. They instil confidence in project managers and assist them in achieving project success. Effective top management support offers the project manager the confidence to steer the project toward success by employing effective leadership abilities, Morgan, (2012).

According to Too & Weaver (2013), top management serves as a link between those who devise methods for achieving success and those who oversee the project's execution. Their primary responsibility is to motivate the team members, properly communicate the objectives to the managers, and provide them with the necessary assistance and resources to achieve the desired results. One of the most critical responsibilities of top management is to provide a pleasant working environment.

Kandelousi et al. (2011) gives a list of top management. According to Kandelousi, top management is critical in delivering resources such as human capital, funds, and the allocation of responsibilities to different individuals at various stages of the project. Their responsibilities also include assisting team members who are in danger. They must serve as a role model for the rest of the team by demonstrating their dedication to the project. Encouragement of those participating, at all levels should be handled only by top management.

The necessity of top management is described by Belassi and Tukel (1996). According to their findings, important success variables for each project are unique, as are the critical success factors for that project. These criteria vary depending on the project, the organisation, the end user, and the team participating. These considerations have a significant impact on the project. However, the one factor that is crucial in every project is the project's senior management's backing. As a result, any project that does not have the support of top management is doomed to fail sooner or later. On the other side, despite experiencing challenges and danger, a project will succeed if senior management fully supports it.

Adding to this Zwikael (2008), also explains the role of top management in project. According to Zwikael, senior management support is at the top of every list of critical success

elements associated with any project. This is a factor that affects every project at any level and has a significant impact on the project's success or failure. The importance of top management's job may change with each phase of the project, but none of them can survive the challenges without the help of those in higher positions.

Young and Jordan (2008) discussed that top management support is often, discussed as a paradigm which is related to the project success alone.

Meredith and Mantel (2010) described that projects with top management support are less likely to fail. Officials in higher positions are accountable for a project's success by supplying all necessary resources, such as capital investment, human resources, and material procurement. They are also in-charge of allocating responsibilities to their subordinates and motivating them in difficult situations, such as when a project encounters roadblocks. All of the management's support keeps the team members going, and they thrive for success as a result. The projects that rarely fail were dubbed "sacred cows" from then on. On the other hand many projects fail due to a lack of senior management support, according to Anantatmula, 2010; Edwards, 1989. Non-allocation of resources, a mismatch of ideas and plans with stakeholders, a communication gap between senior management and project managers, unclear project objectives, or quitting the project when it encounters bottlenecks could all be reasons.

In the studies, Beck (1983) stated that top management support is critical in providing resources for the project from start to finish. They aid in the development of project plans and strategies. Top management not only helps with planning during the early stages of a project, but also in putting those plans into action during the execution phase. As a result, top management has a role to play in each situation.

In contrast to previous studies, Smith (1999) claimed that, while top management support is a vital success component in every project, the success of a project does not solely rely on top management support. There are other aspects that play a part in a project's success as well. In addition to senior management, these factors have an impact on the project. Furthermore, he emphasised the importance of these higher-ranking individuals having leadership qualities in order to oversee their teams.

Top management's role includes supplying all necessary resources for a project's development. Human power is the most important resource at any given time, followed by funds, procedures, and technology, all of which are delivered only by top management. Their job also entails selling the finished product and demonstrating its benefits to the ultimate customer. In addition, they must demonstrate political clout in order for their proposal to be supported. (Young and Jordan 2008; Boonstra 2013).

According to Boonstra, (2006) influencing stakeholders in favour of the project, negotiating capital investments with them, encouraging them to invest in the project by explaining the scope of the project, and inspiring the parties to assist the project executors are all roles played only by senior management.

5. GAP ANALYSIS

In this dynamic world, to urge successful, desires quite an essential outlook and team that is chargeable for a project ought to investigate of these factors terribly rigorously. Erling et al. (2006) says, “There are no clear proof linking a project success factor and actual project success.” As each project is exclusive in itself, so are the factors that end up in its success and failure. The team that leads the project has got to contemplate each side of it therefore to attain its goal at the desired time and price allotted thereto. Rahman et al. (2018, p 4) states that the project success can be divided into three components-

1) Delivery on time

2) Complete work in specified budget

3) Fulfilment of the requirement of a project.

While beginning a project it is a tendency to take under consideration loads of things like- size of the project, form of the project, top-management support, methods, tools and techniques involved, team leading it, value allotted thereto, risk management, intellectual competence of managers, stakeholder's satisfaction. However, typically team involved in a project often fail to think that not only these internal factors influence the outcome but also some external factors like location, demography, geographical factors, and climate are few such things that play a significant role in path of whole cycle of a project. Talking about climate, it is average state of weather of that particular area. When climate deviates, can be a significant deciding factor of result of a project. Environment sometimes flips the entire project to a failure. In past, field consultants regarding the agents that require to be looked into for a project to be successful, have studied loads. Nevertheless, those agents are all confined to what is called internal factors. A really less or virtually no analysis has been done regarding the impact of geographical factors or climatic factors which will impact the project.

6. RESEARCH OBJECTIVE

• First objective of this research is to see into these geographical factors which will impact a project. In addition, to find answers to few questions like- Does location, geographical factors can really impact a project? Can these factors be really managed to possess zero or minimum impact on the campaigns?

• The second objective is to search out the amount of impact which will be done to a project which will cause its failure despite all other factors that are being aligned consistent with the need.

• The third objective that this research will unveil is, how these external agents can be considered and plan accordingly, which not only can save us from facing failures but also can accelerate the performance.

7. RESEARCH QUESTION

The research questions addressed in this study is how and how much these external elements such as climate, location, and demography affect a project. Does disregarding both or any of the two factors have an impact on the project's success? Does it simply affect the ultimate result or does it affect the cost, time, or any other component concurrently? Is it feasible to lessen the impact of ignoring either of the factors?

8. HYPOTHESIS

H 1: External factors like location and climate a huge impact on the project’s success or failure.

H2: When the impact of external circumstances is factored in, in addition of internal factors, the likelihood of success increases dramatically.

H3: Ignoring the impact of external factors on a project can turn big campaigns into a failure.

9. METHODOLOGY

Despite the fact that several elements are considered from beginning to finish before launching a project, some of the projects nevertheless fails. As a result, main goal is to devote attention to the elements that might lead to project failure. For the same reason, a lot of research have been combed to determine the characteristics that are critical to project success.

For the literature review, a variety of reliable sources have been used. Google Scholar, Research Gate, SSRN, and DOAG were used to locate the content.

While reading the literature, it became clear that many of the scholars placed a strong emphasis on what is called internal forces. However, issues such as location (where the project must begin) their current climate, demography of that area was not taken into consideration.

The main aim of this analysis is to think about the external factors too before beginning a project which will have generally the very best impact on the result of a project.

To support this research, a comprehensive approach using both, qualitative and quantitative methodologies have been used.

In a qualitative approach, many projects are examined in this paper, as well as the impact of numerous external components that had a detrimental impact on these projects, causing them to fail or fail to meet the success criteria. Case studies presented in this article will provide in-depth insight into real-life projects that failed or had to incur additional costs or delays as a result of ignoring climate, geography, or demographics, allowing for a more nuanced understanding of their impact. The case studies contained in this paper are extremely pertinent to the hypothesis mentioned, which must be answered or proven, because the impact of location and climate is prominently displayed in all of the projects. The selection criteria for these cases were based on the impact of location or climate on project failure,

have influenced, or affected profit, time, or any other component of the project. Personal engagement, talking to the particular project expert, face-to-face interaction with the families of loss bearer, site visits and content analysis have been important methods of gathering data for case studies to describe the reasons for the project's outcome. In this paper, photographs incorporated are sourced from Google to enhance visual representation and authenticate the data and information collected through personal interaction. In addition, the study examines current data, allowing us to detect traditional trends and patterns.

The structured questionnaire has been used as part of the approach to determine quantitative data, based on respondents experience or existing literature. The questionnaire's target sample consists of people working at various levels in various organisations and with various profiles. This questionnaire has aided in comprehending the participants perspective about the significance of the factors listed in all aspects of a project. The questions included are in kind of ratings and personal experiences from varied project managers and alternative team members are taken under consideration. In questionnaire, simulation technique has been used, in which participants are given situations, in which they must evaluate the situation and, after analysing it, determine whether the reason for the project's delay, cost increase, or failure was due to ignoring either the location climate or both. It was a quantitative data collection method based on an online survey. A link to the questionnaire was delivered via an internet platform, and to increase response rates, reminders were sent. A small pilot-tested sample of a questionnaire was developed and then revised in response to assessments and feedback.

The questionnaire responses and the case studies provided in the paper go beyond the outcome of any project. Intergraded approach to analyse and compile the outcome was used to process the findings, where qualitative study of case studies would provide quantitative context, depth and richness of questions asked. This will assist in learning how cost, time,

hazards involved, and other factors interact with these two parameters, as well as in elucidating the risks that are encountered when these influential factors are ignored. Following an understanding of the outcomes of several case studies, practical recommendations were provided. By shielding the identities of the participants, ethical considerations were given proper weight. Before asking respondents to complete the questionnaire, they were asked to give their full consent. Care was taken to reduce the possibility of bias by keeping the data analysis method clear and the terminology neutral and unbiased.

10. ROLE OF GEOGRAPHICAL FACTORS IN GENERAL

Before starting any project, the aspects that will contribute to its victory are for the most part considered. Be that as it may, components such as climate, demography, and climate conditions in that locale are at times given thought. Amusingly, the reality, that these components play a basic part in each endeavour is for the most part ignored. Numerous times, dismissing these contemplations, the group involved, endeavour to develop success. Climate, topography, and demographics are all components that are associated with and have a coordinated effect on the ventures and endeavours. In case the required objective needs to be fulfilled, at that point sometime recently setting out on any campaign, a couple of questions must be, to begin with, replied, such as:

What constitutes an area's geological components?

What impact do they have on the socioeconomics of the region?

What work do they play within the area's financial advancement?

Is it conceivable to apply control over the circumstance?

Characterizing geological components essentially, it can be said that they are physical factors related to the earth's surface that affect us either specifically or in a roundabout way. Climate, soil, mugginess, precipitation, vegetation, and demography are all cases of topographical components in that locale.

Geological considerations and their significance in human lives is a gigantic point. In this think about, the centre will be given on a modest bunch of these components and the parts they played in ventures (which can be clarified as case ponders) when they were disregarded.

To begin with, understanding what is climate/weather, and what part it plays in any extent is required.

In straightforward words, the climate of a locale is the normal state of meteorological conditions at any location. When the climate of a place is examined, the point behind it is, about how it influences people over time.

On the other hand, the climate of any area is the condition of the day in terms of temperature, stickiness, precipitation, and wind speed at any given time or day. When the climate of any locale is documented over a long period and considered, that region's climate is shaped. The weather in any area can alter drastically, but the climate in that area takes a long time or decades to change. The components that oversee the climate or climate of any locale are decided by where it is found on the globe. The degrees of scope and longitude within the side

of the equator of the planet decide whether an area is frosty cold or hot press. Closer to the equator implies those parts of the globe are more sultry than those farther absent. Equator now and then should confront temperatures over 127-130º Fahrenheit. Ranges close to the shafts, on the other hand, may see temperatures as low as -128-130º Fahrenheit—the sum of stickiness and precipitation in any given locale changes as a result of the temperature distinction.

Since the ages, we've seen that growth and improvement exercises take put in zones where the temperature is moderate and ideal. That is to say, whether it is farming or industrialization, the climate of any locale incorporates a noteworthy effect on its civilization. The physical components to any extent are impacted by topographical factors.

If is expressed clearly, a region's environment does not finish as it were the most extreme for a venture. In common, it isn't as if it were responsible for the project's success or failure, but too has an effect on the execution of the project as an entire. The environment of an area where a campaign must be started, affects several things. Agreeing to think about distinctive ventures in length, the topographical parameters of an area have an effect on the project's extreme taking a toll, residency, quality, and preparation execution.

To begin with, when it comes to the labor/manpower locked in, in any sector, the temperature in that zone has a noteworthy effect on how that industry works. We have all taken note that when the climate is pleasant, individuals are more profitable. It’s been noticed that at the higher temperature, the efficiency rate diminishes, thus the financial growth falls as compared to a direct temperature. Extraordinary temperatures, such as those over 100°F or underneath 40°F, are never considered unwinding for anybody. When the temperature of a range is between 73°F to 77°F, productivity or slant to achieve errands inside a specific time limit,

increases. Humidity, as well, has a part to play. Working in an extreme sticky environment is never a great thought. An excessively dry environment cannot be considered to be alluring for people. An overabundance of stickiness not as it were decreases proficiency but moreover serves as a breeding ground for an assortment of diseases. Humans considers 35-55% stickiness to be a normal or ideal working environment. In this manner, on the off chance that the workforce's working productivity has to be boosted and to keep the temperature and mugginess around them at a level that's conducive to their job, more money has got to be gone through to give them that atmosphere.

Talking about crude materials, the primary step is to communicate the crude materials to an area where they will be prepared or processed. When it comes to crude materials, the climate of the range has an effect on the transportation of raw materials to the location where the a project has to be started. When the temperature drops below 28°F in the winter, transporting RM gets to be a troublesome assignment. At this temperature, the fuel within the motors solidifies and the anti-freeze solution is provided to the motors. Water used in chemical forms solidifies at freezing temperatures and must be transported to the working location via anti-freeze or protective pipelines. Even though, the temperature interior of the structure can be overseen but the materials that will be utilized must still be emptied from holders and transported to their last area. Chemicals utilized within the chemical industry, some of the times require extra separators or anti-freezing tanks because their liquefying point is lower than the surrounding temperature. On the other hand, when the temperature rises, transportation becomes troublesome. A temperature of more than 104°F is never considered perfect for stacking or unloading chemicals with low flash point. Whereas, while loading or unloading chemicals or solvents with a low flash point from the carrier, the outside temperature is critical. Some compounds, such as petroleum ether, butyl lithium, and

hydrogen peroxide, can detonate when exchanged from one holder to another. As a result, when the temperature is not congruous to their taking care of, extraordinary caution ought to be worked out. At extreme temperatures, any activity including open-air exercises, such as agriculture, construction, or hydroelectric control generation, is challenging to handle.

When it comes to the agriculture industry, Kharif and Rabi crops each have their particular temperature run at which they produce the most. However, when the temperature run in which they develop outperforms the limit, the surrender of those crops dives. In its own way, each trim illustrates ideal efficiency. Every crop performs best in a particular range of temperature, mugginess, and precipitation. When too much of anything is given it results in plant’s system failure, coming about within the plant's death. Not as it had that, but the sort of soil in a given place had a critical effect on the sort of crop that could be developed there. Not all crops flourish in all sorts of soil. Crop choice must be made based on the type of soil. Crops such as wheat, grams, sugarcane, and jute can be grown in zones with loamy soil. Clayey soil helps crops like paddy, lentils, and pulses develop way better. Cactus, melons, and coconuts can all be developed in a sandy soil environment.

Hydropower is a favouring in human lives. It has been a key source of vitality in numerous locales of the world for the past several long times. Hydropower is also being used to create power in many developing and developed countries. Overcoming the rising demand for control whereas lessening the utilization of limited assets to make power has been demonstrated to be a troublesome errand. Besides, when the temperature rises past solidifying, the water alters its frame, making it more troublesome to overcome this obstacle. Ice pieces shaped in the water stored in dams all through the winter, come about in lost productivity or process delays.

For the building sector, mugginess may be an enemy. The metal utilized in construction, rusts as the mugginess in the air, increments. High humidity also raises the chances of steel or electronic gear falling flat in other businesses. Metals have to be more pliable at more noteworthy temperatures than in their natural state, which can contribute to auxiliary distortion. When the temperature drops, in any case, the metals nature shifts from ductility to brittleness. They are prone to breaking and can result in the structure collapse. Construction projects that must be completed in muggy situations must be taken care of with care. They will get to boost their budget in arranging to join materials that will expand the life of materials that are damaged by excessive mugginess. It's been seen that people who build their homes in hot climates usually have double walls to make a vacuum within the walls, which anticipates the cool discuss from ACs from getting away. Similarly, the efficiency rate of cooling towers utilized in industry for cooling reactors is decreased by higher stickiness in addition to high temperatures. The productivity of boilers is decreased when the temperature and humidity is very low. Besides, low temperatures harden braided pipes, making their utilization for fluid fabric transmission more challenging.

Natural calamities are an unavoidable portion of life. Floods, Tsunamis, violent winds, and earthquakes are several cases of natural calamities that will thump out any considerable extent into the clouds in a short moment. Indeed so, the most extreme is done to play down the harm caused by these tragedies. Buildings built in earthquake-prone regions, for example, use ductile materials. When utilized in buildings, pliable fabric permits them to flex or sway instead of collapsing. As a result, in common, development in seismically vulnerable regions is done with steel instead of iron since steel is more bendable than iron. In situations where there could be a high hazard of flooding, such as close coastal areas, 'FLOOD RESISTANT MATERIAL' is employed. Even when exposed to water for an extended period, the fabric

used does not rapidly break down. Marine-grade plywood, foam insulation, and other water-resistant materials are commonly utilized in these regions. As it were on the off chance that these materials are exposed to surge water for more than 72 hours will they be harmed.

This reliance on projects on climate puts a burden on the budget allocated for that venture. It too sometimes causes delays and overruns.

11. CASE STUDIES

The impact of climate on projects that have turned out to be a disaster as a result of the role it played is demonstrated in this section. To accomplish the project on schedule and within the budget, the persons participating in it may neglect the criticality analysis that might be caused by not taking into account the climate or demographics of the area. These examples from the preceding section will demonstrate it in greater detail.

11.1) COLLAPSE OF THE CHAUDI CANACONA BUILDING

1.1 INTRODUCTION

According to Fagbenley (2012), the buildings that are constructed are primarily used for residential, commercial, or storage purposes. Therefore, it is the responsibility of the construction personnel to ensure the safety of all individuals who will be utilizing these buildings for various activities. Despite advancements in technology and increased knowledge in the construction industry, there has been a rising trend in building collapses. Several factors contribute to the stability of a building, including

- the foundation,
- the type of soil it is built on, and
- the construction materials used.

If inferior quality materials are used during construction, the structure may not be able to withstand the load over time, resulting in cracks and eventual failure. Additionally, faulty architectural design or engineering can cause strain or stress on the walls or foundation. It is crucial to consider the suitability of the soil for construction purposes. The height of the foundation pillars depends on the number of floors to be built, ranging from 3 to 9 feet. The strength of a structure is determined by its foundation, which is influenced by the type of soil it is built on.

In the southern region of Goa, there was an ongoing construction project called Chaudi Canacona Building. Bharat Developers and Realtors Private Limited were responsible for overseeing this project. This construction firm has an annual revenue of approximately 5-10 crores. The company was founded by Mr. Pradip Singh Birring and Mr. Jagdeep Kumar Sehgal, with Mr. Sehgal possessing extensive knowledge in European design and Mr. Birring being an expert in Bombay real estate.

The construction contract was given to a coastal builders and engineers company, the director of which was Vishwas Dessai. In Goa, Bharat Developers and Realtors are active in the development of both residential and commercial projects.

Bharat Developers is a company based in India. Ruby Residency was one of their residential projects in the south of Goa, among many that they were managing.

'RUBY RESIDENCY' was erected by Bharat Developers and Realtors in Canacona, South Goa. Phases 1 and 2 of this project resulted in the construction of six structures. It contains six wings, numbered A through G, with 91 flats. In plot D, phase 3 development was underway, and it was named H wing. In Phase 3, 150 apartments had been completed and were ready to be moved into, while 24 were still being built. Canacona Municipal Council granted them the licence for construction of the building.

On January 4, 2014, around 2:30 p.m., while employees were working on the building's construction, the five-story structure collapsed, killing 14 innocent people and injuring many more. Many people in the area and personnel in the building affirmed that there were more than 31 people killed. The count was confirmed by a number of sources in that area as well as staff in the building. The rescue squad, led by the Army of Margao and Bambolim, arrived for the rescue mission.

Fig 1: Rescue team reached the site after collpase

When the rescue crew was asked, they claimed it was difficult to put the scene into words because there was nothing but masses of stones and rubble all over. It was obvious that those buried inside that building would not survive. The project, which was previously envisioned as a success, turned to rubble, killing many people and shattering the dreams of not only the investors, stakeholders, and buyers, but also of the families whose members died in the collapse. The rescue team and others worked for days to clean up the scene.

Fig 2: Canacona building after the collapse

Fig 3 : Crane trying to remove debris from the area

1.2 INVESTIGATION OF COLLAPSE

Following the incident, a team of surveyors and loss assessors was dispatched to investigate the cause of the collapse. Mr. Murlidhar Shenvi was appointed as the leader of this group. On January 9, 2014, he conducted a site visit where he and his team collected soil samples from the area where the building had collapsed. Boreholes were dug at depths of 1m, 1.5m, and 2m, and the soil samples were carefully collected in a bag. Sufficient soil was gathered to conduct important laboratory tests that would provide valuable information about the soil composition.

The mandatory tests performed on the collected samples included

- Moisture test,
- Atterberg limit test,
- Dry density of the soil,
- Compaction test, and
- Specific gravity test.

1.3) IMPORTANCE OF SOIL ANALYSIS

Conducting a thorough soil analysis before commencing a construction project is a crucial step that should never be overlooked. There are several reasons why soil analysis holds significant importance.

• Understanding the bearing capacity, stability, and composition of the land is facilitated by comprehending the soil's characteristics. The foundation design of any construction site is

determined by the type of soil present, and it must be tailored to ensure the structure's stability and safety.

• Different types of soil possess varying expansion and collapsible qualities, as well as different water content capacities. These characteristics can assist engineers in designing the construction of the building to mitigate potential risks.

• If the construction site is located in a hilly region, it is essential to assess the slope angle, potential hazards associated with building on that slope, and other factors such as landslides and slope failures that could impact the safety of the structure.

• Each soil type exhibits unique seismic properties. Therefore, based on the soil analysis, the foundation of the building must be prepared in a manner that can withstand potential seismic activities.

• Soil analysis is essential for determining the appropriate construction techniques and materials to be used. For example, expansive soils require special measures to prevent foundation damage, while highly permeable soils may require additional drainage systems to prevent waterlogging.

• Soil analysis also plays a vital role in assessing the long-term stability and durability of structures. By understanding the soil's properties, engineers can design structures that can withstand the effects of settlement, erosion, and other soil-related issues.

• In the case of the collapsed building mentioned earlier, soil analysis would have helped in identifying any underlying soil-related issues that may have contributed to the collapse. This information can then be used to prevent similar incidents in the future and ensure the safety of other structures in the vicinity.

Overall, soil analysis is a crucial step in any construction or land development project. It provides valuable insights into the soil's characteristics, allowing engineers and designers to

make informed decisions and ensure the safety, stability, and long-term durability of structures.

The various tests performed on soil to analyse its physical and chemical qualities are as follows:

Moisture test-A soil moisture test is an assessment of how much moisture is in the soil. If too much moisture is present, it will need to be removed by letting it dry before foundation work can begin. If the soil is too wet, it will take on the look and feel of mud. This will make it difficult for buildings and foundations to support their weight. Conversely, if the soil is too dry, it will cause the foundation to lose its property. The soil will have loose holes that need to be filled to make it dense enough for a building to support its weight. Too dry soil will not have the ability to fill these voids. Therefore, it is important to evaluate the soil moisture before foundation work so that you can construct a foundation that will last for many years.

Atterberg test-The Atterberg water content test is a test used to measure the essential amount of water in the soil particles. This test is typically used to measure the soil's liquid limit, the shrinkage limit and the plastic limit. If the amount of moisture in the soil continues to rise, the state of the soil will go from solid to semisolid to plastic to liquid.

