International Journal of Management, IT & Engineering
Vol. 10 Issue 06, June 2020,
ISSN: 2249-0558 Impact Factor: 7.119
Journal Homepage: http://www.ijmra.us, Email: editorijmie@gmail.com
Double-Blind Peer Reviewed Refereed Open Access International Journal - Included in the International Serial Directories Indexed & Listed at: Ulrich's Periodicals Directory ©, U.S.A., Open J-Gate as well as in Cabell's Directories of Publishing Opportunities, U.S.A

NEED OF PROJECT MANAGEMENT PRINCIPLES IN LARGE CONSTRUCTION PROJECTS

By BIENVENIDO MERCADO MAUNAHAN, Research Scholar, Construction Project Management, IIC University of Technology, Cambodia.

Abstract

"Failure" is the natural state of a project and this is no more valid than in the world of major large ventures where "fail" is two out of three ventures. A framework for success is not provided by current project management theory. In this paper, in the context of the ongoing development of general management philosophy and the ideas of management and projects discussed, the existing theoretical structure for managing broad complicated projects is regarded. Characteristics in broad dynamic programmes are analysed and proposed improvements in management viewpoints. The aim of this paper is to move beyond the author's previous question of "Is it time to rethink the theory of project management" to suggest some of the essential perspectives and focal changes that are likely to include such a rethink. And as science philosophy changed from a strictly classical perspective to a classical and relativistic (or neo-classical) perspective, each with its own scalar realms, so too must the world be best served by broad dynamic ventures. Big, complex engineering and building projects are the major complex projects contemplated in this report, although some may judge their findings to extend similarly in other fields. Extensive footnotes are meant to help reinforce the viewpoints of the speaker and provide readers with avenues for more reading and insight.

Keywords: *project management, large construction projects.*

INTRODUCTION

Webster's dictionary describes a project as a scheme or idea to do something, or a programme may be used to undertake or execute a coordinated action or mission. However, there is something that the country, the government or a business entity or a person needs to do. This very issue establishes the foundation for the initiation of a project specification. The concept of the project is theoretically viable, commercially viable, morally reasonable and socially acceptable, because the entire definition of the project involves an examination of the resources involved. The project begins when the investment plan is accepted. To fulfil a goal, a project is therefore launched-whatever the task might be. As soon as the task is accomplished, a project is finished. The project exists during these cut-off stages, so this time period is regarded as the life cycle of the product. It may also be stated that the project begins with a definite objective from scratch, produces operations requiring a range of human and non-human capital, both geared at achieving the task and ends until the task is achieved. "It is described by the project Management Institute USA as:" A project is a one-shot, time-limited target, a big understanding that involves the dedication of multiple expertise and resources. It also identifies a project as a mixture of human and non-human capital pooled together to accomplish a particular goal in a temporary organisation. A project is described by UNIDO (United Nations Industrial Development Organisation Vienna) as "a plan for an initiative to construct and/or expand certain facilities to increase the output of goods and/or services for a certain period of time. The word project is defined by Baun and Tolbert as" a distinct package of initiative policy initiatives and administrative and other steps intended to increase the production of goods and/or services

In order to drive economic and social change and to bring about better living conditions (improved health, education and housing facilities) for their citizens, the main developers, funders and

implementers of development initiatives have been the governments of developed countries. It is not important to stress the significance of the project as a capital of smaller or greater significance is involved with any such project. Because of this very reason, the word "project" money, which is a precious asset, has gained worldwide attention as a method for the growth phase.

In this decade, project managers are experiencing highly challenging obstacles. These problems are the product of high raw materials inflation variables, heightened legislative demands, stakeholder strain, crashed delivery schedules, higher production costs and shortage of qualified labour, these environmental pressures have occurred previously, but not to the degree they are doing today. In the past, by embarking on the 'Somehow go get it' strategy, pioneers have managed to ease the burden of these environmental factors. The normal outcomes of these systems have been postponed as initiatives with lower quality requirements have been implemented. Project management is one of the tactics that can be seen to resolve organisational concerns through its proper application. The approach to project management is relatively new. It is distinguished by innovative organisational transformation approaches and the adaptation of specific management strategies in order to gain greater leverage and utilisation of the resources available.