When the soil is saturated with water, the liquid Limit indicates the point at which the soil's plastic condition transforms into a liquid state.

Similarly, the shrinkage limit specifies the point at which soil's plastic condition transforms into a semi-solid state. When the moisture in the soil is removed further, it transforms from semisolid to solid, and the value of this transformation can be verified by testing the shrinkage limit.

Dry density test- Dry density, the weight of soil in a given volume of sample is determined using a dry density test. The soil can be classified into three types based on the results of a dry density test: dense soil, medium dense soil, and loose soil.

Specific gravity Test- Specific gravity test is used to determine the unit weight of soil to the unit weight to water.

Proctor's Compaction Test- The purpose of Proctor's Compaction Test is to determine whether soil has a tendency to compact when pressured under heavy weight. The voids in the soil are eliminated to ascertain the value of compaction, and then the amount by which it has shrunk in volume is calculated.

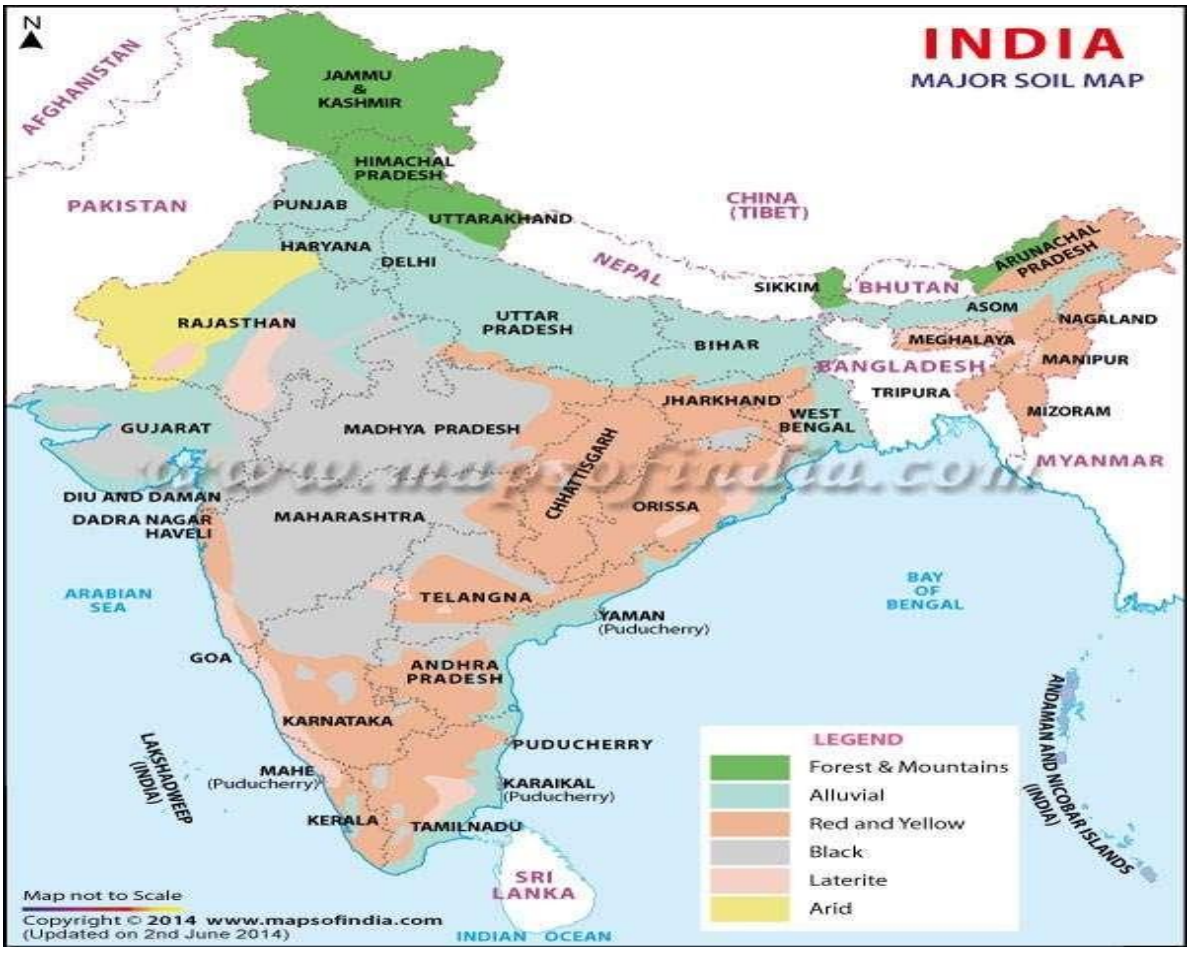
These tests when done help to determine the weight bearing capacity of soil. Physical and chemical composition of soil is also important factors that can be evaluated by doing these tests. Stability of the constructed building depends on the values that can be evaluated by doing soil analysis. The values of soil that is being reported by doing these tests depends on the weather conditions of that area, climatic changes the soil has undergone and the purpose of soil it was deployed for.

1.4 DISCUSSION

According to Murlidhar Shenvi, the work was done on a wet catchman area as well as a reclaimed land. The wet catchman area is the area where practically the entire precipitation or rain water gathering happens. This is a watershed area with a lot of moisture. Similarly, a reclaimed area is an area or portion of land that has been recovered or created by filling or stocking a once-flooded area. In general, land reclamation is accomplished by either

evaporating the water in the area or filling it with rocks. To prevent additional flooding of the land, the mouth of this marshy terrain must first be walled off with dikes. In his report, he also stated that Bharat Builders and Developers failed to study the soil analysis report prior to beginning the project, which ultimately resulted in the building collapsing and the deaths of multiple construction workers.

Laterite soil is the largest part of soil composition in several parts of the district, according to statistics published by the Government of India's Ministry of Water Resources' Central Ground Water Board. Laterite soil has a high porosity and is slightly acidic in nature. Organic materials and elements like calcium and phosphorus are also in short supply. When laterite soil is moist, it becomes soft, but as it dries, the granules harden. Furthermore, due to the weathering that laterite has undergone, its bearing ability is extremely poor. In comparison to weathered rocks, partially weathered rocks are stronger and have a higher carrying capacity. Iron and aluminium oxides are found in laterite soil.



Soil Profile in different regions in INDIA

Because laterite soil contains a considerable proportion of clay, it has a lower load bearing ability. When clay sinks many feet and is put under pressure, it causes an uneven foundation, which eventually leads to the collapse of the structure.

1.5 SOLUTION

Although the soil composition in Goa is insufficient to support large structures, the construction process can be modified depending on the type of foundation required.

1) As previously stated, the bearing capacity of laterite soil is limited, resulting in a shaky foundation. This can be remedied by removing air gaps from the soil pores. These voids can be filled using the compaction procedure.

2) The foundation that must be created must be deep enough to support the weight of the building.
3) Because laterite soil has a high water holding capacity, it is susceptible to moisture variations. Excess water should be removed from the soil by mixing in some gravel.
4) In order to assist stabilise the soil, a steady water table should be maintained in the area. This is crucial because laterite soil is prone to moisture fluctuations, causing the foundation to shift up and down.
5) A raft foundation is typically utilised for laterite soil. When the load bearing capacity of the soil is low, raft foundations are used. The load of the constructed building is distributed over a vast area by using a raft foundation. Before the framework must be constructed, a thick concreate slab reinforced with a strength-giving substance such as steel is carpeted over the entire area. This aids in the support of the structure's walls and columns, resulting in a long-lasting construction.

1.6 CONCLUSION

Not only did ignoring or disregarding one of the most critical factors in the building business, soil analysis resulted in financial losses, but it also costed the lives of numerous construction workers. The significance of geography in an area has been confirmed in the case study above. The importance of soil in the construction sector was explained by Terzaghi and Pack (1977). They made it apparent that the soil bears all of the weight that a construction places on the ground. The foundation has a role to play as well. The overall weight of the building and foundation, however, is finally transferred to the soil. As a result, it is critical to do a soil analysis before to beginning a construction project. If the results are incorrect or the analysis is incomplete, the building has a very high chance of collapsing. Ambrose (2012) emphasised

the importance of conducting a geophysical study of the region that will be used for building development. Soil analysis aids in the discovery of anomalies in the soil, which can be overcome by the right application of concreate, which can extend the life of a structure. Soil testing is the first stage before any construction can begin on a plot of land. Soil testing is required to evaluate the weight bearing capacity of the soil. It aids in determining the pace at which dirt settles when weight is applied to it. If the weight bearing capacity, moisture content, or compression test of the soil does not meet the building project's requirements, then the appropriate soil content modification should be carried out. The foundation that must be laid should be based on the soil results obtained from these testing. All of the aspects that contribute to the project's longevity should be paid attention to, if project has to be completed the same way, the objective it was started with. In addition, this case study has demonstrated that ignoring geography/location/climate has consequences, which were not only paid for by the project's investors, who understood the importance of geography's role, but also by the diverse group of stakeholders.

11.2) SIX FLAG NEW ENGLAND, MASSACHUSETTS.

2.1 INTRODUCTION

The trend of amusement parks is on the rise.

Entertainment parks are comparable to funfairs in that they offer an assortment of attractions. Be that as it may, not at all like the early funfairs and carnivals, entertainment parks are settled in one area and are not versatile. The fetching of building up an entertainment park is considerable. This exciting industry contains a noteworthy number of financial specialists and partners. It includes not as it were the individuals who must contribute to this extent, but moreover, the brains that must come up with unused and unique diversion and experience thoughts that will set it separated from other topic parks. The development of these theme parks is some of the time-worn out bits and pieces. Indeed even though, the park is open to the public, the games, coasters, and slides must be supplanted on a normal premise to keep the park looking new. In order to attract visitors and remain ahead of the competition, the park's administrators must proceed to make fun-filled recreations. A few subject parks have created shopping centres, resorts, and hotels inside their grounds in arrange to pull in visitors.

Data from Statista Research Department:-

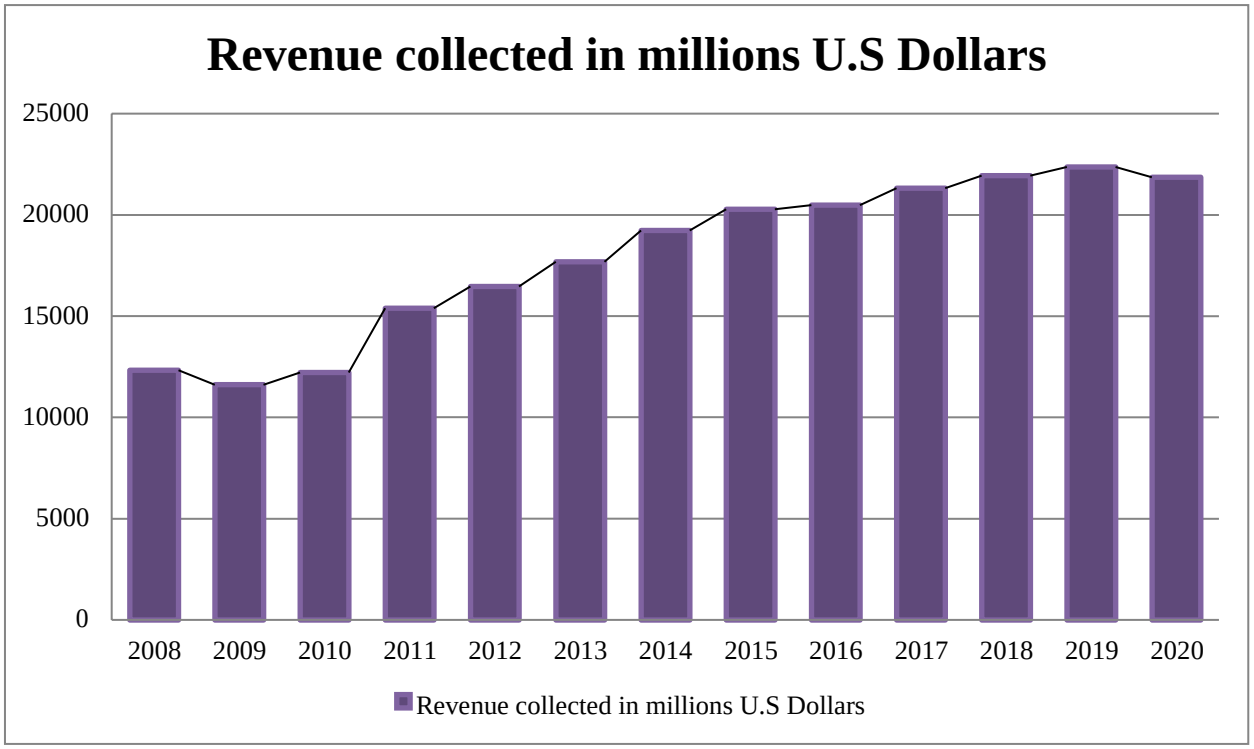


Fig 4: Bar graph of revenue generated in U.S through amusement parks

Agreeing to information from Statista's investigative office, shoppers are getting to be more inquisitive about entertainment parks. Revenue collected from amusement parks within the year 2008 is 12,328 million US dollars and it has risen to 21,866 million US dollars by the year 2020. There is a hop of nearly 44% in 12 a long time. This industry has demonstrated to be advantageous to both the entertainment and government businesses. These parks draw in a huge number of cash for the government. As a result, the companies' speculation in these ventures is well worth the chance.

Traveling to beguilement parks or theme parks transports you to a modern world of fairies, vampires, and castles, permitting you to disregard your everyday pressure and lose hope. The surge of adrenaline you get from riding risky but exciting roller coasters makes a difference you overcoming your fear of heights, twists, and turns. Amusement parks not only bring you

closer to yourself, but they also assist you in bonding with your family and companions. One such entertainment park in the U.S. is the SIX FLAG NEW ENGLAND, found in Agawam, Massachusetts.

2.2 HISTORY OF SIX FLAG NEW ENGLAND, MASSACHUSETTS

Gallup's Forest was the title of the park when it to begin with opened to the open in 1870. It was more of a gathering for individuals. Within the early twentieth century, mechanical rides and a carousel were built at the park. The park's transformation from an outing to an amusement park is credited to Henry J. Perkins, who purchased the arrive in 1911. He made various alterations to the park, not as it were by introducing unused coasters but moreover by supplanting ancient ones with unused and exhilarating ones after many a long time. After the 1929 Wall Street crash, the park was closed from 1931 to 1939. Edward Carroll acquired the then-closed park in 1939. He remodelled the stop and revived it in 1940. Edward created a Riverside Park Speedway in 1948 and presented the stock car, which got to be a Six Flags attraction. Six Flags created the primary water ride in 1979. To compete with other parks, the park's speculators took care of supplanting the more seasoned slides and coasters with unused ones. Premier Park of Oklahoma City bought the stop in 1996 and renamed it The Great Escape. The name, Six Flags New England was set up within the year 2000. Six Flags New England entertainment park encompasses a add up to of 62 attractions, including roller coasters, rides, and a water slide.

2.3 WHEN TO VISIT (ROLE OF CLIMATE/WEATHER)

The city of Agawan is found in Hampden Province, Massachusetts. The Connecticut Stream runs through the city on the east side. On the other side of the waterway lies Six Flags New

England. Agawan is hot and muggy in the summer. Snow and freezing temperatures within the winter, on the other hand, permit Agawans to appreciate all four seasons. The months of May to July, concurring to weather-us, are the hottest months of the year, with normal temperatures extending from 62°F to 84°F. These are the months when Agawan residents can luxuriate in the sun and luxuriate within the warmth of the year. Individuals cherish spending their time in entertainment parks and on energizing rides throughout these months. SIX FLAGS New England is busiest at this time of year. The park is bustling all through these months. SIX FLAGS New England has so numerous energizing exercises and rides that guests spend a great bargain of time interior. This amusement park's expanded foot activity is due not fair to the lodging and eatery, but moreover to the showcase interior. Individuals who visit SIX FLAGS New England as a rule pay an extra $15 for a pass so they do not have to hold up in line. Alternatively, maybe if holding up, they are willing to pay a premium to take part in all of the park's activities. The park staff affirmed that despite the reality that the park is open for 10 hours, it is constantly swarmed. Amid these months, the water slides, roller coasters, showcases, lodging, and eateries are all pressed. Not that individuals come as they were once within the park. Individuals are compelled to return to the park and over because of the thrill and boundless fun. Due of the huge volume of guests, Six Flags has presented the Extreme Pass and Ultimate Pass. These passes permit clients to have as much fun as they need for the whole season. SIX FLAGS New England moreover has parties and LIVE concerts, which help the company, generate more income. Nevertheless, as the year advances and Agawan approaches the final months of the year, the scene changes significantly. From October through March, when Agawan is snow-covered, the temperature reduces to a normal of 19°F from October to March, with the most reduced temperature being 19°F and the most noteworthy being 34°F. Moreover, the sum of sunshine is diminished

throughout the winter months. The normal daylight time decays to 9 hours amid October to January, compared to 15 hours from April to July.

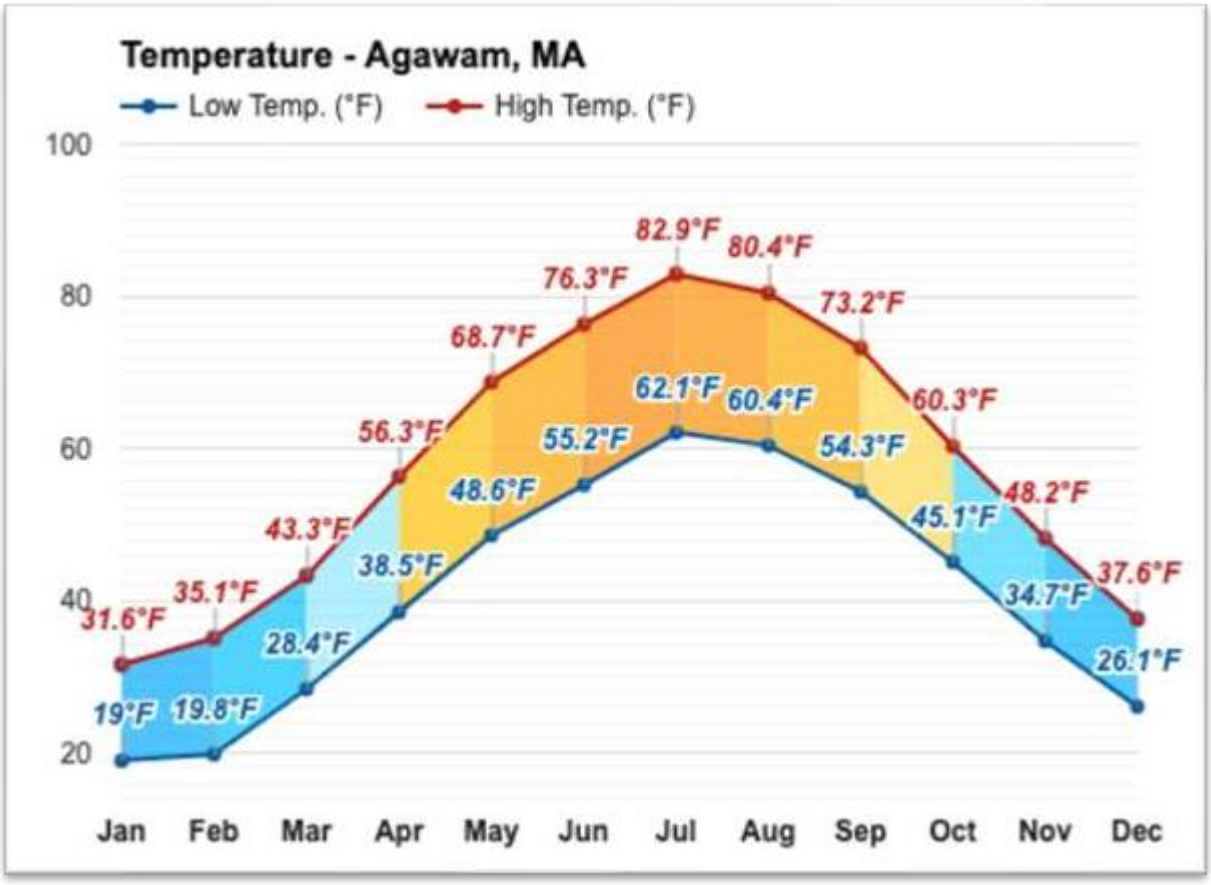


Fig 5:Graph showing average temp in Agawan from Jan to Dec

These chilled winters force the park proprietors to shut for the rest of the year, bringing an end to the excite-filled rides and water park in SIX FLAGS New England

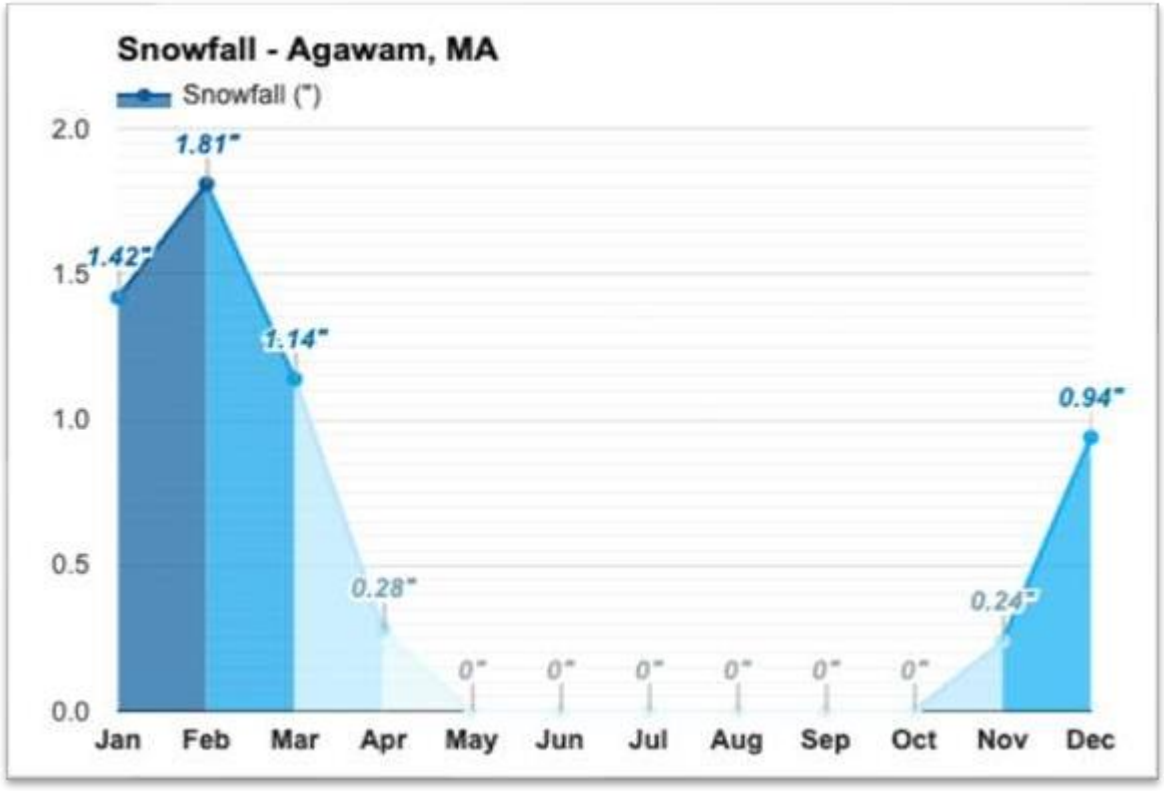


Fig 6:Graph showing average snowfall in Agawan from Jan to Dec

The leading time to visit entertainment parks is when the climate is warm. Numerous, in case not all, entertainment parks near the winter. Agawan is covered in snow during the winter months due to the chilly temperature. The snow-covered Agawan makes it troublesome for inhabitants to get out of their homes and appreciate the exciting rides at SIX Flags New England, particularly between November to March. Expansion to a decline in the number of individuals going to the park, the other reason for the closure of parks is, that the park's administration is responsible for the park's visitors' security. Parks are closed for a variety of reasons all through the winter and snow season. Individuals dependable within the park's support do not need to risk people's lives by overlooking their safety. Keeping this in intellect, they put a halt to the park's exercises and shut it down for the total winter season.

They put a halt to the potential income that may be earned by a small number of people going by the park.

2.4 REASON

During the winter, most amusement parks are close. The number of individuals, who go to entertainment parks, drops as the winter approaches. The decrease in guests can be ascribed to a variety of variables.

1) Individuals are less likely to come out and appreciate the rides due to the cold climate. When the temperature drops underneath freezing point, the water parks and rides are closed. The chilled winds do not let individuals appreciate the excitement of high speed roller coasters and other water rides.

2) When it comes to roller coasters, the excitement of extraordinary speed is misplaced since the speed of the roller coaster diminishes when the temperature drops, expanding contact within the coaster's wheels. Metals' inclination to recoil at low temperatures plays a part in entertainment parks as well. Due to the low temperature, the metal track shrinks marginally, which might cause genuine mishaps on the off chance that they are in utilize.
3) Agawam's solidifying temperatures thicken the oil that is put into the track to diminish friction between the track and the wheels. In addition, indeed, in the event that the coasters are operational, the heat created will be inadequate to warm the track adequately to run the roller coaster easily due to the moo temperature. The issue is not with the oil, but with the water-powered liquid within the brakes, which can lead to mischances.
4) Polyurethane is utilized within the wheels of coaster vehicles to amplify the life of the wheels and to avoid erosion and amplifies the life of the wheels and avoids fast wear and tear.

In any case, at low temperatures, the compound gets to be delicate, causing the wheels to part or smash.

Pic 7: SIX FLAGS NEW ENGLAND IN AGAWAN, MASSACHUSETTS.

5) Rollbacks, in which the roller coaster returns to the most reduced point of the track if it is incapable of clearing the most elevated top of the drop, are included in numerous roller coasters to boost the fervour calculation. Nevertheless, due to expanded contact between the track and the wheels within the winter, numerous rollbacks happen, hence increasing the chance of a mishap.

6) Roller coasters include sensors to prevent accidents when the coaster cautions, the coaster stops. These brakes bring the roller coaster to a stop on the track, anticipating a mishap. In any case, on the off chance that the coaster stops in between at over-the-top statures in cold climates, the chance of ice nibbles increases.

2.5 CONCLUSION

Climate and weather have been playing a fundamental work in the expansion of the viewpoints that have been considered vital by numerous specialists in terms of their impact on a venture. However, for the difference in weather, it can be seen that Six Flags New England has all of the same variables in both the winter and summer seasons. Because of this alteration, all the park exercises are ended. When the climate changes in Agwan, the income era that was booming amid the summer, drops to zero as winter approaches. During the summers, when individuals want to take part in all of the rides and pay more for the pass, indeed at that point the park is all packed, but amid the winters, it is forsaken. Roller coasters, which give thrills in the summer, are considered unsafe in the winter. The climate, the environment, and socioeconomics are all vital angles to consider since they influence delays, costs, income creation, chance components, victory, and disappointment of a project.

11.3) KORAMANAGALA APARTMENT, VS HAL AIRPORT

3.1 INTRODUCTION

On land held by Chalet Inns Restricted, K.Raheja Enterprises created an extended Raheja Vivarea in 8 sections of land of arrival. Raheja Enterprises is one of India's most fruitful construction firms. Mumbai is the base camp for Chalet Lodgings. Mr.Suresh Singarvelu, the M.D. of Chalet Inns, claims property in Bengaluru's Koramangala neighbourhood, Jakkasandra Town. Financial specialists related to the venture contributed around 400 crore within the project. He was building a 17-story loft building with 2 cellars, a ground floor, and 17 over floors. Chalet Inns required a NOC (No Objection Certificate) to construct a private complex on this location since it was beneath Hindustan Flight constraints. On October 28, 2011, Hindustan Aeronautics Limited (HAL) issued the NOC to the Raheja groups. Numerous wings were beneath development at the time, and by September 2012, about 5 wings had completed all 17 stories. Out of 289 pads that were being built beneath this extend, 202 pads were as of now booked. HAL issued a letter to the proprietor on August 16, 2013, over two after the NOC was issued, declaring that the NOC has been repudiated, in this manner cancelling HAL's permit to construct the complex to the stature permitted already. Agreeing to data obtained from indiankanoon.org, Chalet Inns Constrained, the landowner, recorded an appeal against HAL's NOC after accepting the letter. Under the Article 226 and 227, the summons was given to topple HAL's letter of August 16, 2013.

3.2 REASON WHY NOC WAS REQUIRED

Air terminals are isolated into four zones, according to information taken from the official site of India's airplane terminal specialist.

No construction zone- Usually a zone where no development of any kind is allowed. The runway for planes is located in this location. The transitional surface may be a surface that is adjoining on both closes. There is no development zone from the start of the runway to the point where the plane takes off or lands.

Inner Horizontal Surface- Agreeing to the Aircraft Act of 1934, this locale is 4 kilometers all around the ARP (Airport Reference Point). This range features an incline of around 14%. The height of any development in this region should not surpass 45 meters/150 feet over the AMSL (Distance Above Mean Sea Level). That has to say, on the off chance that one has got to develop a building, it must be less than this tallness.

Conical surface- A conical range with a slant of 1/20 is adjoining to the internal level surface. This zone extends from 4 to 20 kilometres from ARP. The extreme height of a building that can be built in this area is 150 meters.

The outer transitional- This surface extends from 20 to 56 kilometres.

For the security of flying operations, it can confine the improvement of buildings near aerodromes beneath section 9A, Central Government Control. It states further that no structures, trees, or plants ought to be put inside a 20-kilometer span of the ARP (Aerodrome Reference Point) that could discourage airship operations. In case when such a development is found, the proprietor will be mindful of deconstructing it or evacuating the tree, as well as paying the pulverization costs.

On January 14th, 2010, the Ministry of Civil Aviation issued a notice showing that all structures that ought to be raised close to air terminals must get a NOC from a government office and a certificate of location height. This site elevation must be affirmed by the local town arranging board. In this situation, BDA is dependable (Bangalore Development Authority).

The security of planes taking off and landing in that region is why ranges close aerodromes are not proposed for high-rise buildings. High-rise structures can imperil both the plane in flight and the individuals who live in those buildings. Tonnage confinements on high-rise buildings, chimneys, and other structures are in this manner keeping the zone secure. Development of high-rise buildings, chimneys, and colossal statues has been precluded close this locale within the future. Butcheries and weeding corridors that are sources of squander nourishment are moreover not built close aerodromes to keep foragers out of the locale, which can be a nuisance to planes taking off and landing. Going absent from the restricted locale of the landing strip, the tallness limits release.

3.3 THE REASON FOR THE CANCELLATION OF THE NOC.

The height of the location in address required to be done by a government office with a confirmed rise certificate. The certification in this situation must be issued by the BBMP (Bruhat Bengaluru Mahanagara Palika) and was affirmed by the Dr. Ambedkar Institute of Technology. Accuracy Surveys Pvt Ltd produced the study report. When the engineer was given authorization to start the extension, they asked for consent to build 25 stories, which would raise the development to 110 meters over the location height. HAL rejected the extension and coordinated with them to resubmit it with a lower tallness constraint of 932 meters over the ocean level. They too told the builders that on the off chance that HAL built

up itself within the future, that the building complex does not meet the tallness criteria within the future, the builder will be capable for demolition of any structure that exceeds the permitted constrain, and the builder will be dependable for the fetched of pulverization of the abundance anticipated structure. Raheja builders then submitted revised papers with 17 floors and an added up to a height of 932 meters [870 meters (height from sea level to site elevation) + 62meters (height of building after completion)] over the sea level, which is permitted by Air terminal Specialist of India.

Whereas the extension was being built, a nearby private organization submitted a letter to Defence Serve A.K Antony, raising the concern that the private complex is being built inside 4 kilometers of the HAL airport's Inward Flat Zone and is within the direct route of planes landing and taking off. This poses a coordinated danger to the people who live within the locale as well as planes taking off and landing.

HAL found that information provided by Raheja Organization when submitting printed material for looking for NOC claims that the rise location where they arranged to construct the private complex is 870 meters over ocean level. Nevertheless, the elevation on the study outline of India that they have with them is 892.33, bringing the whole elevation to 954.33 meters. They encouraged that the office be declared a security peril since HAL is not a respectful runway. HAL, as a one-of-a-kind protection air terminal, locks in exercises such as low endurance flight training, arrangement flying, higher landing speeds, plunge, climb, and turns at exceptionally tall speeds, single motor airplane operations, strategic combat preparation, and so on. HAL moreover plans pilots to arrive in troublesome conditions. HAL too trains pilots how to land in a bad climate, turn off motors, and re-ignite in mid-flight during post-production test flights. HAL needed a re-survey of ground rise done by any

government organization to clear the effect of the private complex in addressing airplane terminal exercises due to such dangerous assignments performed in HAL airports.

Chalet Hotels commissioned an aeronautical analysis from AAI in arrange to guarantee the security of plane operations. On December 30, 2015, individuals of the AAI group, Shri Rajkumar, Shri Container Singh, and Shri L. Mohantay, evaluated the location. Taking after the data obtained from Indian Kanoon, it was found that AAI arranged a nitty gritty report after evaluating the location and cross-checking the information given by Chalet Hotel Constrained. In their evaluation, they found that:

a) Chalet Hotels' private complex is within the Inner horizontal Surface of HAL by an edge of 21.23 meters. Besides, the tallness surpasses the 45-meter tallness constraint.

b) The OLS is additionally entered by the residential complex. OLS stands for Obstacle Limiting Surface. The surface is the locale that must be clear of obstacles in order for planes to function easily.

c) AAI did not yield a report on impeded air ship execution since it was exterior of their zone of work.

d) Procedures for Air Navigation Services - Air ship operations were not imperilled by the private complex's stature (954.41 meters).

e) The height of the residential complex will have no impact on CNS equipment.

f) The airplane administrator must guarantee that the proprietor or builder of the private complex has completed the stamping and lighting on the structure.

HAL said that the ponder was inadmissible since it was fragmented owing to a need of information tending to the report's corrupted airplane execution. As a result, HAL

recommended that the extended structure built by the proprietor ought to be annihilated since it would imperil airplane operations and the residents of the property in address. HAL too highlighted the reality that HAL infers unsafe aviation operation, in this manner security tolerances from deterrents to the ground ought to be considered. Height limitations ought to without a doubt be enforced with the contemplations of HAL operations in intellect.

HAL wanted the enlarged structure disassembled since it was a one-of-a-kind air terminal. Concurring with the court's judgment, Chalet Hotel Limited ought to resurvey the location, and in case the structure is decided to be over the passable restrain the proprietor of the private complex must annihilate the broadened structure for security reasons. The court's ruling was followed by the building's proprietor, who had the location height resurveyed by the Karnataka State Farther Detecting Application Middle. After that, the site elevation was found to be 892.33, or maybe 870, as stated by the landowner. Because of its area inside the HAL aerodrome's Internal Flat Surface, the height confinement was complied with, restricting the stature to 932 meters instead of 952 meters. The landowner arranged to disassemble the structure which was regarded as a danger to airship operations due to security concerns.

3.4 CONCLUSION

It is incomprehensible to demonstrate at what stature somebody can purchase a house at, without knowing the area of the staying since it is troublesome to tell the location elevation of that locale, the permissible height of the building, and the deterrent surface where the building is. It is critical to urge the location elevation assessed by the Airplane terminal Specialist of India sometime recently beginning construction or indeed obtaining arrival. As it were after getting the values of these buildings one can decide whether or not to construct a

house in that region, as well as what height is acceptable in that location. The Airport Specialist of India site gives an essential idea of location rise. In common, a NOC is essential at whatever point anyone wishes to build a building within 20 kilometres of the airport owing to Visual Flight Rules and up to 56 kilometres due to Instrument Flight Rules.

In this illustration, area, which was never considered a fundamental component by any analyst in anticipating the result of an extent, played a basic part. The Raheja Viverea complex's position inside HAL's Internal Level Surface has fetched speculators a critical sum of cash and has caused the project's completion to be deferred (in this case completion of the Raheja Viverea private complex). He had to spend lavishly since the area he chose, was near to the airplane terminal and inside the Inward Horizontal surface. He had to disassemble the pads he had as of now built earlier to receive the NOC disavowal take note. The sole reason was because of the Area. As a result, it can clearly understood that area is basic in each venture and should never be ignored.

11.4) RICE MILL, ANGARH.

In Uttar Pradesh, Mr Dinesh Chand (genuine title) ran a rice mill. He had been running this rice mill for the past 22 years when he gotten a take note from the territorial office of the Uttar Pradesh Contamination Control Board to shut it down on April 22, 2010. Encourage examination uncovered that Mr Dinesh Chand had gotten a caution from the Civil Committee prior on 10th October 2003 to shut his process and migrate to another area since the mill was built up in a private neighbourhood. Guarding himself, the mill's proprietor expressed that he gotten a permit for his rice process from the Authorizing Specialist on January 10, 1990, beneath the Rice Processing Businesses Control Act, 1958. He was an approved manufacturer-trader of rice and paddy beneath a permit from U.P. Krishi Utpadan Mandi Adhniyam in 1964. Upon addressing, he demonstrated that he was running his mill in understanding with all of the contamination board's guidelines and prerequisites, which he had built/renovated his process with these measures in intellect. He has never had any issues with contamination made by his process within the encompassing zone. He employments a 15 HP electric engine for his process, which is additionally compliant with contamination control board measures. An inhabitant dwelling in that neighbourhood, raised the concern that his processes are causing contamination that's affecting the individuals living in that private zone. Taking after that, Mr. Pankaj Yadav, an assistant engineer with the Environment and U.P. Contamination Control Board, did an overview. When Mr Pankaj overviewed the process and the encompassing zone, he found that the mill is located in a private region and produces 2.5 metric tons of rice and paddy each day. The manufacturing plant has been dynamic in rice dehulling and refining to attain this level of execution. Furthermore, the mill's power engine was 20 HP instead of 15 HP, as expressed by the mill's proprietor. In expansion to these operations, the process proprietor has raised a 20 KVA

diesel producing set as a crisis reinforcement. Introducing all of these machines in a private area has caused a slew of issues for the people who live there. The mill's clamour and discuss contamination have been harming people's wellbeing, inciting them to file a complaint with the process proprietor, asking that he near the process in that area and move to the mechanical zone assigned for mechanical movement. To this, the proprietor was exceptionally hesitant to move his 22 a long time ancient area and offered in court against the orders.

4.2 REASON FOR RELOCATION

There are three wide categories into which businesses are classified-:

Essential industry.

Auxiliary industry.

Tertiary industry.

2.1 Essential Industry

When it comes to the essential industry, it is more broad in under developed or developing nations. Due to a need of technological advancement, numerous nations depend intensely on essential businesses to back their economies. These businesses require more individuals than the other two sorts of industry. Angling, horticulture, craftsmanship, and animals raising are fair many illustrations of occupations that have a place into this region of primary industry. Farming and craftsmanship are the most sources of financial development in India, which is still a creating nation. Animals cultivation has been the central source of pay in Africa. In

common, they are the source of crude materials for auxiliary and tertiary businesses. These businesses do not lock in in heavy machinery-intensive operations. In spite of the fact that new technology is used these days, the conventional strategy of getting the ultimate product is still utilized within the larger part of the nations.

2.2 SECONDARY/AUXILIARY INDUSTRY

Essential industry's conclusion yield serves as crude raw material for auxiliary industry. Fabric fabricating and development are ordinarily classified as auxiliary businesses. Auxiliary industry conclusion item fabricating necessitates the utilize of apparatus and gear. The lion's share of auxiliary industry operations generate squander and posture a risk to the environment. The sort of machinery utilized, whether overwhelming or light is decided by the finished product and the process that need to be followed to get the finished item. In agribusiness, for case, crops must be cleaned and refined before they can be sold. This requires the machines of innovation competent of cleaning crops and cleaning seeds. The machines required for these occupations are light machines, which have a lower natural affect than large machines. Overwhelming apparatus is utilised within the development and fabricating businesses. These heavy-duty machines create a huge sum of waste, contaminating the environment, soil, and water. They are seen as a fiendish that comes with the advancements.

2.3 TERTIARY INDUSTRY

Tertiary businesses are mindful for expanding the effectiveness of both of the going before businesses. This category requires insights, competence, capacities, and knowledge. The tertiary industry is additionally capable for maintaining the dynamics of all three businesses. The development of vitality from essential to secondary to tertiary is basic for advance and

improvement. The tertiary industry is in-charge of keeping up the stream. Tertiary industry administrations incorporate flag transmission through adherent, quick message transmission, virtual gatherings, healthcare industry, skyscrapers that people are pleased of. Presently considering the case of Mr Dinesh Chand's rice process, that mill was found in private zone and was included in refining and cleaning of rice and paddy seeds. This included machineries, generators for reinforcement control, and a high horsepower motor. The sum of rice and paddy yield in which he was included falls beneath secondary industry. Mr. Dinesh confirmed that he possessed a paddy field which he includes a few other paddy generators who send him paddy and rice for last husking of paddy grains and rice cleaning. He had to introduce a dehusker and a high HP engine to boost his proficiency due to the huge volume of paddy he receives for washing. At first, the enterprise was not very fruitful, but because it developed, he needed to introduce a few machines to speed up his handle of cleaning and polishing rice and paddy grains. Dinesh had modest silos for putting away tarnished paddy that he gotten from neighbouring areas. This paddy is in this way handled for cleansing purposes. The cleaning he had to conduct was tired an open setting. He utilized an ancient strategy of gravity separation to partitioned light particles from overwhelming rice grains. He as it were required some labourers to do the work. Destoning was done fair in that area after the lighter particles were expelled. The dehusking machine was fueled by a 20 HP motor in his process. A little husk separator built there isolated the paddy from the grains after it was dehusked. At last, the grains were sent to another section of his mill for brightening and polishing.

4.3 POLLUTION CAUSED BY VARIOUS PRACTISIS OF RICE MILL

1) Dust was the main source of contamination in adjoining ranges amid the purging of paddy from gunny packs. The stench from the gunny sacks of gigantic sums of paddy made the put dreadful. Fine clean from the movement of paddy grains from silos to cleaning sites was the most source of aggravation for neighbours' eyes.

2) Mr. Dinesh placed an expansive blower in his mill to partition the light particles from the overwhelming rice grains. When these light particles were isolated, they were put away in piles in his mill. The zone where the husk loads were kept was uncovered. When the air velocity was higher than normal, these husk particles would blow away to encompassing places, becoming a considerable source of contamination for the residents of that private region. When addressed by one of the residents, she concurred that on blustery days, husk utilized to be all over their house, causing a mess. Numerous people had lung issues because of the dust and rice husk that was flying all over that range. Pretence Sunder Lal, a inhabitant, lives nearly 700 meters and Chander Upadaya, who lived over 1km away from Mr Dinesh's mill, were weak acute bronchitis as a result of the dust blown absent by the mill’s handling.

3) The generator in his rice factory was not only a tremendous source of clamour contamination, but it moreover delivered harmful chemicals such as carbon monoxide. An overview conducted in that area's healing centre and dispensary yielded surprising results. According to the overview, 77 percent of patients in that range had breathing issues because of fine tidy contamination made by the mill. Eye redness and conjunctivitis are prominent eye issues that inhabitants of that range confront.

All of the problems caused by the rice process compelled the inhabitants of the locale to talk out against the process proprietor, requesting that he near the plant and move to the

mechanical division. Spreading the disease of any malady is culpable by detainment beneath areas 269 of the IPC and 278 of the Indian Corrective Code. In addition, concurring to the Environment Protecting Act and the Noise Contamination (Control and Regulation) Rules, 2000, the level of noise in any place ought to not be higher than the area's surrounding ambient air quality. On the off chance that anybody is found to be blameworthy for causing these issues, they will confront criminal charges beneath the Indian Penal Code.

CONCLUSION

The awful impacts on the wellbeing of local people living close the mill were a major stress, in this way the mill's proprietor was not allowed to function the plant in a residential neighbourhood, driving him to shut the mill and migrate to the industrial zone designated. The apparatus, gear, and dry husk display in rice mills pose significant security dangers, not as it were to the industry but also to nearby houses. Carelessness in keeping up security measures and lacking capacity hones can lead to accidents and fires, imperilling both property and human lives. To guarantee the security of all stakeholders, strict adherence to security conventions, standard hardware upkeep, and legitimate capacity hones are basic. Keeping this in intellect, any frame of industry ought to be at slightest 5 kilometres absent from the edge of a private zone. Small-scale businesses that do not represent a natural hazard are allowed in private neighbourhoods. Weaving, painstaking work, little ventures requiring yarn turning, and other exercises that do not require the utilize of generators or heavy machinery and don't radiate squander into the environment can be carried out at a residential range.

As a result, it can be concluded that the mill's arrangement was basic in this situation.

Overlooking the location and finding the rice process and carrying out the operations in a residential neighbourhood was unsatisfactory, so the mill's proprietor was constrained to pay the cost and he had to migrate his long-running mill to a new area.

11.5) MOTIVA HARBOUR ARTHUR REFINERY, TEXAS

Said, an oil refinery is a mechanical structure that distils crude oil at high temperatures and refines it into distinctive valuable divisions such as melted petroleum gas, gasoline, asphalt, heating oil, greases and other products. Crude oil is put away in oil depots some time recently being refined in refineries. The use of unrefined oil has expanded amid the final few decades. From its utilization in lubrication and illumination to its development, rough oil has moreover played a critical part in the car industry. Already, the sole product determined from unrefined oil was lamp fuel, which was utilized for lighting. When oil refining was presented into the picture, the need for crude oil skyrocketed. The English saying 'Necessity is the mother of invention' applies superbly here. The request for fuel for the car industry drove the establishment of the first oil refinery in Romania during the nineteenth century, where a long chain of hydrocarbons in unrefined oil may well be broken down into little divisions that could at that point be utilized for different purposes. Since at that point, increasingly complex forms for getting more refined oil have been developed. When oil refining was to begin with introduced, a rudimentary method of breaking was utilized in which a long chain of hydrocarbons was broken down into littler fractions, resulting in the generation of kerosene oil with the utilize of sulfuric corrosive. When the process got to be more advanced, the splitting of unrefined oil created petrol, petrochemicals, and diesel fuel all of which were employed in the car industry.

11.5 (a) OVERVIEW OF MOTIVA PORT ARTHUR REFINERY.

There are around 800 oil refineries worldwide that utilise various methods to distil out the appropriate end product based on demand. The United States leads the list in terms of the number of refineries. In 1862, Sameul M. Kier controlled the first oil refinery in the United States. Since then, more than 100 oil refineries have been built in the United States, with Motiva Port Arthur being the largest, capable of refining 630,000 barrels of oil per day. Motiva's refinery is in Texas, Jefferson County. It is covering almost 1400 acres of land. Establishment of Motiva started in 1902 and operational in 1903, the refinery was purchased by Saudi Refining Inc. in 1989. Motiva refinery expansion and improvements since then have allowed it to refine crude inputs from a variety of sources. It refines crude oil that is heavy, acidic, or sour. Motiva refines and distributes a large volume of petrol, diesel and aviation fuel to the market. In addition to petrochemicals, it also offers feedstock such as benzene and toluene solvents, which are utilised in the plastic and fibre industries. Another product that Motiva Port Arthur refinery produces is asphalt, which is commonly used in road carpeting. Lubricant oils are used to minimise friction in machinery and in the manufacturing of engine oils are also one of the widely used products that Motiva manufactures. Motiva Port Arthur Refinery has all of the necessary high-tech equipment to suit the industry's demands.