CHARACTERISTICS OF PROJECT

- Projects have some functionality that are essential to all projects. These features may be assumed to be main features or intrinsic features, and can be described as below.
- It has well defined points of departure and ending.
- It incorporates a large spectrum of tools and expertise, including expense and time.
- It includes the collaboration of individuals and functional structures across organisational borders.
- It is an instrument of transformation that is remarkable in itself.
- Each project moves in sequence, i.e. what will happen precisely with every project is not necessarily understood beforehand before it begins the comprehensive engineering and development process.
- The project is often like a major work , i.e. it is single and produced to order.
- It is a mixture of different skills in science, tools , machinery, materials and persons. It can thus be said that unity in diversity is unity.
- Each project includes an implementation framework, i.e. a turnkey base, sub-contracting or cost plus base, etc.
- Any degree of difficulty and confusion is correlated with the Ever\ project. A badly specified initiative has a higher risk rating.

THE CONSTRUCTION PROJECT

Project management experience, for varied frameworks wherever numerous organisations are concerned, a project manager is needed. A building initiative calls for advanced project management expertise. The value of strategic management in building projects has been illustrated by Chinowsky and Meredith (2000). They also proposed a two-step approach for strategic construction company management. The first step is to define the vacancy, and the method of filling the hole is the next stage. In order to accomplish long-term targets, they have established seven fields of strategic interest for every construction firm. The building activity community encompasses an immense variety of tasks and works with various groups of individuals. The following was built.

(1) Nuclear power stations and hydropower stations

(2) Flyovers and bridges

(3) Networks on roads

(4) Put down train tracks and construct metros

(5) Tunnels

(6) Networks of lakes and canals, ports and harbors

(7) Airports

(8) Homes, i.e. hospitals, schools, cluster of accommodation, flats and goals.

(9) Factories

(10) Parks and resorts A little thought shows that the 1-6 schemes is generally managed by the municipality.

Just 6 to 10 are usually performed by both government and private organisations. In India, the government typically launches ventures that are for the common good, and the key beneficiaries are the citizens of the region. Such programmes are sponsored by the government or other organisations. For the formulation, execution and assessment of such programmes, there is a common protocol. Social Cost Value Analysis (SCBA) includes certain programmes. Two traditional approaches for SCBA are the United Nation Industrial Development Organization (UNIDO) system and the Mirless technique. In India, however, the Planning Commission has laid down its own processes for planning, reviewing, executing and judging initiatives. The multiple levels of every building scheme. In particular, the overall designed construction phase may be considered to consist of seven main components as follows:

(1) Concept of project.

(2) Provisional Preparation.

(3) Public resources recruitment.

(4) Planning a project.

(5) Content acquisition.

(6) Completion of the plant.

(7) Start-up project.

The owner looks for an accomplished construction engineer after identifying and conducting conceptual research. The work of the construction engineer and the contractor constructing the project is targeted at the same task, namely the development of something that can fulfil the reason for which it is designed in a satisfactory way. Construction is a design's primary target. Improving the efficiency of building is crucial on the part of the contractor and function Object() { [native code] }, while at the same time reducing the different construction costs. The designer / planner is responsible for creating the building, which would almost meet the owner 's desires at the lowest possible expense. Any large item should be analysed by the contractor to decide if the expense can be lowered without unduly affecting the value the project can offer. The planner should have the insight and insight to allow necessary design improvements, alter the building specifications and adjust the layout section in such a way that the project expense can be minimised without losing the important benefit. In fact, an engineer who follows this theory offers a clear benefit to his customer and to society in general. It also seems clear that if an architect wants to plan a project to be completed at the lowest possible expense, he should be fairly acquainted with the peculiarities of architecture, construction processes and prices.

Construction is basically a service sector that is responsible for transforming the designs and designs designed by an engineer or an architect into a constructed project. Plan design requires thousands of specifics and intricate interrelationships between developers, planners, builders, general contractors, specialist contractors , suppliers, vendors of supplies, dealers of supplies, government departments, urban planning departments, laboratories and others. At a defined period and expense, the contractor takes the responsibility for providing the finished facility. He acknowledges moral, financial and administrative responsibilities for doing so. More raw resources, industrial products such as cement and steel and finished goods are used by the building sector than any other business. As soon as the contractor appears in the picture, the next question emerges as to what the contract mode would be. There are three ways of contracting: contracting. Lump-sum contract; in the building sector, the unit price contract and cost plus contract are popular.