11.5 (b) REFINING OF CRUDE OIL

To achieve high level of product quality, Motiva Port Arthur Refinery goes through a complex sequence of processes to produce refined oil that meets market specifications. When oil needs to be processed or refined into a final product, it passes through the following stages:

a) Distillation- Each fluid contains a temperature extend at which when it is warmed up, it changes it shape i.e. changes from fluid to vapour state. Refining is such technique that includes warming a fluid to very high temperature in order to vaporize it and get the immaculate frame of distillate. In refineries, rough oil, which is made up of an assortment of complex other items, is warmed in a reactor that is associated to a column with a lower temperature utility running interior it to condense the oil vapours into fluid frame. When the temperature of crude oil rises, liquids with lower bubbling temperature vaporize and rise to the column. The lower temperature utility running within the column condenses them, and the distillate is at that point collected independently. This set of item collections proceeds at different temperatures based on their bubbling temperature. At different temperatures, petrol, jet fuel and diesel is collected during distillation.

b) Conversion- After refining, a more progressed and complicated process such as catalytic breaking is carried out. Employing a catalyst, overwhelming hydrocarbons are broken down and changed over into more valuable compounds. Amid change, less profitable divisions gotten amid refining are blended to create high-value items such as gasoline, which is at that point utilized in computerization as a profoundly esteemed item nowadays.

c) Treating- Since of the pollution produced by petrol and other items, quality has to be the essential limitation as their usage expanded. The most source of contamination caused due to automation is Sulfur. To diminish the sulfur substance, the by-products are refined and changed to evacuate the sulfur display. To accomplish the goal, forms such as hydro treating is performed.

d) Blending- Mixing could be a procedure used in oil refineries to combine different items to urge the required product review. This is done essentially to improve the quality of petrol or

diesel. At that point the ultimate item is put away in expansive tanks until it is exchanged to their particular area.

e) Storage/Transportation- Once unrefined oil has been refined and changed into wrapped up goods, it must be stored in expansive capacity tanks known as fuel tanks before it is being conveyed to its last goal for utilization. Fuel is then transported by means of pipelines or large vehicles or tankers, which pass on the ultimate item to the aiming location.

11.5 (c)OIL REFINIERIES CLIMATE AND LOCATION

Before venturing into the market, each company must consider certain characteristics. So also, setting up an oil refinery requires broad investigate to decide the circumstances that will permit it to flourish.

A few of the characteristics that speculators or business visionaries consider whereas setting up an oil refinery are:

• **Oil source vicinity**-:

Before beginning any firm, the primary thing that anybody would see into is the simple accessibility of its key crude fabric. The essential crude material in this circumstance is unrefined oil. As a result, before establishing an oil refinery, consider its vicinity to an unrefined oil source. This has many points of interest for the firm proprietors since being near to the source of oil will help the refinery proprietors lower the cost of transporting oil from the drilling location to the most spot where oil is refined. Another advantage is lower stocking costs. In the event that the source is near to the refining office, the fetched of holding stock will be lower since the enterprise will not need to store abundance oil as a reinforcement.

• **Framework accessibility**-:

Any firm, big or small, requires a place/location to conduct its operations. Building an oil refinery requires the establishment of reactors, channels, and satisfactory streets. Henceforth, before establishing, one must ensure that all of these things are promptly accessible at the location of development, or they must endure the extra fetched of transporting all of the essential materials to the location of establishment.

• **Water availability**-:

Water is required for all processes in an oil refinery, from unrefined oil refining to washing to dispense with contaminants. To guarantee that everything runs easily, the oil refinery ought to be close to a water source. Straightforward availability of water makes transporting this expansive sum of water to the area decently basic, and so the cost reserve funds seem contribute to the benefits.

• **Climate or Weather**-:

Each industrial process must be performed at a specific temperature. In other words, every industrial operation requires an environment conducive to temperature or climate conditions. On the off chance that certain conditions are not met, the responses within the reactors may be hampered. When it comes to oil refineries, mild temperature is ordinarily useful for their responses and gear to run well. Unreasonably tall or low temperatures can cause pumps, engines, and other hardware to fall flat. It can too cause reactor erosion and make channels, valves, and other stainless steel or metallic gear delicate and inclined to wear and strain. Besides, each chemical has an ideal temperature at which it is slightest perilous. In the event that the temperature climbs over that point, an blast may happen, whereas a drop in temperature may result in the chemical solidifying. Temperature changes can too influence

the chemical characteristics of the solvents and other compounds utilized in oil refineries. In both cases, the responses ended up troublesome to oversee and may posture a safety issue. As a result, the larger part of refineries are located in zones with a direct climate. Something else, the refinery owners must bear the extra cooling or heating costs, which would include to the extra speculation within the firm.

11.5 (d)TEXAS POWER CRISIS

When the temperature drops below freezing point, the action of oil refineries is hampered. Working conditions at crude oil penetrating destinations deteriorate rapidly. Since crude oil is extricated from underneath the soil, boring is required. When it snows, the require for extra boring machines becomes apparent. Moreover, penetrating within the snow makes the work about as troublesome as it does in standard conditions. When it comes to refineries, there are a few pieces of equipment that don't work legitimately when the temperature drops. Boilers are not able to create sufficient steam to run the refineries at full capacity. The steam generators require more water, but water accessibility diminishes due to the cold temperatures. Amid the snow season, transportation of oil from penetrating locales to refineries or other raw materials to refineries gets to be troublesome. Transportation delays cause operations at boring destinations and refineries to be delayed.

Comparative conditions and results were recorded in Texas in February 2021. A winter storm struck about 251 provinces in Texas and numerous other areas in February 2021. During this time, the temperature in Texas fell to a single-digit record low. In state, a minimum temperature of -2ºF was recorded. The frigid temperature, which come to a record low, made life troublesome for individuals in Texas. The most cause of this low temperature was a winter storm actuated by negative cold motions. There is a back-and-forth movement of

weight made by the atmosphere between the artic and mid-latitudes within the north Pacific and north Atlantic in negative cold motions. Another reason was the Polar Vortex. Polar vortices form in low-pressure zones. People in Texas experienced a vitality emergency in February 2021 since of critical snowfall. On February 10th, the storm began to move towards Texas. The high-speed wind brought with it overwhelming precipitation due to which activity was influenced, and the common individuals were incapable to get basic administrations and commodities. Fuel prices and demand both rose as request for private warming increased. On the opposite, as request taken off, various oil refineries, outstandingly Motiva Harbour Arthur, closed down their operations. As vitality and fuel supplies dwindled, millions of Texans were cleared out within the dark for days. Winter days and evenings were cruel for the poor residents of Texas who lived in inadequately protected residences. The need to warm their homes increased demand. This winter had claimed the lives of 21 individuals by February 17th. By the 21st of February, the passing toll had risen to 70. Not as it were, the vitality and fuel was in scarce but in addition, the water supply had to be exchanged off, since the water had frozen within the pipelines used to transport it to the suitable position. In expansion, due to the solidifying of water in pipelines, the pipeline bringing water to residences detonated. It also caused a disturbance within the stream of characteristic gas and other fills through channels. It has been detailed that the citizens of Texas were educating to expend, as it were bubbled water.

In expansion to this, the other results of extraordinary climate were car mishaps, hypothermia, house fires, and CO harming, coming about in 246 deaths and a $130 billion financial harm. The cause of all of these disasters was the closure of refineries, the public's as it were supply of fuel and power. Closing down refineries caused all of these essentials to vanish from the market, coming about in fatalities and other consequences.

There are different reasons why the refineries have to shut down their plants.

Availability of water- Water is required by businesses for a variety of capacities in plant operations, either specifically or indirectly. Some of the times the water used in the method or from any other source returns with small or no debasement in quality. This water can be reused a number of times to diminish water consumption. However, there are times when the water utilised within the process does not come out, cannot be reused since it is devoured in the process, or vanishes owing to quality debasement. That amount is alluded to as net water utilization. Concurring to Ellis M., Dillich S, Margolis N, 1.0-1.9 gallons of water is required to refine 1 gallon of unrefined oil. In common, water is required within the refining, splitting, light coking, and heavy coking forms of crude oil. When washing oil with a caustic or corrosive arrangement to remove washable or water-soluble contaminants, a few water is used. It contains a number of contaminants in crude oil that can harm reactors within the long term. To secure the reactors from this type of erosion, oil is water washed at a specific temperature before going through any kind of refining or reprocessing. Aside from that, water is used in cooling towers in oil refineries. Cooling towers are massive structures outlined to preserve the circulating water within the framework at low temperatures.

A massive sum of water is pumped to disseminate the warmth that the water absorbs from the framework. Water is additionally utilized in utilities fuelled by condensers in oil refineries. Water or brine is cycled in condensers to condense the high-temperature vapours emanating from the reactor and then collected. Amid crude oil refining, a vacuum is connected in the reactors to form a low weight, permitting oil to vaporize at a lower temperature than its typical bubbling point. Vacuum pumps are utilized to form low pressure. To make the hoover, water is pushed by these pumps. These pumps and cooling towers request an expansive volume of water. Therefore, it can be said that most extreme sum of water in

refineries are utilized in cooling towers and in chillers or condensers. In addition to this, water is also used in boilers in refineries and other businesses, where it is utilized to produce steam. Moreover, water is used for drinking, sanitary purposes, and cleaning.

Oil refineries require a huge sum of water for their operations, which must be brought to the facility by means of long pipes. Similarly, completed items such as petroleum, petrol, jet fuel and diesel fuel are transported to their final destination via pipeline. Amid the 2021 February storm there was a noteworthy disturbance in the availability of water, which would undoubtedly cause refinery owners to suspend industry exercises. As already expressed, the pipelines conveying the water froze in February 2021, making the conditions troublesome for refinery proprietors to pursue the job.

Due to a need of water, boilers were closed down, coming about in a need of steam for heating purposes within the refinery. Additionally, cooling towers were not functioning due to a need of water. Motiva seem not total the in-process water washing before moving on to the ultimate refinement stage.

Motiva also suffered major equipment damage because of the low conditions. The reactors, discharge lines, and vents all have a number of valves. Due to the frigidity of the environment, they all jammed. Because of the rapid drop in temperature, lubricated valves and other machinery parts experienced issues. Texas was experiencing a power outage.

Motiva also suspended its operations for safety reasons since, during distillation, as liquids rose to the column and then separated after condensation at low temperature, there was a considerable risk of freezing owing to the low temperature, resulting in plant failure. The rapid shutdown of the refinery resulted in the release of carcinogenic chemicals such as

benzene and other poisonous gases into the atmosphere, which was far greater than the Environment Agency's permitted discharge.

11.5 (e)PLANNING FOR WINTERS

Motiva Port Arthur Refinery had to face not only financial losses, but also other harms, because of the refinery's closure or suspension of all operations. Due to the low temperatures, the pipelines ruptured, valves became clogged, and motor pumps and their glands showed malfunctioning. All of them were supposed to be fixed so that the refinery could restart operations. The cleaning process also consumed both time and money. They also had to pay the fines incurred as a result of the gases discharged into the atmosphere as a result of an abrupt halt in activities. All of the problems and penalties that Motiva Refinery had to deal with caused them to consider worst-case scenarios in the future and prepare for them. The oil refineries geared themselves for the worst due to the unexpected drop in temperature. Since then, refineries have undertaken significant adjustments to avoid future disasters like these. After confronting so many challenges that resulted in the refinery being shut down and the firm incurring losses, Motiva was compelled to implement several steps for the future-Motiva devised multiple contingency plans to deal with such weather-related issues in the future. They discussed how they would handle the energy system, power outages, and other water scarcity challenges. Motiva also investigated matters that may assist them in planning a risk management system, so they can have all of the vulnerable operations that are influenced by severe weather conditions and the strategies to mitigate those risks.

Motiva upgraded its plant after the 2021 weather event by installing a power generator backup and also introduced upgraded steam generation system. Better line insulation was also introduced, which can withstand a low minimum temperature and delay the freezing of

liquids moving through pipes. Motiva has also boosted its inventory of water and other raw materials used in the production of energy.

11.5 (f)CONCLUSION

The impact of the winter storm on Motiva Port Arthur and many other refineries in Texas led us to the conclusion that weather is extremely important in any industrial sector. The Motiva Port Arthur refinery in Texas was forced to close due to weather conditions in February 2021. Because refineries are the primary source of all the fuels required for nearly everything, a stop in refinery operations resulted in a fuel scarcity in the market. During that period, the price increased. Not only that, but the refinery's short closure caused a slew of other problems, including the deaths of Texans who were forced to live in chilly temperatures without suitable heating systems in their homes. Natural gas, petrol and petrol prices all skyrocketed. It had a disastrous impact on the market.

Severe weather conditions exposed refineries' vulnerability at the time. The refinery was forced to close due to a lack of fuel and energy. This prompted stakeholders to devise a more robust method of combating these types of circumstances, in which the system can collapse like a house of cards. One of the key subjects of discussion was the infrastructure required to combat such extreme weather.

The Motiva refinery is a vital source of economic development in the United States. Closure of operations during winter storms not only impacted the US economy but also brought to light the need for refineries to have a structure that can withstand the elements of harsh weather conditions. After that, Motiva went a step further by installing an additional power

generator and adding additional insulation to pipelines to combat the negative temperature, which was one of the reasons why the gasoline was not being carried, as well as the water and other liquid that froze in the pipelines.

As a result, it can be concluded that weather not only affected the operation of oil refineries, but also the fuel price, demand, and supply chain in the United States. To counteract the influence of weather or climate, the industry had to incur additional costs that were not anticipated at the time the refinery was designed.

12)SURVEY METHOD

According to Check & Schutt, 2012 survey is “the collection of information from a sample of individuals through their responses to question”. Several lecturers have chosen the survey approach to amass primary information for his or her topics of interest, as it is not merely the quicker however conjointly more cost effective than other ways. Moreover, the information gathered can be easily apprehended. Obtaining information quickly and pronto doesn’t mean that this technology does not need any thought, effort or time. To develop a survey, to make query for any survey, a great deal of labour and intellection is needed. Henceforth, form methodology has been used to gather data from folks since it offers various benefits over different ways. Building a form is undeniably a long task. However, it has each, advantages and disadvantages causation the survey by phone or web avoids the prices postage, paper and printing that area unit related to ancient surveys. This can be the fastest approach to conduct analysis within the age of web as a result, of this you will be able to reach as several people as you wish in a second. Moreover, by following this survey methodology, namelessness can be maintained. In this study, a survey strategy was used that targeted folks to elicit data, which will facilitate to know additional concerning people’s views on the variables that they think are relevantly crucial to project’s success.

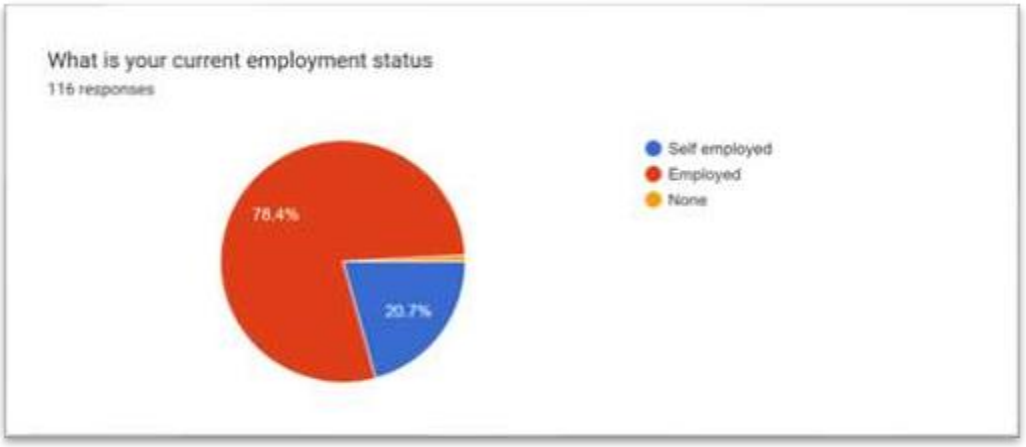
To achieve the foremost responses, a quick close-ended form that does not subject respondents to the form taking fatigue that they often expertise whereas filling out prolonged open-ended responses. In order to clarify to the participants why analysis, filling and their feedback is important, proper conference call was made. In the form, solely twenty-four queries are enclosed, furthermore as general data concerning the answers like their name, age gender, highest qualifications, and so on. Following the generic queries, their skilled details, as the business they add or the amount of comes they have managed has been inquired. This

data motor-assisted in analysing the respondent's psyche while evaluating their responses. Their names have not been disclosed in the survey results, as they wished to be discreet concerning their identities. The poll enclosed a form within which participants were asked to pick out 5 variables out of 10 that they believe are crucial for any project and have a major influence in its productive completion.

In this study, a survey strategy has been employed that targeted people to elicit information that can help to understand more about people's perspectives on the variables that they regard to be crucial to project success.

1) EMPLOYMENT STATUS

Everyone is involved in projects in their own way. When asked about their employment status, 99.1% of the occupations were done professionally, with the remaining dealing with day-to-day obligations. Out of 99.1% of working respondents, 78.4% of respondents were employed by an organisation, whereas 20.7% ran their own enterprises.

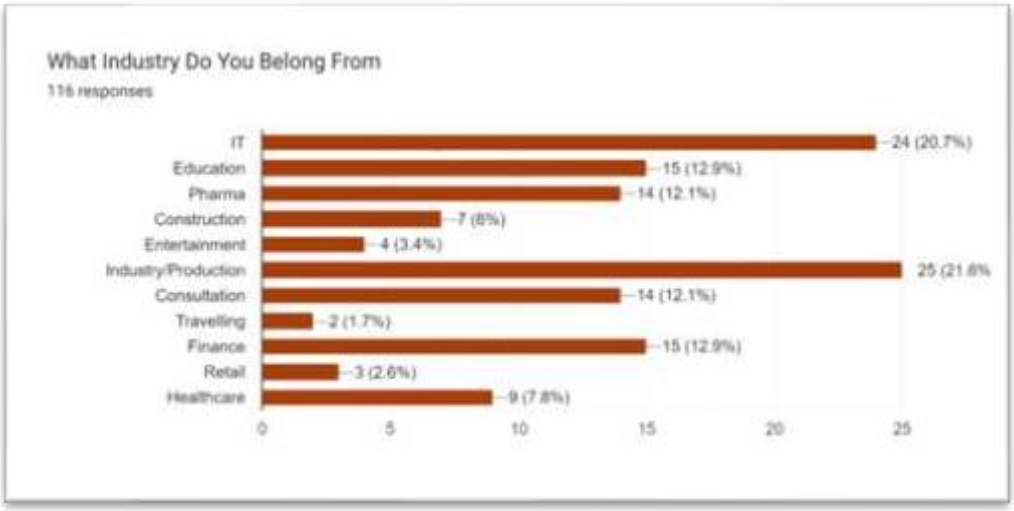


Employment status of respondents

Everyone contributes to the success of his or her project by meeting the deadline and delivering a satisfactory output that fulfils the receiver's expectations. Meeting the customer's demands not solely confirms that what was done was correct, but it also helps to minimise post-sales disputes, which can cause the organisation not only to lose the customer's loyalty while also increasing the cost of the project.

2) INDUSTRY TYPE

To have a stronger understanding of the kinds of projects handled by these participants, a question about the industry in which they work was posed. Understanding the perspectives of participants while answering the questions is aided by understanding the sort of industry. It is also beneficial to understand how they approach each component and what function they believe is critical in their line of labor.



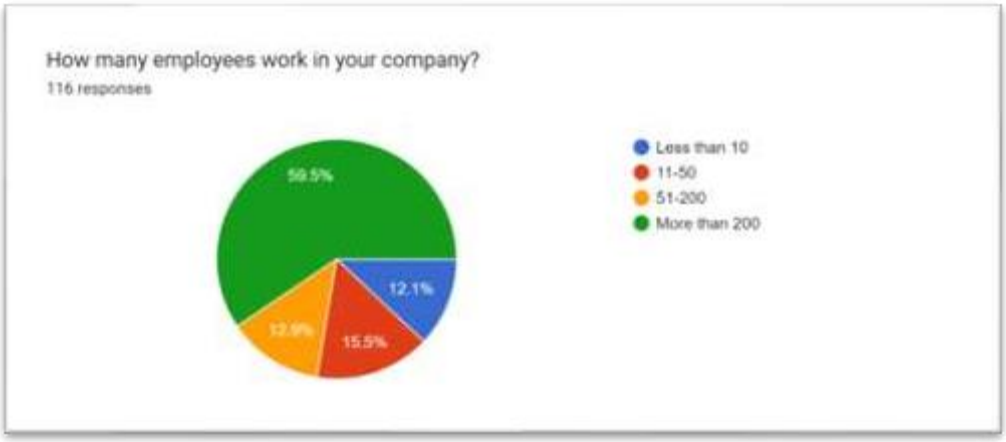
Employment Type

The majority of poll participants worked in the production or manufacturing industry, followed by the IT sector. Participants in the poll worked in education, banking, drugs, consulting, and other industries. An element may be essential for one project but not for another, and contrariwise. Notwithstanding, it was important to get to some of the criteria

mentioned in the question that are common in practically every business and play an important part in the completion of almost any type of project.

3) HEADCOUNT

The number of personnel handled by any enterprise helps to understand the scale of the team that has to be managed by a team leader. More individuals working in any company not only helps to appreciate the importance of the team leader engaged, but it also gives an idea of the costs associated in each project that the organisation is handling. It is considered that a firm with a high number of employees is able to provide more successful projects than a company with a smaller number of employees. More than half of them were employed by organisations with more than 200 employees. In contrast, 12.1% of the organisations had no more than ten employees.

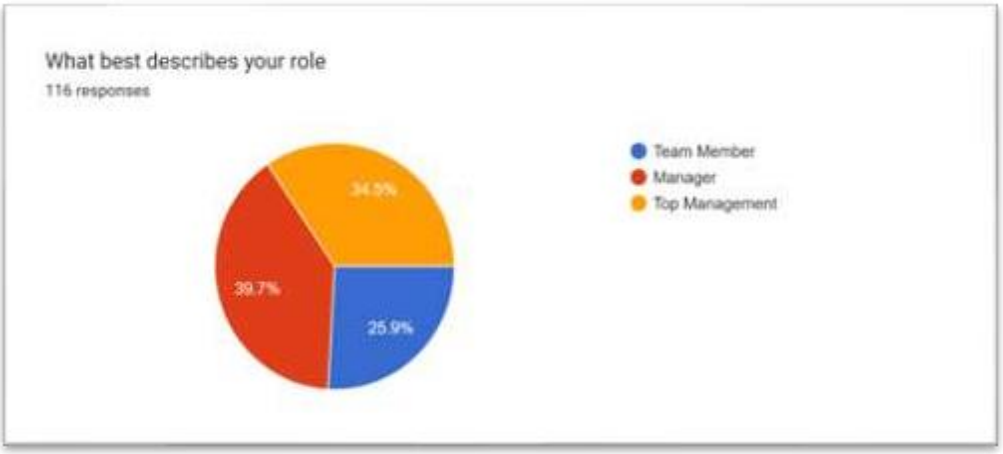


Total headcounts in respondent's organisation

4) ROLE PLAYED

The ranking of success elements is never the same for everyone working in the project, and it changes with each step of the project's life cycle. For example, a team member may rank Project Manager as an important part of any project, while a project manager dealing with

team members and top management may rank communication as an important factor. Similarly, different members of a project may have different perspectives when ranking the factors. Therefore, to get an idea which member considers which factor important or critical for a successful project, the rank they are holding in their organisation needed to be known. In the sea of plans, strategies, tasks divided, goals, it is very common that the track of what is important that must be tackled at what time is lost. Therefore, every member involved in the project has their own way of looking into the factors that play important role. Henceforth, their perspective is very important to understand.



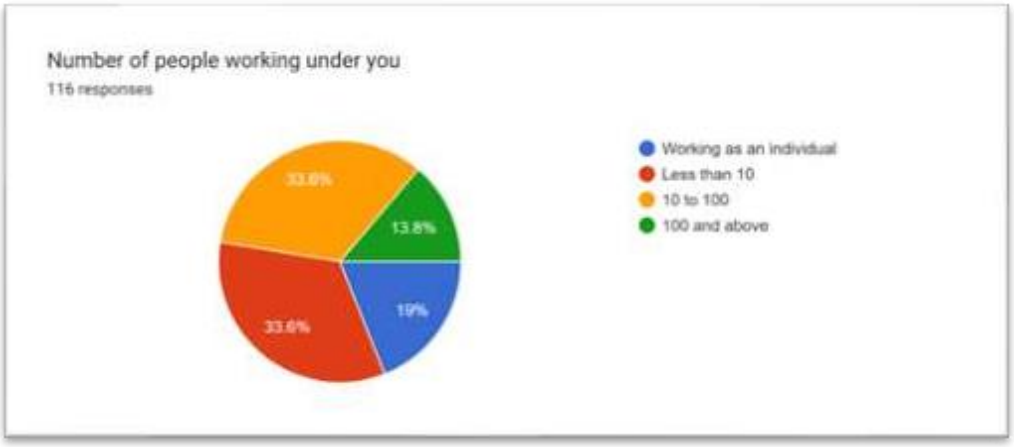
Designation in the organisation

5) TEAM MEMBERS

Knowing the team size of the participants was important as a result of the dimensions of a team affects the performance of a team leader. Although managing a team is not rocket science, however it is conjointly demanding. Once managing a team, the team leader might face variety of challenges. A team that is either too small or too large will continuously result in a significant failure of an antecedent undefeated project. A frontrunner whose team is just too little to handle all of the project's activities faces varied obstacles, and his viewpoint on the variables that he thinks important might disagree considerably from that of a frontrunner

whose team has over enough members. For instance, having over the desired variety of team members will cause issues once synchronization the complete team. What is more, because the project progresses, the team's energy wanes. At that time, motivating a bigger team becomes harder to manage, leading to a loss of effectiveness and, as a result, a diminished chance of accomplishing the ultimate goal.

Knowing the number of team members that a project has or a team leader has to handle, provides insight into why they chose one part over another.



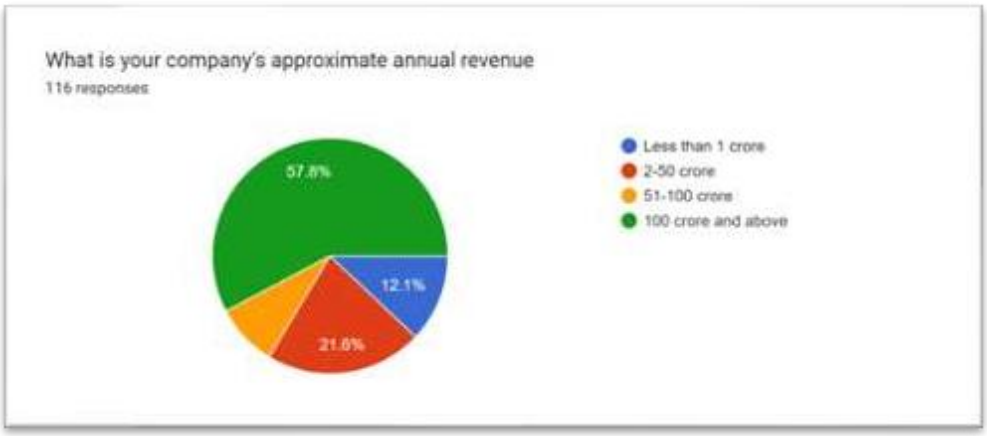
Number of members respondent leads

6) REVENUE GENERATED

The predominant goal of any organisation is to generate revenue. Revenue generation is the process of generating money or income for an organisation in order to propel it to greater heights. It is accomplished through the sale of their products or services, depending on the industry. Knowing the revenue generated by any organisation is now an excellent determinant of how large a venture a corporation is managing. More revenue means more stakeholders, more squad members, more synchronisation, more challenges, and much more top-level support. When someone works in any organisation that generates a large amount of

revenue, their perspective on the factors involved in making a project reach its goal shifts. For example, a company with an annual revenue of less than $1 million may consider information sharing to be more crucial than the role of project manager. Smaller organisations focus more on lowering overhead costs or production costs, making quality less important. On the other hand, a company that has invested heavily in its project and is generating revenue in excess of $100 million may prioritise risk management or deadlines over others. They value quality and customer satisfaction far more than chasing money by lowering the cost of procuring and maintaining inventory to meet the customer's deadline. As a result, knowing the cash flow of a company makes it easier to understand the psyche of that organization's employees in terms of selecting one factor over another.

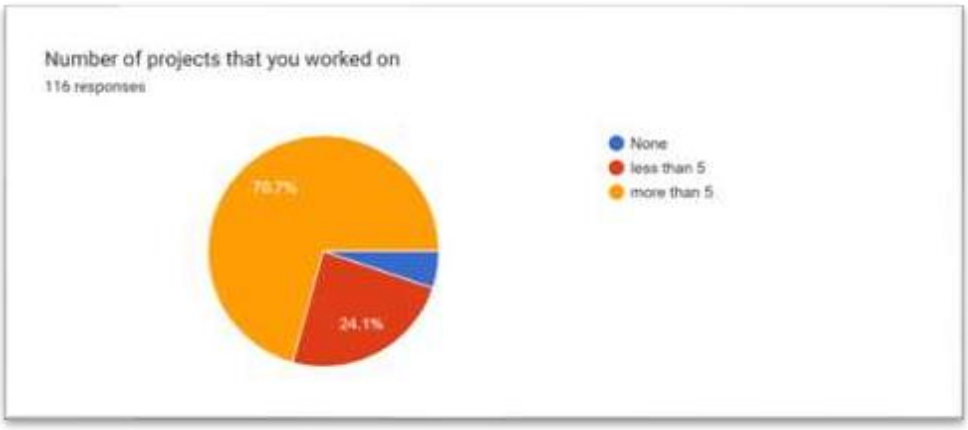
57.8% of the respondents work for companies with revenues exceeding $100 million. On the contrary, only 8.5% of projects have a revenue of less than $1 million.



Annual revenue of respondent’s organisation

7) NUMBER OF PROJECTS WORKED ON

Only 5.2% of those who responded to the survey have no experience working on any of the projects, while 74.1% have worked on more than five. This is one of questionnaire's most critical questions because, as mentioned in the literature review, no two projects are alike. Every project differs from the others in some way. When it is said that each project is unique, it means that the factors involved in each project hold different positions on the critical scale in different projects. Handling or working on a number of projects indicates that the individual has more experience than those who have handled few or none of the projects. For instance, consider a manager who is working on two projects. In one, he must deliver a popular product while his competitor is also working on the same product. To rule the market in this situation, he must deliver the product before his competitor. However, the other project on which he has been working has already dominated the market, and the end user in this case is unwilling to compromise on product quality. As a result, in both cases, the project manager must focus on various factors based on the needs of the project. In case I, meeting the deadline is critical, but in case II, he can overlook the target date and focus on the coefficient of performance.

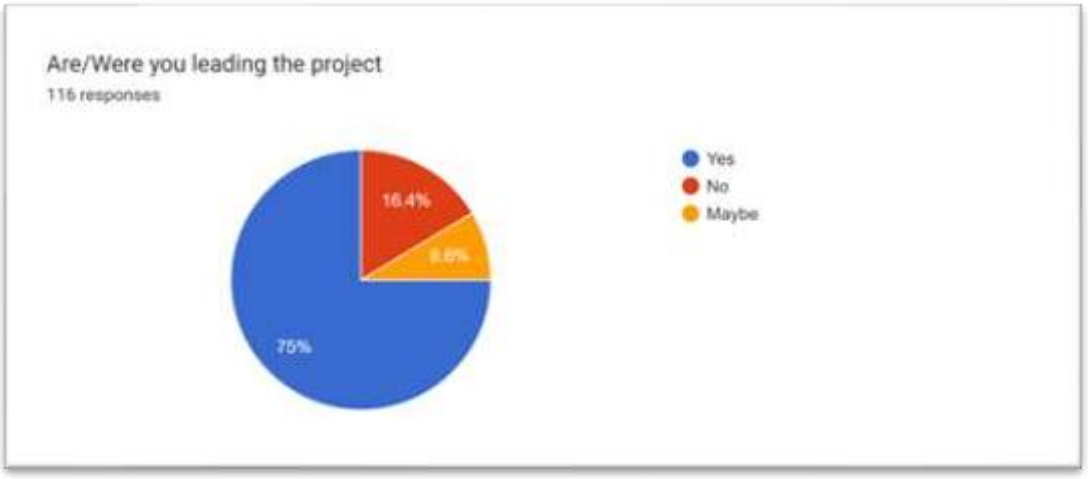


Projects handled by each respondents

8) LEADER/TEAM MEMBER

Although, a project can be either large or small, but every project is a collection of tasks that necessitate a dedicated team to work together to make it a breakthrough. From top management to project managers to team members, everyone has a goal to achieve. As a result, each member of the team has a responsibility that must be achieved. To avoid project failure, the "if I had done this, the result would have been better" scenario should be avoided. To complete all of the steps meticulously, each step must be prioritised according to the need of plan. When responsibility shifts with the hierarchy, so does the perspective on how to complete it. Asking the question of being the team leader or a team member, gives the insight of the person of why he chose one factor as critical over the other. To put it simply, when discussing top management, some of the main factors that they are concerned about are the deadline, stakeholder expectations, and the budget involved. Top management support, proper communication of project goals, a strong team, and risk management, on the other hand, are at the top of any project manager's priority list. Furthermore, when team members are being discussed, they consider an experienced project manager, teamwork, monitoring, and controlling as factors that will determine the project's fate.

When leader or team member question was asked in the questionnaire, 75% participants either were in top management or were project manager, while 16.4% worked as team members.

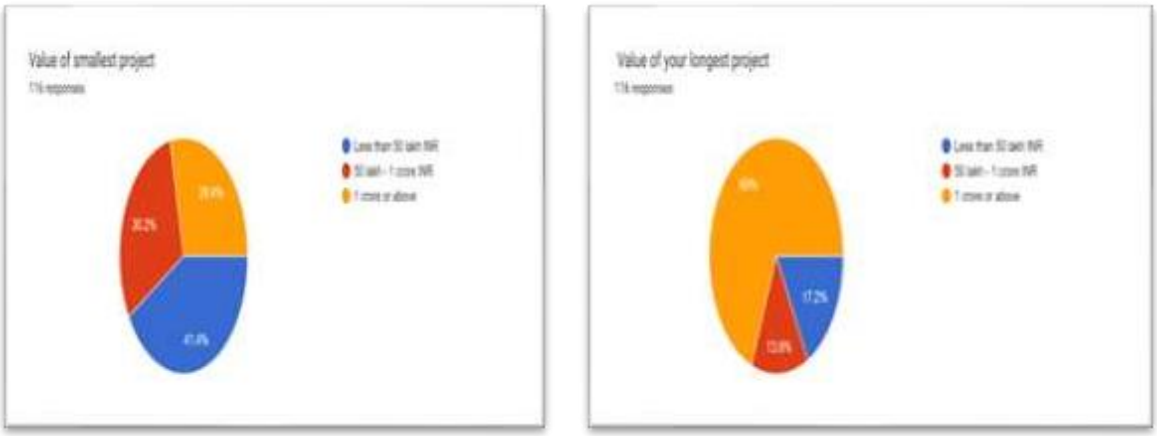


Profile of respondents in the project

9) VALUE OF SMALLEST/LONGEST PROJECT

Any project requires a little cash to begin. This may be utilized to buy resources, crude materials, work, and so on. A few ventures are expansive and require a huge speculation, while smaller ventures are fulfilled for a lower fetched. Not one or the other all little ventures total effectively nor do all large ventures fall flat. In any case, all of the megaprojects are complex and, for the foremost portion, over-optimized. Ventures that request a huge entirety of cash frequently require more financing and are more time-consuming. The overly long period of conveyance leads to a need for intrigue, and the natural products it bears don't continuously coordinate the points that were set. On the other hand, smaller ventures might now and then fall flat owing to a need for assets. On the other hand, smaller activities may come up short owing to a need for financing, an erroneous conclusion of the returns, or the thought of a substandard project item. Mega ventures with gigantic speculations have an advanced and expansive number of brains working for victory, but ventures with constrained reserves must adapt to dangers and overheads while keeping up the budget inside limits. As a result, the reason why the address was inquired around the project's net worth was to assess the method of reasoning for selecting the success elements for their specific

initiatives. Individuals of a huge venture would see hazard administration and time as basic victory components. Group individuals working on low-budget ventures, on the other hand, would accentuate the noteworthiness of extending chief. The net worth of the littlest extent dealt with by 41.4% of the overview respondents is less than 50 lakhs, and the net worth of the biggest venture overseen by 28.4% is more than 1 crore. Agreeing to the pie chart, 17.2% have not taken care of ventures including more than 50 lakh in venture. The net worth of the project, or the fetched caused by the venture till completion, changes the recognition of not only group individuals but also partners. Even though all activities, huge or small, start with the same objective in intellect and that is to reach the targets within the period set and to supply the result within the quality asked. To do so, they must explore the perspectives that can play a vital portion in accomplishing the conclusion point. This address was postured to respondents to get it their mind-set when judging the viewpoint would be noteworthy.

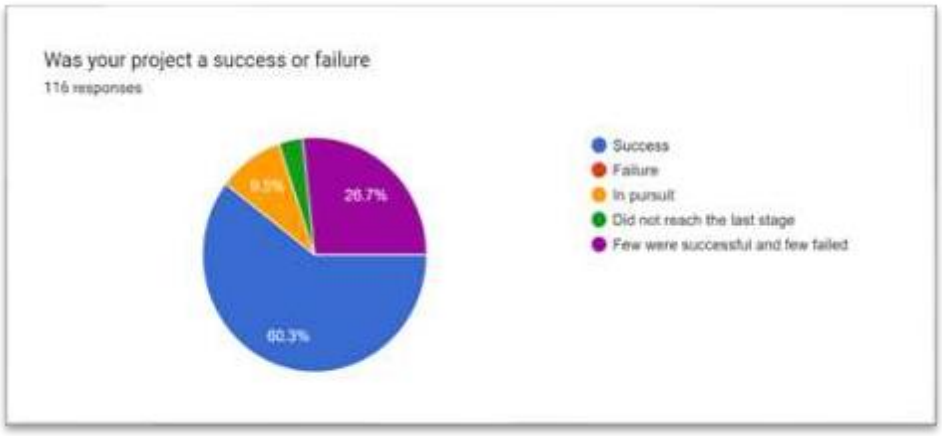


Value of projects handled by respondents

10) END RESULT OF THEIR PROJECTS

When any project is begun, no matter how little or huge, there's as it were one objective in intellect: to total it and accomplish the project's objectives. To reach that objective, legitimate arranging, strategizing, shaping a group, making ventures and everything else is done to surpass expectations. Nonetheless, it is not continuously what has been wished for, can be accomplished. There are minutes when the group or individuals of the extend lose their enthusiasm or drop separated along the course. Indeed when all conceivable has been done, to guarantee the victory of a venture, once in a while lost due dates, falling flat to fulfil clients' desires, and going over budget are a few thing that happens that lead to falling into the trap known as Disappointment. When a venture comes up short in any way, there must have been something that the group related to fizzled ventures ignored when the venture started or was in advance, which was considered by the group related to effective ventures. An assortment of factors can turn a continuous effective venture into a disappointment. Even though the cause of disappointment can happen at any organization of the venture, the foremost basic arrangement is the starting. It is during this stage that the extended group must arrange each angle of the extend in arrange to reduce the probability of disappointment. It is the commitment of the brains working on the extent to examine each hazard included and to find an arrangement to bargain with any concerns that will arise during the campaign. When this address was presented to the survey, one objective was in intellect: to discover how numerous triumphs somebody has had and how numerous disappointments others have had, as well as the factors they accept are or have been noteworthy within the ventures they have dealt with. This would permit them to get a handle on their recognition of why they accept they fizzled or succeeded in their particular try. 60.3% of responders were fruitful in accomplishing their campaign's conclusion objective. A few of the members of the overview were still working

on the extension, i.e. they were within the centre of a few stages of the extension. There are some events when it is accepted that the extent that was begun, is not advancing as was anticipated and has come to a point where no matter what alterations can be made, it will not finish the objective. The venture in some cases is closed owing to delays, changes in needs, money-related overwhelms, and other unforeseeable and unavoidable occasions. Such events were experienced by 3.5% of the reactions. Aside from these categories, 9.5 of the respondent's members have been a part of the group that gave ventures that come to the target and have moreover been a part of some ventures that fizzled to fulfill the project's objective.



End result of the project

11) 5 FACTORS THAT ARE CRITICAL

Concurring to the writing inquire about, there are a number of variables that have a critical affect within the victory of a venture. The significance of each viewpoint changes as the campaign advances. Be that as it may, the whole affect can be extreme on the off chance that that vital perspective is neglected when it ought to have been considered and centered on. Various scholors have uncovered and underlined these components as significant. Within the survey, a few criteria were recognized that have reliably been at the best of for all intents and

purposes all academics' records. A few analysts accept that an extended chief is critical to the victory of a venture, whereas others accept that if any group has the total backing of the best administration, the chances of achieving the most objective rise. Essentially, hazard management, communication, satisfying due dates, conclusion client input, and venture objective were all included within the options regarded as pivotal to venture victory. Two other components within the list have also been presented. These two components are the area, where the venture must start, and the climate of that zone. These two components were either ignored or underestimated within the list of analysts.

After gathering all of the specified data on the members, they were required to rank the viewpoints that they accepted are vital to the victory to any extent. Respondents were asked to identify the five most imperative issues that, if disregarded, may lead to the disappointment of the venture.

After getting the discoveries, it was clear that the larger part of members, 76.7%, shared the same estimations communicated within the writing audit. The design that was developed was consistent. The lion's share of members concurred that communication and 71.6% positioned venture chief and senior administration back as the spine of any venture.

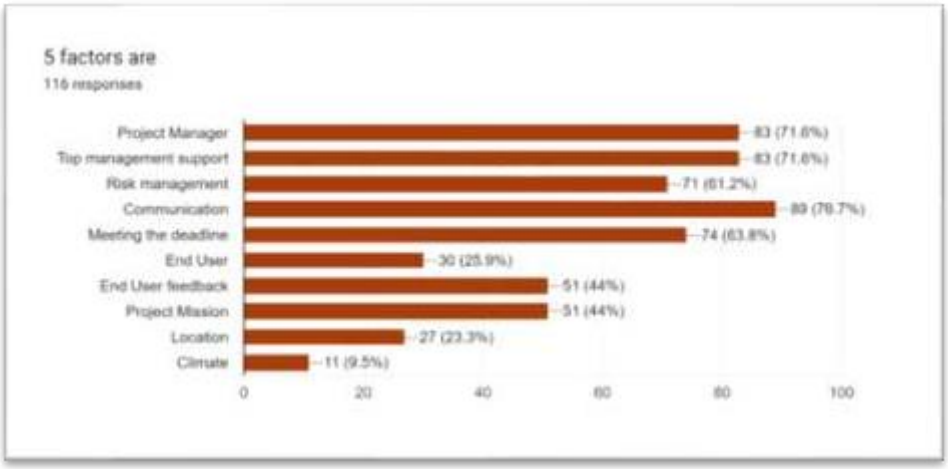
Sometimes recently any extent, expansive or small, an expansive sum of data is required for the project to realize its final goal. This gathering of data and after that exchanging it to the group, requires a compelling strategy in which the group relegated can get a handle on the goal that must be accomplished. All of this information collection and change to a fruitful extent requires amazing communication. This communication must be a two-way road from best to foot, both within team individuals and with exterior parties or partners.

Straightforwardness in communication, as well as instantaneousness, are benchmarks that must be taken for any communication to be compelling.

Essentially, in case a project manager is in-charge of an extent from the start to the conclusion, he will be able to lead his team and extend to the specified result. The lion's share of team members accept that the venture supervisor can have an effect not only on the group of individuals who work under him, but moreover on beat administration, partners, administering bodies, providers, and the end client. He is the one who can direct each phase of the extend in a suitable way.

Top management is positioned the same as the venture chief within the survey. 71.6% of respondents believe that beat administration back is essential and plays a more vital part than any other component expressed in the survey. From the advancement of the project's concept to its completion, the best administration is responsible. They are not as were responsible for major choices, but they can moreover intercede in minor subtle elements of the extend. Besides, the best administration is basic since they are specifically included in campaign dangers and contribute to their resolution. Those at the best contribute esteem by occasionally boosting their subordinates, which drives them to complete the delegated assignment on time. Agreeing with the respondents, all of these characteristics make them a critical part of on-screen character. In expansion to these issues, everybody included within the venture, from an related to the CEO of the firm, conclusion clients, partners, and everyone else included within the venture accepts that no matter how good the extent is, it'll not survive within the showcase in case it does not make the due date. To attain the due date, one must too handle the project keeping in intellect all of the dangers related to the venture as well as arrangements to settle such challenges on time so that the project's due date is met. Meeting

the deadline and risk administration came in fourth and fifth, with 63.8 and 61.2% votes, separately. Both end-user input and venture mission garnered 44% of the vote. Agreeing with the investigation, as it were 25.9% of respondents accepted that the end-user played a key impact in the victory or disappointment of any extent. The scholarly audit uncovered that area and environment were thought to have the slightest effect on the result to an extent. As it were 23.3lieve the area of an extent is critical. As it were 23.3 believe the area where a venture must be created affects the extent. Be that as it may, a fair 9.5% of those surveyed distinguished climate as one of the ten variables included within the study.



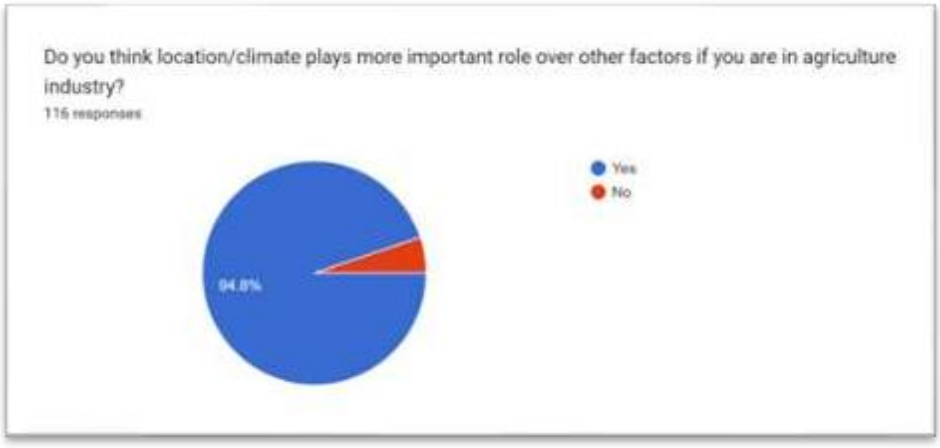
Critical Factors for a successful project

12) QUESTIONS RELATING TO SOME GENERAL CONDITIONS

The scenario depicted in the questions above was the same as what was read while researching the literature. Having followed that, questions were asked of the respondents in which some broad conditions were given and they were expected to respond based on their vantage point.