Project and Project management

Still now, entrepreneurs are financing more and more capital machinery programmes in an effort to maximise or boost efficiency without raising labour. Unfortunately, modern developers are quite constrained on how much they can reduce the expense of labour without placing the enterprise as a whole at high risk. In a capital project, expanding the capability is not always the solution. Therefore, developers have been compelled to search for answers to their challenges elsewhere. The entrepreneurs of today claim that the answer to most business challenges requires effective management and utilisation of current organisational tools. The focus is on searching at answers to these issues within the internal framework instead of externally. As part of the initiative to achieve an internal alternative, developers take a close look into the aspects in which organisational processes are handled.

Fifty years earlier, project management in the US Department of Defense and major road building corporations was limited to its operation. Today, the idea of project management is used in all fields and organisations, such as security, manufacturing, pharmaceuticals, plastics, petrochemicals, hotels, banks , hospitals, etc. In both technology and the market environment, the exponential pace of transition has placed tremendous strain on the current organisational types. The conventional approach of project management was overly hierarchical and practise revealed that it did not respond to a evolving world fast enough. The conventional approach may then be substituted by project management, which is highly dynamic and can adapt very quickly as conditions inside and outside the organisation evolve. Corporate leaders and researchers have long debated project management as one of the workable options that could combine difficult initiatives and remove wax from the method. It has not been simple to embrace project management, and often founders are not prepared to consider change and are inflexible when it comes to transitioning to a new setting. The approach to project management involves a break from the conventional hierarchical model of company, which is generally vertical, stressing a deep superior-subordinate partnership. Project management is no longer about maintaining the series of measures needed to finish the project on schedule, as per Harvey Maylor. It is about implementing the customer's voice efficiently, developing a disciplined means of prioritising action and addressing trade-offs, operating in multi-functional teams and even more on all facets of the project simultaneously. For example, a modern product production alignment with distribution , storage and after-sales service and so on requires far stronger connexions between project teams and downstream operations. In virtually any enterprise, there are tremendous potential to remove missed time and effort. Toyota reported in manufacturing that only 5% of operations actually add value, 35% are essential but do not add value, whereas the remaining 60% are pure waste-" Muda "in Japanese! They prove this "Muda" can be minimised by effective project management by halving the efforts to build a new vehicle. Each project manager will search for different ways to remove the Muda in their processes so that next time they can achieve better for fewer, and more efficiently!

Project management definition: Project management consists of preparing, coordinating, managing and regulating organisation capital with a comparatively short-term purpose that has been created to accomplish particular aims and goals.

Classical management is commonly known to have five roles, which are:

- Preparation
- Planning
- Staffing
- Monitoring
- Directing

As the project manager does not staff the project, the personnel role has been excluded from the above description. The duty of the line is manpower, and not that of project management. "Relatively" implies initiative in the short term. For a short-term project, not all divisions have the same meaning. The project might take six months to two years for engineering; three to five years for construction; up to ten

years for nuclear parts. A project must, within a pre-defined period, finish at a target. For eg, the day when the new factory hits maximum capacity, the day when the new purchase is taken over by the parent company's organisational management, or the day that the new product goes on sale in stores around the world. But when far more staff, more resources, more corporate divisions, and more time would be invested in the organisation's experience than most other uncommon undertaking, the test outcomes are obviously optimistic. Project management introduces a rational strategy to the project, speeds up decision-making and reduces time to a manageable amount for management. In terms of the number of persons and the corporate actions involved, a project might usually be charted as a wave-like curve over time, steadily increasing to a crest before suddenly falling off with the achievement of the end goal. The project starts with a few people researching if it is desirable to bring a commodity to the grid. In order to build the device, few engineers are employed after some early decisions to continue. Their job passes to hundreds of process planners, toolmakers, and other engineering engineers and eventually requires entire production facilities or departments as the development gathers traction in the first month. If salesmen raise their commitment to effectively launch the object, this momentum carries into the field. Finally, the effort of the project ebbs as the latest item is introduced into normal manufacturing and marketing operations.

Evolution of Project Management

Project management is an critical topic, since many businesses, small or large, are involved in the creation of new enterprises at one stage or another. These undertakings can be wide-ranging, such as the launch of a new product or service; the introduction of a new assembly line in a manufacturing undertaking; a public relations campaign plan; or a broad building project. In order to remain ahead of their competitors, companies are constantly met with the development of new products, innovations and processes with very short time-to - market windows, coupled with the need for cross-functional skills. In this situation, project management becomes a very important and successful tool in the hands of firms who know the implementation and have the skills to implement it. The evolution in project management capabilities in organisations, along with the implementation of information management frameworks, enables corporate teams to work collectively to define priorities and implement take-to market projects by synchronising team-oriented tasks, schedules, and resource allocations. It allows cross-functional teams to create and share details on initiatives. However, this is not required since information management systems have the capacity to allow the project management process to take place in a real-time environment. As a consequence of this intrinsic project management experience, participants dispersed globally or internationally can access and interact simultaneously with the same updated project information immediately, including project schedules, threaded forums, and other relevant materials. In this situation, the distributed use of the word takes on greater importance. It needs not only cross-functional management teams, but also the company's supply chain experts and business associates. Organizations are expected to follow macro-level project management techniques to ensure that their organisations (small or large) are finished on budget, under the expense goal and within the defined norm. At the micro stage, the priorities of project management combined with a suitable information management system are.