12a)Agriculture's reliance on location/climate.

When asked if geography or climate play a factor in the agriculture industry, 94.8% said yes. Only 5.2% of respondents did not believe these two elements played a significant effect.



Role of climate/location in agriculture industry

Agribusiness has been fundamental to human survival since antiquated times. It is troublesome to suppose the lives without this division. It not as it only gives man-kind nourishment but also serves as an essential source of vitality and other things such as medicines inferred from home grown plants, creature bolster crude materials for oils and textures and much more. Advanced and sophisticated technologies are being utilized to duplicate trim production in order to satisfy the required request for all of these things as the populace develops. Although, utilizing high-grade cultivate automation, half-breed seeds, and high quality composts has without a doubt expanded trim generation rates, but eccentric and undesirable climate designs such as draft, surges, warm waves, and rush and climatic variables like temperature, sum of precipitation and light do play a part in putting the endeavours on the back foot and uncovering the genuine control of nature. These factors like location or climate of a place have always affected the agriculture industry. Floods and

draught are the foremost obliterating and impressive normal adversaries of the human race, and they can demolish the horticulture commerce. Individuals hold worldwide warming responsible for the same.

Floods, especially flash floods, not only crush the ground by expelling rich soil, but they too render the zone unfit for human habitation since the floodwater incorporates numerous perilous sterile contaminants. These poisons cause the soil to lose its ripeness, decreasing the land's efficiency and life span. Floodwater can cause thousands of dollars in losses when it ruins crops that have as of now been gathered or put away in expansive silos.

The moment most genuine challenge to farming commerce could be the need for water supplies. The dry season is the essential reason why ranchers have inconvenience in the assembly of the planning required for water for water system operations. Since man's impedances with nature, conditions have exacerbated to the point where the graph of starvation deaths has about multiplied within the final decade.

Draught risks poses dangers and harms not only to developing nations like India and China, but moreover to industrialized countries like Australia and the United States.

Each crop has its claim growth pattern that is directed by temperature, light, and precipitation. Not all crops develop at all temperatures. A few crops develop in temperatures extending from 15 to 27°C., though cocoa, sugarcane, and oil palm prosper in temperatures ranging from 20 to 35°C. Crops like dark pepper flourish best at temperatures extending from 30 to 40 °C. Collard, kale, and spinach, on the other hand, can withstand solidifying conditions. Changing the ideal temperature of the edit will make their germination conditions more regrettable, coming about in poorer efficiency.

When it comes to the effect of location/land on crops, it is verifiable that not all crops develop within the same sort of soil. Hence, each soil has its nutrient profile, which favours certain crop types. Considering coffee, it has a high trade value after crude oil. The soil ought to be volcanic ruddy soil and profound sandy soil for great coffee development. Volcanic emissions are mineral-rich, and the soil that comes about is tall in Ca, Mg, and K particles. Moreover, the soil formed, is unused and has not misplaced these components as a result of serious agrarian exercises. Another critical figure in coffee production is high elevation. Various nations produce coffee, but not all of them is at the cutting edge. Brazil is the world's biggest coffee maker. The reason for this is that Brazil has the perfect climate and soil sort for coffee generation. Similarly, millets require a dry bone-dry climate and dry soil sort to flourish. It can survive in draft conditions due to its amazing water maintenance capacity and waxy coating on its takes off, which helps in less transpiration. On the other hand, coconut may be a tropical crop that requires a bounty of sunlight, humidity, and precipitation to flourish. As a result, the greatest coconut production occurs close coastal zones where the climate is muggy and soil prerequisites, i.e. soil should have a pH of 5-8 and be free of difficult shake particles. Coconuts develop best in soil that contains laterite, coastal sandy, or ruddy sand.

When it comes to another fast growing crop, wheat, India is the driving maker after China, and it is the country's staple crop. Numerous states create wheat, but not all deliver the same sum of wheat per hectare. The reason for this is the perfect climate and soil conditions for this crop. The beat three driving makers of wheat in India are Uttar Pradesh (UP), Punjab, and Madhya Pradesh (MP). Concurring to the stats for 2010-2011, to region beneath wheat generation was 96.370, 35.100, and 43.410 lakh Hectares individually. The wheat yield of these states is 300.01, 164.72, and 76.271 lakh MT respectively. Looking at the information

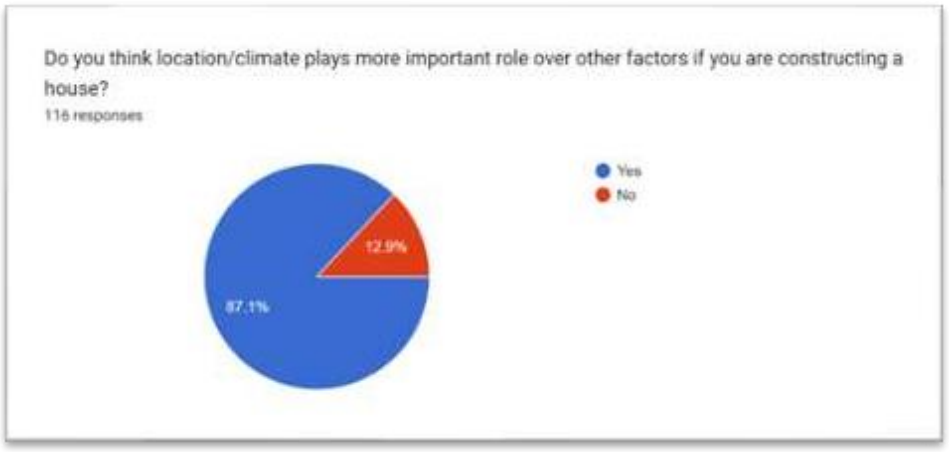
to begin with appears that without a doubt UP leads the generation of wheat but when it comes to percent abdicate; at that point, Punjab develops as a showstopper. Punjab yields 4693kg/Ha as compared to 3113kg/Ha of UP and 1757kg/Ha of MP. According to information for the year 2021-22, roughly 35 lakh hectares of arrive in Punjab is beneath wheat generation, compared to 97 lakh hectares in Madhya Pradesh, which was 43 lakh in 2010-2011. On the off chance, that wheat generation is compared in these two states, MP slacks distant behind Punjab in terms of percent surrender. MP contributed as it were 35 quintals per hectare, whereas Punjab contributed 49 quintals per hectare. The reason for this crevice or MP slacking behind Punjab is that Punjab has consistent climate conditions and soil, which aid in wheat development and generation.

Engaging in growing the crops in a place whose soil profile does not coordinate the crop's needs, or trying to develop a crop in an area where climate conditions are not conducive to plant expansion, only wastes time and exertion. It is conceivable that under adverse or not so great conditions, crops can be delivered utilizing progressed methods, but brilliance in agribusiness cannot be accomplished until and unless the requirements for plant development can be caught on, whether they are related to soil, temperature, or precipitation. Food has ended up progressively rare in later decades, and each country recognizes the have to feed millions of individuals. At the same time, it must perceived that this requirement can be met if it is perceived that this segment must be dealt with caution since, notwithstanding the human sort taking care of it, it is completely subordinate to natural factors like climate and area.

The vulnerability of horticulture because of these components has been felt by these countries, putting them in a position where they must discover a way to manage with these or see an increment in hunger-related deaths.

12b) Dependence of housing

87.1% of respondents claimed that they all review location or climatic/weather conditions before deciding where to build the dream property, with 12.9% disagreeing with the majority.



Role of location/climate when planning constructing a house

Everybody would need to distribute his or her assets wisely, particularly within the genuine domain industry. Apart from those within the military, naval force, or discuss drive, everybody tends to select their dream domestic range based on several components. Individuals consider a few components sometime recently making the choice where to invest in their cash to build a home since building a house may be a long-term objective. Land is the most imperative influencing the budget as the populace develops. On the off chance that buying a house within the middle of the city is a costly try, the same region can be bought for less than half the cost within the city's edges or less thickly populated ranges. From now on, the area is greatly vital in this division. The area gets to roadways and fundamental conveniences like schools, markets, and healthcare offices since all these things increment the

esteem of your resource. The pertinent laws in that area are moreover respected exceptionally and are critical viewpoints while considering the area. The crime rate in that zone should never be neglected when deciding whether it is secure for individuals dwelling there. Besides, consideration of, whether manufacturing in that particular area is cost-effective. The more the put of crude fabric in the customer's area, the more will be fetched from the construction venture. Other key contemplations incorporate activity stream, weather changes, and the climate of that particular zone.

Exploring geographical factors in that locale moreover makes a difference in the screening preparation. An area with non-conventional geological highlights may show up engaging to begin with look, but its effect on development costs can be financially draining. If the finalized development domain is not in a normal geological zone, the temporary workers take a toll will climb since of commuting, raw fabric accessibility required for development, and the utilization of extra materials on development, all contribute to the general fetched of construction, which a building on the off chance that built at a level territory would not ought to bear.

Acquiring a domestic in a zone overflowing with hoodlums, cheats, and burglars is unsafe. Everybody needs their family to be secure. As a result, individuals continuously investigate the region in which they expect to construct their homes.

When the fetching of building a house is the subject of talk, it incorporates not as it were the fetching of the materials utilized, but moreover the length of the development. Construction projects that are postponed for one reason or another takes a toll on development. Climate is one of the factors causing development ventures to be postponed. Nations where it snows most of the year can validate this point. Most building ventures are postponed amid the

snow/rainy season. A few of the reasons for this include a shortage of labourers, a disappointment in getting the crude materials required for development on time, and a disappointment in finishing the work properly due to the extraordinary climate. In case a house had to be constructed, choosing a season when viable asset adherence is conceivable would be the choice of everybody, which is not conceivable in either snow or rain. When a recurring project must be brought to a halt due to weather conditions, the toll of that venture rises. The group included in making the extension never got the project back within the same state it was in when it ended in the middle. As a result, the fetch of revamping or reshaping it adds to the extended budget.

Besides, construction of a building in a zone with an extraordinary climate requires additional raw materials to guarantee the building's life span. Alongside the development materials required for a house built in regions with ordinary climate conditions, the builder must consider other components such as insulating the house to avoid interior warmth from leaking outside in colder locales or avoiding outside warmth from leaking interior a house in forsake ranges. Fiberglass batts, dense-packed cellulose, and polystyrene integration inside the dividers are a few of the materials that increment the budget. Essentially, when building a house where precipitation is extreme, a stilt establishment is always prescribed. The soil in these zones must be designed appropriately to avoid the sinking of houses. Engineers moreover have to see into the way for water to shed from the slant and should extra waterproofing fabric to include a long time to the life of the house.

As a result, claiming that the area or climate of a specific locale has no bearing on the development of a house would be off base.

Increased rates of real estate in towns versus rural areas, as well as expanded costs to extend the toughness of houses in extraordinary climate conditions, have moved people's inclinations and forced them to think about investing in a property. Hence, claiming that building a house is not affected by the area or climate of that specific locale, would not be suitable.

12 c. Considerations for Hotel Site

Nowadays, the hotel industry could be a billion-dollar venture and it is the quickest developing division that is committed to understanding the requirements and appropriately giving administrations to their visitor. Due to developing competition and survival of the fittest, the partners of this industry are attempting to be more indulged in understanding the requirements of clients and prioritize it to extend their deals, be within the long-term trade, and expand productivity. Not at all like most other businesses, this service industry places a high esteem on the location since its essential objective is to pull in clients. On the off chance that the hotel proprietor is incapable of supplying them with the location that they require, the lodging will drop level. As a result, sometimes recently opening a hotel, one must altogether review each perspective of the property to ensure its reasonability.

Particularly for those who require easy access get to their lodging and at the same time need to appreciate the activities that place has to offer, the area of the hotel plays an exceptionally critical part. Simply get to the hotel and to other activity places that can be delighted in, spares the time, cash, and other carry bother. The cost that the lodging charges will be decided by the area they give to the clients. Before choosing a specific location for construction a hotel, take into consideration that it is simple to alter all of the other distinctive features of the hotel, such as the insides, the benefits suppliers, and the food if the

administration accepts it isn't working legitimately, but moving the arranges, once the property is built up, is unlikely.

The occupancy rate of rooms in a hotel is driven by shopper contentment concerning the hotel's area. On the off chance that the hotel is not effectively available, is congested by barrio activity, or is not near to any places of intrigue, it is destined to come up short. No one needs to spend his or her excursion in a five-star inn that has been built in a low-income neighbourhood. In this manner, in case somebody is building a hotel and are giving fabulous offices to draw in clients in the country zone or lodging that's encompassed by a region possessed by low-earners who cannot spend cash remaining in such lodgings, would be a wastage of reserves and abuse of assets. Additionally, a lodging with as well numerous workplaces around it will, be congested with activity. Such lodgings must fight issues such as pollution, contamination, untidiness, or a high volume of activity, which makes their evenings a bad dream. Opening a hotel close to a healthcare facility, a school, an area encompassed by workplaces or a manufacturing industry will be a commercial disappointment.

Clients will never spend their cash in a lodging where they have to breathe contaminated industrial gasses or confront morning activity jams amid school hours and thus be a part of heightening contamination.

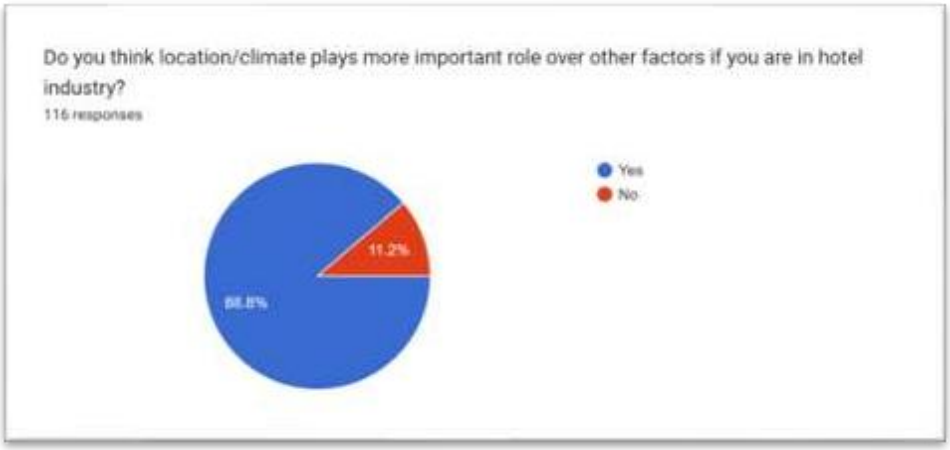
Furthermore, when choosing a location for lodging, one must seek a zone that is free of fear and thefts and burglaries. Contributing intensely to the development of a hotel without considering the surrounding wrongdoing rate imperils the safety of both residential and worldwide guests. The security and security of individuals remaining in a hotel could be a measure that voyagers search for, and the local people in that zone decide it. It is impossible

to evacuate the regions that have been a part of that zone due to the development of a five or seven-star lodging. As a result, it is best to consider the area sometime recently contributing.

When somebody plans to open lodging, he/she has to be lookout for the local people dwelling adjacent zone. For case, if somebody with a strong point in Italian food opens a hotel where Italian nourishment is not exceedingly esteemed, the logic behind it is misplaced.

In today's world, clients are willing to pay indeed more for an area that they accept is best suited to their needs. Huge names in this industry have their chains in several cities and areas, but the rates of the rooms, which provide the same administrations and are worked by the same benefit suppliers, vary due to the geological area of the hotel. Hotels/resorts, which provide lavish green regions with waterfalls adjacent or found in attractive landforms, cannot fall flat to draw in clients. Clients are happy to pay more in case they get good quality service instead of a large quantity.

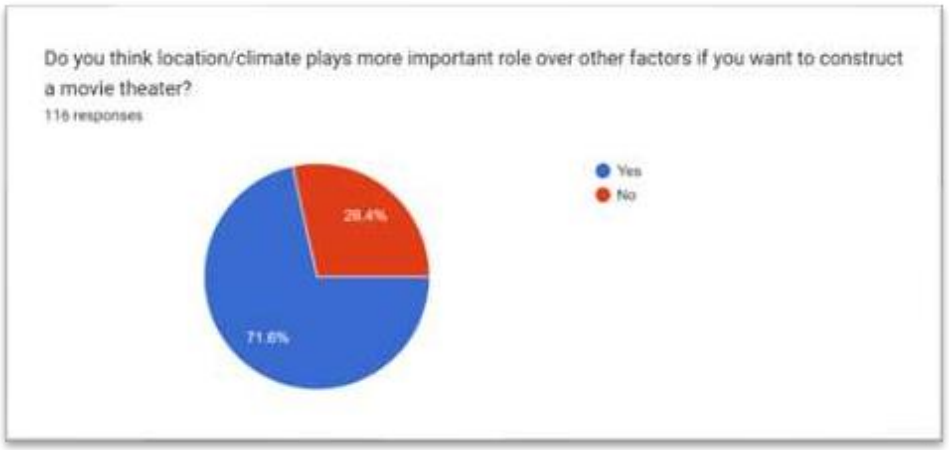
A hotel/resort charges a part of cash because they are supposed to supply the clients with the mental peace they are seeking when they select their resort for a stay. That mental peace would as it were be there if the customer is fulfilled with the hotel and as discussed, the location of the hotel is one of the most imperative components, why it seems to be a disappointment or a success and how it can sustain in the market, competing other hotels. Concurring on this, 88.8% of the respondents discover the role of location as a vital calculation in the hotel industry.



Role of location/climate when planning a hotel construction

12 d) Role of location/climate in creative industry

When asked about the role of location/climate in opening a movie theatre, 71.6% of total respondents felt it was persuasive that location/climate of a region does play a key role. On the other hand, 28.4% said that regardless of where a theatre is located, it might be a profitable investment. Let us talk about it before making any decisions.



Role of location/climate while constructing a movie theatre

The theatre segment not as it were engages individuals, but it moreover contributes to the worldwide economy. Within the 2019-2020 monetary years, the dramatic commerce

produced over $35 billion in income. Opening an ordinary medium-sized motion picture theatre with a seating capacity of 300 would fetch more than $900,000-$950,000, barring the arrival fetched, which is the greatest variable, that completely depends on the area. The other costs incorporate legitimate expenses, licenses, cinema gear, CCTV, furniture, and so on. After pouring so much cash into a venture, in case it comes up short, it would be a colossal difficulty for both the financial specialists and the parties included. Footfall is one of the industry's most important resources. In case the footfall is at its top, the firm is bound to flourish.

When somebody wishes to open a theatre, he/she must commit himself to researching the region that is believed will assist in meeting his or her objectives. Because it may be a well-known truth, building a theatre costs a parcel of cash, in this manner, one must consider all of the things that can clear obstacles in the way of victory so that the cash and endeavours are not wasted. On the off chance that somebody opens a theatre in a hamlet or a low-income neighbourhood, he must be careful of the development fetched due to inaccessibility of raw material required for cinema and approximately the people living in towns or rural areas are less likely to be curious about the dramatization industry. They still consider this industry or enterprise to be unscrupulous. Individuals in this zone will never educate their children to waste cash and time by aiming at the theatre. As a result, indeed if the theatre has all of the civilities, such as AC lobbies, a phenomenal pantry, new motion pictures, and simple and reasonable get-to-ticket booking, the number of individuals planning to the corridor and observing motion pictures would stay very moo. The contrast in benefits between a cinema in town and one within the outskirts would be significant. There are a few reasons why film cannot be profitable in wide open. A few of them are low-income village dwellers. They will not be able to manage intermittent motion picture tickets. Another factor is that individuals in

towns do not ordinarily go to late-night shows. As a result, the ultimate concert must be put in the early morning hours. Moreover, in villages/suburbs, especially in under developed or developing nations, young women are not effectively allowed to visit theatres alone. These concerns would in the end lead to misfortunes and the theatre's collapse.

Essentially, opening a cinema at a location, which is near to residential area, without considering the aftermaths, would be a senseless bargain. It also has numerous facets to it. Opening a theatre close private zone would be an issue for individuals dwelling in that region. A clash of motion picture beginning and conclusion timings with office and school hours would lead to tremendous activity jams. Late night shows and after motion picture dialog at that time would unquestionably pose an issue for the inhabitants of that zone.

12 e) Role of location/climate when planning a vacation

The tourism trade has appeared a solid crest propensity in its extension. People appreciate voyaging to unused zones not as it were for pleasure purposes, but too for commerce, well-being care, sports and enterprise, instructive reason, to urge in-depth information of culture and religion of different countries, visiting family and companions, and lot more. However, if only vacations are considered, it can be seen that this trend has developed significantly over the last few decades. A break from the daily repetitive schedule relieves and revitalizes the souls and minds in this fantastically fast and energetic environment. Vacations not as it were help to bring mantle peace and revive the person, but it make a difference in producing cash for the nation, produces work.

On the off chance that a slant is seen, the more engaging an area is, the more sightseers will run there. Nature is the foremost important resource that includes the excellence of a get-

away destination. Before anybody packs his or her stuff for any specific put, he or she must consider several components. Aside from budget, time, and attractions, the primary and essential consideration for someone is the put and environment that is the most perfect for their daydream vacation. The by and large effect on the attractiveness of any visitor put is the area and climate it has to offer to the visitors. Besides, the climate/weather of that area impacts the length of the day and night, as well as the number of activities accessible. The climate of any given zone moreover affects the sorts of resources (normal) that are accessible, which contribute essentially to the exercises that can be embraced to make the travel beneficial and unmistakable. The climate wonder does affect visitors who visit an area for relaxation. Individuals looking to create the foremost of their excursion time by locking in all of the activities that will make their get-away paramount. Each activity whether trekking, swimming, equestrian riding, biking, or rafting, has a time and climate situation when it can be done and delighted in. Disregarding the climate design not as it were disturbs their activities, but it moreover puts their security at hazard and can lead to an assortment of well-being issues. In addition, warm, mugginess, foggy, or wet climates ruin the exercises, making the area less prevalent among tourists. As a result, sometime recently an excursion, climate research, and climate designs ought to be organized.

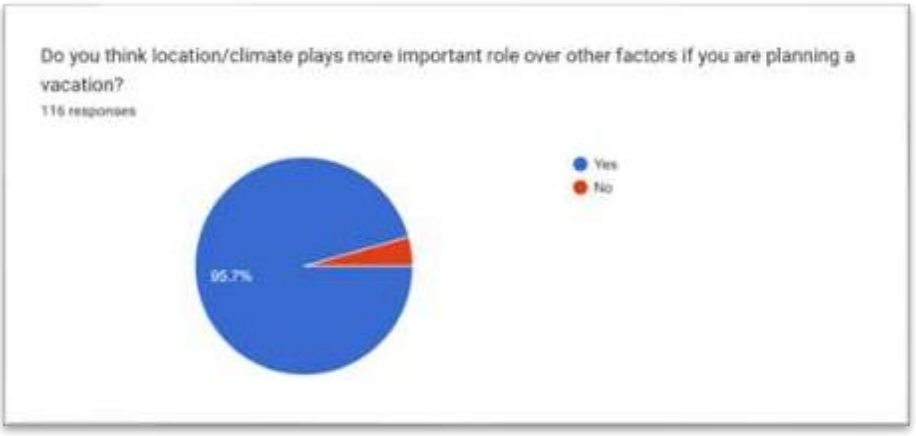
Individuals who appreciate skiing and snow exercises choose their areas shrewdly and travel to colder places. It has been seen that hotels/resorts arranged in colder districts get more footfalls amid snowfall. When the seasons alter, the number of people visiting these areas diminishes, causing costs to drop. Moreover, those who appreciate water sports such as surfing and other water exercises would lean toward visiting a coastal locale. Choice of the area of any spot where sightseers need to spend their get-away time should be agreeing to

the requirements of their inclinations. No one essentially packs the possessions without considering the place. That would be a misfortune of both, their cash and their time.

People for the most part proposed to break from their schedule in look of enterprise, novelty, tranquillity, and a resurgence of mental quality. As a result, a perfect traveller goal ought to have all of the comforts that will lure visitors to visit it. In a sense, on the off chance that someone is trying to find mental peace, he will select a disengaged area over a location abundant in recreational activities. On the other hand, somebody seeking out social lavishness would lean toward investigating places where legacy can be seen and experienced by staying close to the local people and locals of that area. A traveller would select to spend his staycation somewhere with a variety of exercises. Heading to an area missing natural or cultural attractions, or somewhere with constrained access to essential civilities such as lodging, transportation, and get to adjacent places, would be the greatest disillusionment of anybody's vacation. As a result, it can concluded that the location where somebody is arranging their get-away to fulfil what they are looking for ought to be special in its claim way, promptly open, have attractions to offer to come guests, and be close to other attractions.

Numerous travellers goals have closed or diminished their costs as a result of the rise in temperature and other climatic factors caused by worldwide warming. Many glaciers have started to dissolve, causing surges, and woodland fires have gotten to be a regular occurrence amid crest summers. All of these variables have diminished the number of sightseers going to these locations, which was once the essential reason for the tall ridership. Individuals these days regularly check the climate figures for their occasion areas before booking hotels or flights.

Agreeing to the study, 95.7% of respondents give importance to the area and climate of an region when arranging a occasion.



Role of location/climate while planning a vacation

12 f) Role of location/climate when planning to setup an industry

The method of industrialization started within the 18th century in Britain, introducing within the unused period known as the Mechanical Transformation. Humankind has changed so much financially, socially, and artistically since at that point. In any case, what could be a production line? The previously mentioned may be an address that would be tended to sometime recently moving on to the more fundamental angles of building up a production line. Making wrapped up items from crude materials requires a set of strategies and exercises that must be carried out in a particular area by a skilled workforce. Industry or production line alludes to the area of all of these exercises in which crude fabric is changed into wrapped up merchandise. Building up an industry is not a straightforward try.

When arranging for such bootstrapping, one must consider the work drive, the vitality necessary, the capital required for foundation, merchants, and the showcase for last things. Most of the times, when all of these perspectives are talked about upon, individuals by and

large disregard almost the suggestions they will confront within the future in case two more components, the area and climate of that locale, are not taken under consideration. In other words, all the other components are straightforwardly or by implication dependent on the location/climate of the region where one intends to build up the industry. Some of the foremost significant incorporate the cost of creating an industry, government help, potential markets, and removal from the customer for wrapped-up merchandise.

It is very imperative to understand that not all districts can bolster all mechanical segments or the generation of all sorts of products. Each area offers traits that can assist one commerce to flourish, but not the other. If somebody goes into detail, there are a few sorts of businesses, and each sort requires unmistakable highlights of areas that are beneficial to its execution. Some cases may offer assistance to clarify the situation. When it comes to the iron or steel segments, the financial specialist would without a doubt select an area where iron mineral is promptly accessible. In this way, he would maintain a strategic distance from the cost of transportation, which would something else be a hardship for him if his factory's area were not where he could get the crude material. In this approach, he would spare cash on transportation, which might be an issue on the off chance that his firm is found far off from ore supply. Additionally, a few other cases are that if somebody were to set up a cotton company, he would select a location where crude cotton can be effectively obtained. Near seashores, fish nourishment enterprises have sprouted up. The reason for this is the plenitude of the fish. On the off chance, that the factory/industry is found a long distance from the shoreline, transportation and capacity costs would be additional overheads, as expressed in the previous section. Clients are inclined to do commerce with somebody who conveys administrations or wraps up merchandise on time, each time. This is often conceivable when the producer or benefit supplier has straightforward access to assets due to the neighbourhood

region of the crude raw material, which would something else be deferred several times if carried from an inaccessible location. The nearness to the raw material might be a diversion changer for any organization. Building up any industry in a zone where crude materials for that segment are rare can as it were increment the industry's costs. Transportation, stock, capacity, and other overheads would be included in this take a toll

Another calculation to consider when choosing a location is that a financial specialist cannot consider beginning an industry in which he or she would be unable to meet the benchmarks set by the government. The government has assigned zones where industrial facilities cannot be endorsed due to encompassing regions or private regions. Moreover, they must consider places where the arrangement of a factory may affect the flora or fauna of that locale. In some cases, in order to create a development of an area, the administering body gives appropriation on power or other forms of power that are basic for an industrial setting. On the other hand, there are a few commerce where human traffic is basic for the success. In that case, your foundation ought to be found close to a neighbourhood or swarmed area. For case, an eating foundation or eatery must be found in an area where individuals can promptly access and appreciate the cooking. In this circumstance, the financial specialist may need to pay more for the arrival since arriving in a created culture is regularly more costly. At first picking for less costly arrive that does not complement your firm will afterward cause the business person issues.

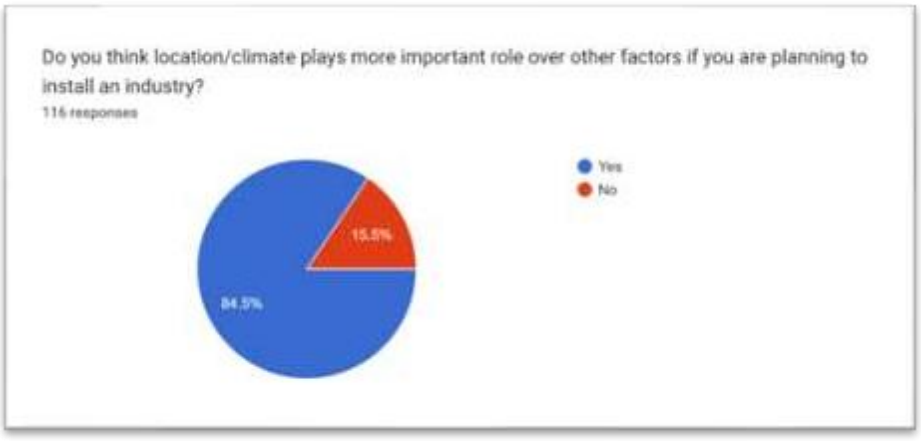
The accessibility of the staff required for industrial activities is additionally affected by the area. Overlooking the area might in some cases cause issues in drawing in the reasonable work for the job. This area is particularly important because sometimes management only looks at the external or superficial factors instead of looking into the core. The match in that

specific area is one such figure. Some of the time the area where management accepts that the industry will flourish is as of now swarmed with competitors. Such areas can diminish the chances of their victory. As a result, it may be more difficult for them to operate in that area.

When it comes to a location's environment, each industrial unit, whether humanly worked or completely automated, is affected by it. When it comes to the facility of the unit, it is influenced by climatic variables. Making the working unit temperature-compatible increases the utility cost. The high temperature in the working environment makes it troublesome for representatives to function efficiently. Not only that, utility supply has always been an issue when fabricating units are subjected to exceptionally high or low temperatures. It has been watched that colder places where the temperature drops exceptionally low, must bear the extra fetch of utilities and work environment insulation. Similarly, locales with exceptionally high temperatures must make extra ventures to keep the essential components or the starting supplies at a temperature that anticipates quality corruption. Chemical industries must work out extraordinary caution since high temperatures can cause blasts and low temperatures can actuate the solidifying of low bubbling chemicals. To address such risks, they must give extra insulation to the storage tanks. In most of the bone-chilling parts of the world, the operations or fabricating units should be closed down because of these reasons. Amazingly low temperatures in these places diminish the influx of labourers and put an extra stretch on them when they must offer additional temperature to make the working conditions consistent. The included cost of utility, lines, indoor regulators, insulations, and chemicals required for these temperature controllers all include a significant sum of weight to take a toll on ventures that are not pertinent when the climate is positive for working. This is pertinent to all businesses. IT ventures, healthcare businesses, agribusiness businesses, or any other industry, are all influenced by the environment of the region in which they work. If the climate is not

adequate, the extra speculation in conveying the right temperature must be borne by the speculator or proprietor of that endeavour.

Presently looking into the chart, it shows that 84.5% of the respondents feel that the location and climate of a locale are crucial calculations that have to be examined sometime recently setting up an industry while the rest think that area and climate can be disregarded when the business or industry has to be setup.



Role of location/climate while establishing an industry

12 g) Role of location/climate on delay of SpaceX launch

When the significance of the subject was questioned within the survey, 33.6%, a stressing number, were restricted, whereas the remaining 66.4lieved that climate and area were the components that caused the delay in carry dispatch in Florida.

Sputnik, the primary man-made manufactured fawning propelled into space on October 4, 1957, has continuously been a portion of the syllabus for kids. After that, Yuri Gagarin, the first man to travel into space in 1961, and Neil Armstrong, the first man to set foot on the moon in 1969, took another extraordinary step. Since that point, a huge number of satellites,

rockets, and space transports have been launched into space to pick up an understanding of the parallel world to our own. Investigating other worlds is not the as it were achievement. Besides, humankind has learned an extraordinary deal about their planet, much appreciated by satellites and space vehicles. The cost of propelling these vehicles into space is within the millions of dollars. There are a lot of satellites in the space like these. When a space transport must be propelled, there is far too much at stake. As a result, much arranging is required. Before any space transport is propelled, a long time of hard work is put in. Numerous minds are working together to create the launch a success.

Since its initiation in 1958, NASA has been included in the dispatch of space transports or rockets into a circle. It has sent more than 150 mechanical or manned shuttles into orbit. NASA's title is related to several dispatch locales. When choosing a launch site, a variety of criteria must be taken into consideration. Not each dispatch location can be the primary alternative. Amid the dispatch time, the area of the location as well as the meteorological conditions of that specific region play a basic impact.

When it comes to the preferred location by the launch company, they explore for something that will permit the space carry to elude the gravitational drag of the Earth. As a result, the equator is the ideal location to realize that goal. The rotational speed of the earth is most prominent within the equator and most reduced at the posts. The speed of the earth on the equator is around 1000 miles per hour, though it is 0.00005 miles per hour at the shafts. Agreeing with the Coriolis impact, the impact of expanded speed at the equator (due to dormancy) helps the space carry in escaping Earth's gravitational drag. When it comes to the Kennedy Space Middle, its area on the equator has demonstrated beneficial for the launch since the rocket picks up additional speed and so effectively overcomes the draw. Essentially,

owing to its proximity to the equator, the Guiana Space Middle in South America and Tanegashima Space Middle in Japan, appreciate the same points of interest. Another advantage of finding a launch location in Merritt Island, Florida, is the huge range accessible for rocket dispatches. This endless region contains all of the dispatch foundations required for a fruitful dispatch. The Kennedy Space Middle is not thickly populated. Both of these characteristics make it secure to fire rockets. Since there are fewer people at the launch location, it is more secure if the rocket has to be recovered if there is a mischance amid the launch and to alleviate the perils in case of disastrous disappointments. Another Florida launch location, Cape Canaveral, is adjoining to Atlantic Sea, making it an extraordinary launch location in case the adherent experiences any issues amid or after lift-off. Cape Canaveral, like Kennedy Space Middle, is situated close to the equator, which increments the rocket's speed amid take-off and so spares the fuel required for additional speed to cross the Earth's gravitational field. It can presently be contended that establishing a space station close to the equator gives propelled rockets an extra advantage in that they pick up additional speed, i.e. the rotational speed of the earth, which is most prominent at the equator, to cross the gravitational drag of the soil productively.

According to NASA statistics, around 30% of launch delays are caused by poor climate conditions at the launch site; thus, immaculate climate conditions are one of the foremost significant necessities for any launch. Taking illustrations of a few of the launches, SpaceX's Falcon 9 was slated to launch on January 22, 2021. The essential objective of the Falcon 9 launch was to put 143 modest satellites into orbit for different government and commercial reasons. Nevertheless, due to the harsh climate on the day of the launch, it was put off to January 24th. The severe climate circumstances that will have risked the launch remained on the 24th, in this way, the launch did take put but it was on the 29th of January 2021.

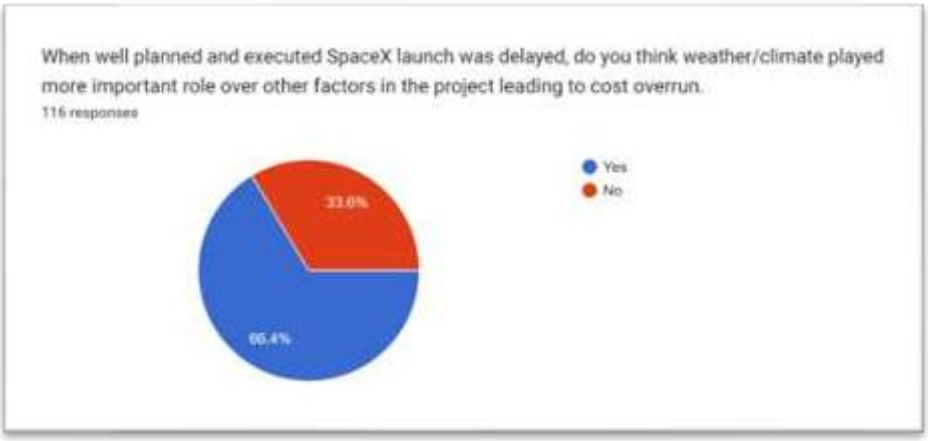
Numerous more launches like this were deferred or slammed propelling or returning to the earth owing to ominous climate conditions. Another launch that was pushed back owing to high-altitude winds was SpaceX's Falcon 9 rocket in 2017. SpaceX crew-1 is however another obsequious that has been postponed due to troublesome climate at the launch location in November 2020. Essentially, NASA has had numerous such climate challenges, driving it to put off well-planned launches for a few days.

A few climate conditions, counting as rainstorms, tall velocity winds, and dense clouds, can antagonistically impact the essential areas of the space shuttle/rocket, resulting in debilitating scenarios if disregarded. Space transports have an expansive number of sensitive electronic components that are powerless to such unforgiving weather conditions. Incidentally, a few launches have fizzled due to unfavourable weather conditions. For illustration, Apollo 12 was planned to be launched from Kennedy Space Middle, arranged in Florida, US (also known as the lighting capital of Joined together States) on November 14th, 1969. When the rocket voyaged through the storm cloud at almost 610 meters, it created a static charge, which came about in lightning, and the space carry was struck twice by lightning shortly after launch of 36.5 seconds and after that at 52 seconds. This brought about a brief control misfortune, and space travellers were incapable of connecting with the mission control framework. Even though the truth was that the disturbance was brief and frightened everybody, the shuttle was fruitful since the pilots were able to hold contact with mission control and re-establish control after the strike. Despite the mission's victory, NASA was constrained to re-evaluate its system, which must be retested sometime recently the spacecraft's flight. NASA formulated numerous strategies to secure the carry from lightning strikes. They too took steps to strengthen shuttle plans in arrange to withstand the striking impact. For the most part, launches are postponed in case the lighting appears as well effective or threatening to the

mission. Another catastrophe due to the unforgiving climate was in the year 1986. NASA misplaced seven crewmembers and a 1.2 billion dollar carry in the space carry accident named, Challenger, on January 28, 1986, when the rocket's O-ring fizzled. Concurring to the inquiry reports, the solidness of the O-ring was caused by the weather on the day of launch, being too cold and the temperature being exceptionally low. After the launch, the solidified O-ring was unable to seal the joints, coming about within the discharge of hot gasses into the outside fuel tank and, in this way, the shuttle's blast after 73 seconds of its take off. This shocking catastrophe caused the engineers and other members of the group to consider the weather conditions on the day of dispatch, as well as work on the plan of the carry to outlive the extraordinary climate circumstances.

An assortment of causes or climate conditions can cause the arranged dispatch date to be delayed. Because the carry could be a complicated vehicle, the effect of each component on it must be continuously monitored. Rainstorms, high-velocity winds, and lightning can all hurt the dispatch vehicle. Low clouds might also obscure the pilot's view during take-off. High-velocity winds can disturb the shuttle's route and cause damage. So also, electrical storms or lightning can cause electronic harm. This can harm the electronic sensors and the whole board, putting the carry and crewmembers' lives in danger. Other environmental conditions, such as high temperatures, can cause the carry framework to overheat. The mugginess of the discussion influences the warm shield of the make. Whereas low mugginess makes the shield brittle and helpless to breakage, tall humidity makes the warm shield less effective. Furthermore, the dew point, or temperature at which vapors within the air start to condense, maybe a noteworthy issue on the day of the dispatch. If the dew point is too low and the humidity is high, the dewdrops initiate the development of clouds, which can impede the pilot's view during take-off or landing. These can jeopardize the shuttle's safety.

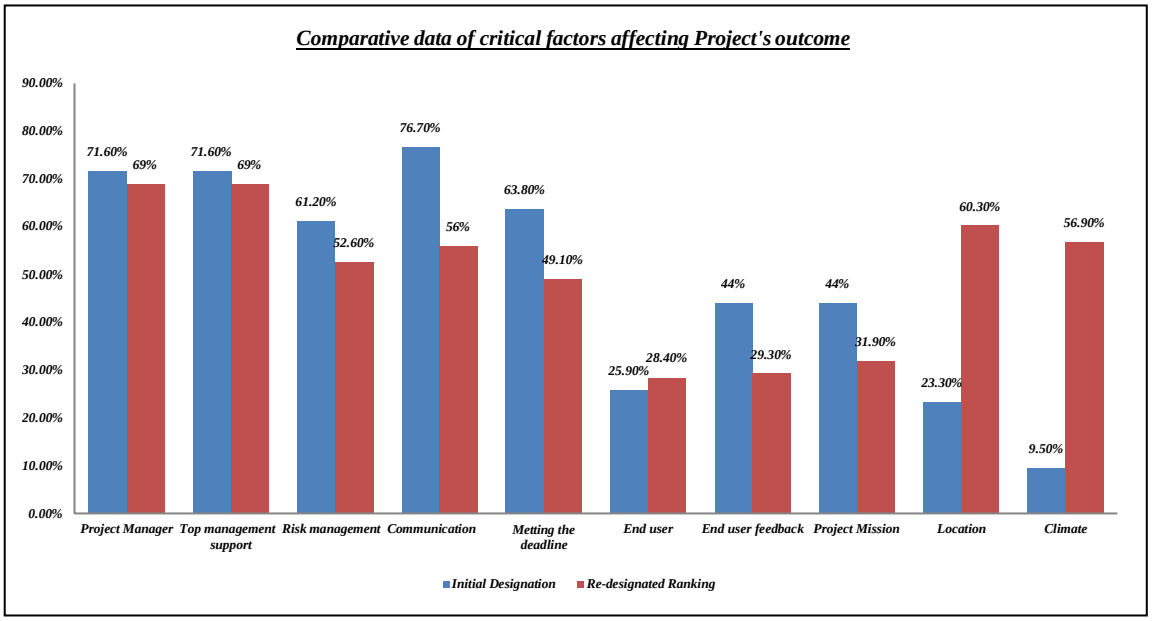
NASA and SpaceX closely ponder climate trends in arrange to address such challenges. NASA includes a group of metrological specialists who work around the clock to dissect the weather conditions on the day of launch and make launch choices. Engineers and researchers use their skills to securely sort out the launch. The information collected is examined utilizing climate balloons, radars, and disciple photography. Computer approaches are being utilized to simulate meteorological conditions on the launch day. A lot has also changed within the designs of the carry to make them stronger so that they can withstand the cruel climate, however, nature cannot be crushed. Despite these efforts, NASA is forced to delay launches if climate conditions are not positive. Falcon 9 was postponed in 2017 owing to high-altitude winds. Another shuttle delivering Dragon cargo to the International Space Station was postponed in 2019 due to high-velocity winds that seemed to harm the shuttle. Numerous comparable delays have happened in the title of weather/climate, posturing challenges for both the crew and other mission members. The delays not only interrupt the crew's timetable but also have a wide-ranging effect. When a carry dispatch is planned, numerous other occasions take after suit. The carry transports supplies and other assets. Besides, amplified delays might increment mission costs if shuttle equipment needs to be modified or replaced. Additional testing due to the harsh climate raises the cost of the launch mission. As a result, the costs brought about are the result of elements that were never considered noteworthy.



Role of weather/climate in delay of SpaceX launch

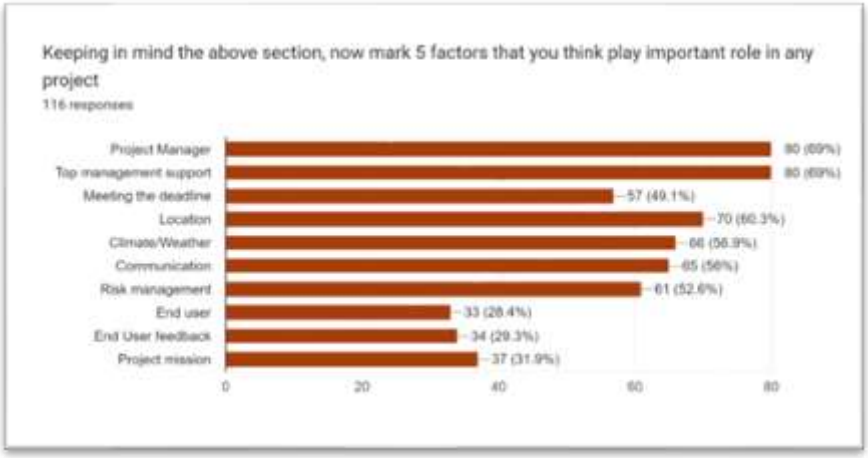
12 h) Redesignation of factors.

After answering all of the questions, respondents were placed in situations in which they had to pick whether they would ignore the discussed elements i.e. climate and location, or prioritise them before moving forward. These situations ranged from vacation planning to starting a business. Respondents were asked to re-rank these factors after encountering these events. The results revealed a significant shift from what had previously been observed. Initially, 76.7% of respondents identified communication as the most important aspect determining project success or failure. However, after the instances were presented to them, this percentage dropped to 56%. The project manager role and senior management support snatched the first slot, which was previously in second place. Where, the location and climate were both placed ninth and tenth respectively, after completing the entire questionnaire, they rose to second and third place.



Bar graph showing comparative data of critical factors affecting project's outcome submitted by respondents before and after specific scenario given to them

The comparative statistics given in the bar graph above clearly illustrate that the shift has been detected in practically all of the components. The dramatic increase in the ratio of climate and location has demonstrated that researchers' previous views have taken a back seat. In the graph, both elements that were not assigned their proper weight have risen to the second and third positions. The survey situation caused respondents to re-evaluate the criteria and realise that, despite all other key factors in place, the climate of a place and the location are both vital and should be considered before any project is launched.



Re-designation of Critical factors affecting project success

13) Implication of Study

Introduction

An English cite by Francis Bacon “Read not to negate and confute, nor to accept and take for allowed, nor to discover conversation and talk, but to weigh and consider.” states that perusing writing isn't approximately finding contrasts of supposition or getting a handle on everything composed without considering around it. The essential objective of considering the writing is to examine, weigh, and scrutinize what has been specified prior. Essentially, the objective of this paper is not to invalidate what researchers have already organized, but to bring to light the factors that they have overlooked.

In today's environment, the foremost essential prerequisite is the effective completion of a project. Richardson, (1995) claimed that no single angle may lead to extend sucess. Alternatively, maybe, the success of each try is subordinate on a comprehensive methodology and is interconnected. As a result, all of the components must be altogether examined in arrange to maintain a strategic distance from disappointment.

Ignoring the main success factors that influence the project can risk the project's result. A few already obscure perspectives have been emphasized in this ponder, so that their thought can help venture agents in accomplishing the specified conclusion.

Theoretical Implications

This work will have noteworthy results for scholarly researchers as well as for everybody who is putting up anything, expansive or small.

This paper about incorporates investigate suggestions that cite the most perspectives that can lead to the success or failure of a project or can influence the project in any way that is critical. Mir, F.A. and Pinnington, A.H. (2014), in their study, expressed that the components that can lead to the success of a project, show up to be distinctive from what they are. Whereas past investigate accentuated best administration, communication, extend management, and numerous other components that are vital for any project's success, there was small prove of area and climate playing a part in venture result. Subsequently, this paper has opened a modern road for future analysts to explore these components in detail and in several situations. Agreeing to Denzin and Lincoln in 2005, case study may be a sort of subjective inquire about that makes a difference to decipher information employing a naturalistic approach to assist individuals get it marvels happening within the common world with settings that, when compared to other cases holding on within the same circumstance, gives an coordinates point of view of that occurrence as well. Gerring, in 2004 underlined that case studies in a thesis are critical since they include a single full unit in which and around which a point by point examination is being done to examine bigger units with the same scenarios. In this manner, presenting case studies in this article would accentuate the significance of each of these components, which can have a noteworthy effect on the result. Rethinking the fundamental components that have already been put at the beat and after that including both of these perspectives to the list will help researchers in understanding the pertinence of the work that area or climate plays when a extend is started. Counting them among the other criteria would offer assistance analysts assess the impact they might have had on any fizzled try.

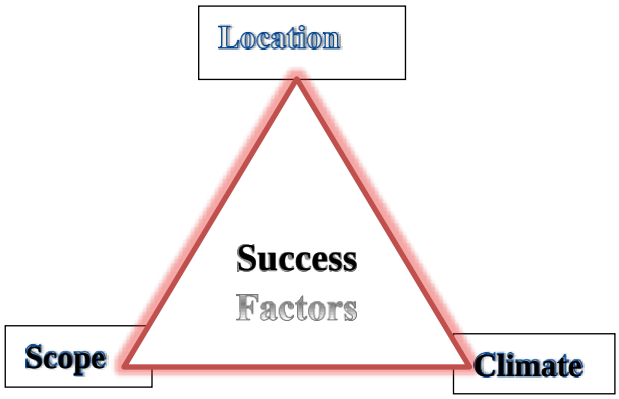
Reading the article will help future directors in passing on the information gathered from the articles to their future organizers. This exposition will moreover assist future researchers or

anyone involved in a project to gain the foremost understanding about these two components where the project must start. Considering the components in depth will help them in comprehending the extra data required in the field of dangers included, extra costs required, extra individuals required, or any other assets required to create the venture effective.

Pollack, Rudder and Adler in 2018 viewed IRON TRIANGLE to be contentious and attempted to explore other aspects that contribute to the success of any project. In 2002, Cooke-Davies, in their article stated that the project administration triangle is not satisfactory to characterize any project's success. From this time forward, supporting this articulation, the project management triangle or the golden triangle that has already examined, in which time, scope and money were seen as the foremost important variables, can be re-evaluated. Getting into the significance of all the three, it is concurred that the time outline in which the project must be concluded, is vital because no matter how noteworthy or useful a project is, if it is not completed inside the period, at that point all of the endeavours within the project come up short. Typically, due to the truth that the ultimate item of each endeavour contains a time. Each product runs with demand and supply chain. Its success is decided by market demand and rivals within the market. In case the final product is provided some time recently before the competitors, the chances of success and covering the market are essentially more prominent than those of the rivals. Talking around the second factor of iron triangle, the cost, if the project is completed or gives the finished product of the project in a time and the scope of the item is reasonable, but the budget of the product surpasses the anticipated budget, the benefit rate will surely reduce. Ultimately, launching any product with negligible scope, even if the budget and time of launching the product aligns with what was anticipated during the conception state, would lack the inherent excitement and viability that stems from the market demand. As emphasized prior, the success of any product pivots upon the presence of a

robust market request that infer benefit. In this manner, the nonattendance of both scope and demand renders the endeavours unrewarding and reduces the fulfilment inferred from its launch. All of these variables are evidently fundamental and deserve to be at the best of the list. When setting out on a project, it is crucial to consider all important variables, counting assessed cost, comprehensive item research and convenient completion. However, overlooking the significance of area and weather/climate conditions presents a basic variable that can lead to project's disappointment. If these components (location/Climate) are neglected and other standard resources are regularly apportioned based on routine scenarios, so when the impact of area and weather/climate became apparent, extra investments are frequently essential to moderate their affect. Completely investigating the location and understanding its suggestion on the project, as well as recognizing the particular weather or climate conditions required, empowers the determination of an area that essentially contributes to the project's eventual success. Moreover, the endeavour to inquire about the threats related with that zone or climate conditions in arrange to restrain their affect is also one of the topics that has to be examined in points of interest. As a result, it is believed that the project management triangle ought to be reassessed. Putting these two factors at the best of the list, among others, has affected to reassess the project management triangle, so advance altering has been done by including location and climate/weather, or by supplanting, the two previously assigned components with climate/weather and extend area. The three most imperative factors that must be included in the project triangle are location, climate and scope. Hence, the presentation of the novel triangle framework would give researchers with a valuable instrument to comprehensively comprehend and prioritize various factors inside a project. By joining this modern viewpoint, analysts can pick up a more profound understanding of the importance of area and weather/climate contemplations, enabling them

to designate fitting significance to these components in connection to others. This approach underlines the need of carefully considering these elements some time recently making asset assignments, empowering a more educated decision-making prepare that accounts for their characteristic impact.



The Iron Triangle of Project Management

Practical Implications

This study about has exceptionally pivotal down to earth suggestions. The stakeholders or anyone else included in the project would profit from this research. People, in common, do not consider the esteem of area or climate some time recently beginning a project. This article will underline the centrality of both of these factors, permitting people to consider them indeed some time recently the project is conceived. This will also shed light on effect of these two factors on loads of other extend measurements like cost, time, dangers involved hence, will donate all-encompassing nature of these variables. The findings will help future practitioners appreciate the importance of location and climate, as well as the results of ignoring these perspectives. They would organize them and evaluate these factors, permitting them to superior make their ideas. Thought of both area and climate some time recently

starting a extend will help them get it the work they play and, as a result, they will be able to arrange for the dangers connected, if and when, these components exceed the planned focal points. Practical implications would without a doubt help them in bringing down the costs that they must endure, if and when project members weaken these two criteria. Taking both of these components and arrangement into consideration, the venture would undoubtedly boost the project's chances of success. Planning assets and allocating them concurring to need would offer assistance to the essential areas and increment the probability of victory. Stakeholders and project managers who must carry out the complete project's execution can use this information to form a choice and arrange of action. This report will be useful not just for projects in the conception stages, but also for those that have already begun or are nearing conclusion. For example, in the event that the project has as of now started, this article can still assist with proceeding activities by adding extra assets that can reduce the dangers associated. Not as it were that, but moreover the hypothetical data picked up by professionals after perusing the article and applying it to their real-life projects can be utilized in consequent activities, shaping a circle of projects and expanding the success rate to completion. Utilizing this article, they will pick up better grasp of the dangers included in ignoring or not taking them as truly as they should have at the begin of extend.

Greener S. in 2018 underscored the importance of highlighting the limitations of any research done because it helps or instigates the future learners to discover unused prospects in that specific field bringing modern approaches and way to find unused aspects of that research done. In any case, this article has provided a supportive understanding into components and the consequences that one must persevere when both or each of these variables are not given their due consideration, there are a few limitations that require to be highlighted. Agreeing to Chasan-TaberL., in 2014, the analyst ought to clarify the impact of his research about

restrictions on the legitimacy of his findings so that future researchers might attempt to eliminate the limits. Keeping this in intellect, the shortcomings of this paper are highlighted, the test size used to get the conclusions in the survey is restricted to a little parcel of the populace at large, which may have constrained the general viewpoint of this research. In the future, the analysts can increment the test estimate of respondents, coming about in assorted perspectives, and it can at that point, be chosen, whether the discoveries are appropriate in other scenarios.

Another disadvantage of the information is that as it were few cases were displayed in which respondents were asked to rank whether area or climate played any impact in that specific occasion. In the future, more research can be conducted in different settings to adequately understand and assess the impact of these two factors. Finally, the survey method was limited to a single geographical location, specifically India. Future studies can be attempted in a variety of zones to deliver improved comes about.

Despite these imperatives, this research article has given understanding into these two variables and the affect they play in project's result.

14) CONCLUSION

This chapter will abridge the important investigate findings in regard to the research aims and research questions, as well as their worth and commitment. It will also look at the study's weaknesses such as qualitative nature of the research article, dependence on case studies, and potential biases in survey are addressed. Proposals for future research are given, proposing quantitative studies to validate the quantitative discoveries, investigating specific industry applications, and considering the interplay between the area, climate and other extend administration components.

This paper outlines the reason, which is to bring to light two variables that were already underemphasized variables of any project, which are area and climate. The point of the paper is comprehensive investigation of these components, understanding their potential effect on project, and examining whether considering them can improve its success.

The thesis's writing survey highlights all of the criteria that have continuously been on the list when critical components are specified. The writing made a difference to dive into existing body of information with respect to communication, Top-Level Management Support, Project Manager, Risk Management, Client Consultation, and Project Mission are only a number of the factors that have continuously been organized. Some of these in this paper have been included, such as best administration bolster, the responsibility of project manager, the need of communication, and risk management. These components are completely tended to in arrange to have an understanding of the part they play within the venture. After investigating tons of writing, it was found that there is a chasm within the researchers' prior discoveries. Area and climate are the two variables that were never considered or indeed recognized in nearly all of the discoveries. It was basic to decide the noteworthiness of these theorized

components, address this void, and decide the significance of these two variables is accentuated.

Firstly, the objective in this paper was to investigate in profundity what these components are and how they can influence the venture in spite of all of the other components satisfying their parts superbly. The other objective was to see on the off chance that both of these causes seem without a doubt bring the about fruitful extend to a stop. In addition, is it doable that in case as it were considering the part of these angles, can amplify the success of the project? As a result, qualitative methodology has been tried to bring it in spotlight. This paper gives five case studies in which one or both of these components were not given weightage as required by any project. The main purpose of bringing these case studies in this paper is to secure the realities and to discover the outcomes of project that were started without considering the location of the project or the climate of that locale.

Case Study No. 1

Within the occurrence of the Chaudi Canacona building collapse, the project was started without taking into consideration the special idiosyncrasies of the locale. When a construction project is laid out, the area, particularly the soil study about of that area, is required to determine the greatest stack that it can withstand. In this case, the stake holders overlooked this basic issue and started development on a place whose weight bearing capacity was very less. As a result, it can contend that it is basic to conduct a location examination before starting any construction project. Since distinctive soil sorts have variable load-bearing capacity, establishment plan must be adjusted legitimately to guarantee the structure's solidness and security. Not as it were is soil investigation crucial, but also so are other geographical contemplations, geotechnical soundness, surge concerns, and so on.

Overlooking the soil think about of that area had critical suggestions on the building and result of which was collapse of Chaudi Canacona and hooking lives of numerous.

Case Study 2

Within the case of Six Flags New England, Massachusetts, this adventure park is closed all through the winter season due to snow. This demonstrates how Six Flags New England adventure park is highly seasonal. In spite of the fact that, typically one of the foremost operational and prevalent enterprise parks in Massachusetts, still there are factors that tend to effect the park so much so that the park has to get to close its activities amid the winter season. This include lower income owing to inaccessibility of guests to the park, which implies no ticket deals, nourishment or refreshment deals, item deals, or income created by direct visits. In spite of the reality that no salary is earned amid that time, the experience parks endure extra costs such as staffs pay rates, utilities, upkeep charges, security, and other costs.

Subsequently, it can concluded, all of these components have an effect on the income earned in parks located in harsh climate condition zones, on the opposite, parks found in moderate climate zones are unaffected by climate or climate. They are operational all year circular. Regular or climate reliance of business diminishes income and increments operational costs, requiring a well-planned trade methodology to restrain the impact of closure and protect budgetary solidness.

Case Study No-3

Within the case of the Koramangala Flat Vs HAL airport, the financial specialist made a costly botch by neglecting the satisfactorily survey of the location before commencing the construction project. This case study serves as an update of the results that can emerge when

the noteworthiness of the project's encompassing is neglected. Particularly, the disappointment to deconstruct the account of Koramangala Loft earlier to getting the vital No Objection Certificate (NOC) come about in substantial monetary misfortunes.

Earlier to initiating any construction project nearness to an air terminal, it is basic for the financial specialist to carefully consider a range of concerns. The airplane terminal possesses total jurisdiction to end the development exercises in case the stature of the proposed project falls flat to comply with the endorsed stature controls built up by the neighbouring airplane terminal specialists. Non-compliance with these necessities can pull in fines or punishments forced by the air terminal specialists, depending on the seriousness of the violation. In case where the development project falls inside the Inner Horizontal Surface, the airplane terminal specialist saves the complete control to request a diminishment in height or indeed the devastation of the structure, as was seen in this specific case.

To avoid such undesirable results, it is crucial for nearby arranging specialists to collaborate with airplane terminal in arrange to comprehend the zoning necessities, height restrictions, and any other safeguarding regulations in put to prevent future non-compliance. Neglecting to consider the area can result in miscalculations, allow and administrative mistakes, as well as delays in getting government endorsements. These ventures difficulties constantly lead to expanded monetary costs and time invades.

Subsequently, it is clear that the preeminent and most significant perspectives to be taken into account before setting out on any construction project, is the area itself. All other components related with the project will hence be contingent upon this essential component, underscoring the significance of thorough and constant assessment within the early stages of arranging.

Case Study-4

The presence of businesses in private or commercial regions can donate rise to various challenges and results that adversely influence both the environment and the encompassing community. One such example is the operations of rice process of Dinesh Chand, which included processes that resulted in discharging harmful dust particles, causing noise pollution, radiating obnoxious smells from by-products, and posturing security and fire dangers. These components necessitated relocation or closure of such businesses due to non-compliance with zoning controls and potential hurt postured to adjacent inhabitants. This same has happened with Dinesh Chand, in which he had to relocate his rice mill to other place. His rice process discharged destructive dust/husk particles during cleaning, husking, cleaning and processing operations of rice grains that contributed to air contamination, posturing dangers to human health and the environment. Moreover, hardware and generators used within the mechanical facility generate commotion contamination, disturbing the tranquillity of the encompassing private regions. The generation of bran and husk as by-products advance contributes to unsavoury smell, influencing the quality of life for near-by private regions. The natural and wellbeing suggestions required the usage of appropriate measures to relieve contamination and ensure community well-being.

The establishment of industrial facility in private or commercial ranges highlights the significance of zoning directions and land-use plans. Towns and cities regularly have assigned zones for residential, commercial and industrial purposes, pointing to limit the clashes between these areas. Disappointment to comply with these directions can result in punishments, closure, or the require of migration. In this manner, industrial investors must prioritize through area appraisals, guaranteeing that their proposed industrial zones and nearby land-use plans.

Therefore, it can concluded that rice plants or other such industrial facilities in private or commercial regions postures dangers and conflicts, counting contamination, safety hazards, and non-compliance with zoning regulations. The cautious selection of appropriate location, adherence to security and environmental standards, and compliance with zoning controls are significant for industrial investors to relieve these dangers and ensure the well-being of nearby inhabitants. By considering these components, industrial development can be achieved in a way that promotes harmonious coexistence between businesses and residential communities.

Case Study- 5

Snowfall in Texas in February 2021 constrained the shutdown of the Motiva Port Arthur Refinery, disturbing people's lives owing to a need of gasoline required to warm and power houses. Closing oil refineries due to critical snow climate is very common in areas with unforgiving winters. Extraordinary climate conditions makes working conditions within the refinery agonizing for the faculty. Fuel shortage cause shuttle problems, and ice aggregation on roadways causes mishaps. All of these issues make staff movement troublesome. Moreover, an expanded winter with thick snow influences overwhelming gear and apparatus, coming about in mischances and other fiascos. To guarantee the security of their workers and the keenness of their machinery, refinery owners curtail or near operations amid serious weather. Although request for fuel and vitality rises all through the winter, supply falls. Oil channels and transfer lines solidify in the winter, rendering oil conveyance to homes troublesome. The choice to near and revive the refinery is influenced by variables such as climate seriousness and operational reasonability.

All of these components that cause intrusion due to climate conditions driven to the conclusion that weather conditions play a critical role within the operations of the refinery and subsequently within the lives of individuals.

These case studies have helped gather empirical evidences and ascertain the outcome of projects that are started without legitimate assessment of location or climate. The result of ignoring these two components, was not that might have been anticipated when the project was conceived. The costs of not considering these variables, as critical factors, were colossal that the stakeholders and all others associated with the project had to bear. In all of the case studies, either the project failed or they had to confront extra costs that were not portion of or reflected in at the time of its beginning. Since of the discoveries of these case studies, it can inferred that it is critical to examine the location as well as the climate of the location where the project must be initiated, if the objective is to achieve the craved results. In addition, these two aspects must be given their due if the extend is to be completed without bringing about extra costs.

Followed to the case studies, to get the public's point of view, questionnaire has been included, in which a number of personal questions about their age, occupations, and projects they have worked on, and so on are inquired, and taken after by their considerations on the variables that they accept are critical and play an imperative part within the success or failure of a project. In this question, they were asked to rank the factors that prior analysts had as of now organized in their studies. In expansion to these contemplations, area and climate are also presented. As anticipated, area and climate were positioned last within the list of criteria. To underline the noteworthiness of these two factors, many questions were postured in which respondents were given scenarios in which they had to decide if the location of their project or the climate in which it would be propelled would have any critical impact. The majority of

the reactions favoured these two prior neglected elements. The last question was to re-rank the previously mentioned components, as the significance of location and climate was presently greatly apparent in comparison to what was as of now assessed by the respondents. The result presently has shown a colossal increment in the number of respondents who accept that these two components, specifically climate and location, are amazingly noteworthy and must be accorded the weight they deserve.

INFERENCE OF CASE STUDIES AND SURVEY METHOD

The integrated approach of both qualitative case studies and quantitative survey method has illustrated the effect of both location and climate on the success or failure of any project. Researchers never considered both of these criteria to be critical components affecting the result of any project. Nonetheless, when case studies included within the paper are inspected, they clearly appear and back the paper's speculation that how dismissing these variables affects the projecte or other parameters associated with it.

a) Collapse of the Chaudi Canacona building clearly bolster the theory H1 and H2 that external components like location and climate have a tremendous effect on the success or failure of any project which disregarding them (in this case location) can lead to failure of an ongoing project. If the builder had inspected the soil profile of that location, he may have decreased the probability of collapse by taking the vital safeguards. Overlooking the region where he started development fetched him workers' lives as well as monetary misfortunes. It moreover demonstrates the paper's goals by illustrating that in case external factors are inspected, it can reduce the dangers included; in any case, minimizing these risks will keep

the allocated budget under control. As a result, it addresses the third reason, specifically, that it is outlandish to have zero or negligible effect on the campaign.

b) The climate/weather of an area not only influences the individuals who live there but also the projects and enterprises. The Six Flag New England unequivocally approves speculation H2 that outside conditions (in this case, climate) of any project, when given adequate weight, boost the chances of success. Even though the park is not a flounder, profit drop significantly amid the winter. Due to security concerns, enterprise parks found in extraordinary climatic conditions must be near or have diminished foot activity all through the winter. This has an impact on the profitability of the enterprise parks. Parks in mild regions, on the other hand, have about the same footfall all year. As a result, it addresses the third reason, specifically that it cannot have zero or negligible effect on the campaign indeed on the off chance that partners endeavour to limit these circumstances.

c) The third case study affirms theory H2, which states that giving outside perspectives (in this case, location) to any extent their legitimate need increases the chances of success. When the Koramangala Flat was nearing completion, the builder was constrained to end construction since he ignored the importance of considering the location as deciding factor and started development inside the airport's security zone. This not only postponed the completion of his extension, but he too had to decimate the structure of his flat so that it did not meddle with discussion activity in that range. On the off chance that the builder had considered the location where he started the project, he would have done the complete due diligence since the construction project was found near the HAL air terminal. In that circumstance, he seems to have maintained a strategic distance from any delays or devastation of the project's structure, which now has brought about in critical money-related misfortunes. As a result, the objective 2nd and 3rd have been met, as this case study uncovers

that disregarding these factors comes about in money-related misfortunes, and delays, and consequently moderates down execution and chances of success.

d) Earlier to opening the rice process, Dinesh, the mill proprietor, disregarded the location of his mill, beginning his trade in a private region, which caused challenges to his otherwise booming operation. As a result of his irresponsibility, he had to confront court procedures, pay a fine, and move his commerce. Moving from a private area to an industrial zone, that are allocated in each municipality so that the inhabitants do not encounter environmental issues because of industrial activities. The theories H1, H2, and H3 are demonstrated by this case study. Overlooking the position where he ought to have introduced his rice mill, he introduced it in a private neighbourhood, coming about in him not only having to pay the fine, but too having to desist his developing business, face misfortunes, and put in additional money to move it to the industrial zone. As a result, the moment reason of the article is met by expressing that his rice process was operating well, but the most imperfection was the mill's area, which eventually cost him when he had to migrate it.

e) The closure of the Motiva Port Auther Refinery in February 2021 due to extraordinary snowfall confirms the hypothesis of this study (in this case, climate), that the climate of an area where the project is established affects the project’s outcome or effects the other related parameters. Other characteristics that are influenced by the climate of that place incorporate the costs brought about to the complete project, the profit made by the company, and the time of conveyance of the wrapped-up item. When the refinery was closed due to overwhelming snowfall, the profitablity of the refinery diminished, and it had to go up against extra impediments due to the noteworthy snowfall, such as equipment failure and pipeline solidifying, among other things. If the refinery had been found someplace where there was no extraordinary climate, it would not have closed and its operations would have

gone easily. This case study approves the H1 and illustrates that the effect of these two components cannot be decreased to zero.

Taking into consideration the survey, where members were asked to rate five criteria out of ten that were allotted weightage by analysts, counting area and climate, the last mentioned got just 23.30% and 9.50% of votes, respectively. However, when respondents were displayed with a few situations in which they had to choose the characteristics they thought were noteworthy, the rate of area and climate expanded significantly. The location that got 23.30% votes, which expanded to 60.30%, whereas the climate has gotten as it were 9.50% votes, which expanded to 56.90%. This clearly illustrates that participants to begin with expected, agreeing to the writing, that climate and area had no impact on the project. However, when confronted with specific issues and asked to think for all intents and purposes, they figured it out that location and climate, among other variables, are extremely important in the project and can decide whether it succeeds or falls flat. It affects other critical factors of the project. In all of the scenarios displayed, most of the members concurred on the part, that these variables play important role, whether it is the role of climate/location in the agribusiness industry, building a house/apartment, opening a hotel/creative industry/manufacturing facility, arranging a vacation, or the delay of a Space X launch. This increase within the rate of climate and location bolsters speculation H1, H2, and H3 that outside impacts do have a fundamental portion in the success or failure of the project and, if they are considered, can amplify the chances of success. As a result, it contributes to the paper's goal of illustrating that the speculation was rectified and that these components ought to be given appropriate thought before starting any project.

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