(a) A overhead costs on programmers.

(b) Customizing the project workspace to accommodate the operational style of the various project departments and team members.

(c) real-time systematic monitoring of Senior Management Strata development initiatives;

(d) Ensuring the communication between project team representatives of accurate, meaningful and timely project documentation; and

(e) Ensuring that critical deadlines for tasks are met.

Program management, as distinguished from project management, is the practise of supervising several related projects many times with the aim of maximising a company's effectiveness. The Task Manager has a overview of the purpose and success of all projects in an organisation and may utilise this overview to support project-level activities to ensuring that the general goals of the job are accomplished by providing a decision-making capability that can not be done at project level or by supplying the project manager with a business point of view if required or as a sounding board for advice. Although a specialist role might be necessary in large and/or demanding programmes, through continuously learning certain experience from project managers, the Program Manager may be better placed to provide this skill. This information arises, though, in order to be confident that the Program Manager needs something as the overall programme goals are practical. It often involves the generation of guidelines, the evaluation of problems and risks and the effects of the programme from the perspective of stakeholders, and the setting of priorities on an ongoing basis.
The topic of the study report is a comprehensive analysis of the programme and project management processes and implementation carried out by selected government and private companies in Karnataka. The human race, which started walking across the world many years ago, has been actively looking for innovative ways to boost the quality of its life. Their efforts were targeted at ensuring that food, clothing for warmth and protection were given to sustain them at all times. Mankind has often dreamed of a well-balanced growth that aims to surpass the limitations of its climate, such that its determination reduces, producing a path-breaking outcome that was not typically possible until then. It is this dream that has made man an innovator and inventor of methods, facilities , materials, dynamic structures and countless programmes. Man also developed organisational techniques and systems to achieve his innovations, which have now been developed into a new source of study called Project or Program Management. In recent years, project / programme management has been recognised as a specialty area in technical areas such as telecommunications , information technologies and biotechnology. Both firms have management systems, work divisions and industries located in different areas of the globe. Project / programme management challenges are addressed through a host of systems and processes that are Online and Internet-enabled. This congruence between the technological advancements of Development and the relevant project management tools has ensured that the targets of the company have been fulfilled in the face of globalisation 's demands. Public sector departments, such as government agencies, semi-governmental organisations and autonomous bodies, are some of the primary structures responsible for overseeing existing projects and services funded by federal, national and international governments. The management of these programmes and resources has become an concern in recent years, as their size, reach and importance have increased enormously. All partners need professional project managers and the execution companies have evolved various methods, strategies and procedures to deal with these requirements. All public sector agencies are under pressure to accomplish targets, deliver major development programmes and implement dramatic improvements in all aspects of their

activities. This presents a big performance responsibility combined with the compliance of the professional that leads to innovation.

A project is a basic effort under specifically specified time, cost and performance constraints to produce a set of deliverables (Westland Jason, 2006). Works differ from standard business activities, since they are:

(a) Unique in nature: it does not include repeated steps, though organisational activities also entail the execution of repetitive processes.

(b) Required by a defined timeline: Projects shall have a particular start and end date established within which deliverables shall be created in order to comply with the consumer specifications listed.

(c) Acceptance of the approved budget: the degree of financial expenditure in which deliverables are produced shall be allocated to the programmes for the purpose of satisfying the specified demand of the customer.

(d) Minimal resources: at the beginning of the project, an agreed sum of labour , equipment and materials may be allocated to the project. Projects need a degree of incomprehension and thus bear market effect.

(e) Designed to promote meaningful improvements: generally , the purpose of a project is to attain business targets through the execution of consumer growth.

Therefore, the term Project Management is more about the skills, facilities and system of management necessary to execute the project successfully within the specified timeframe, expense and performance. The introduction and combination of the Development , Planning, Acting, Regulating, Monitoring and Closing process of project management contributes to project management.

Project management has been deployed at the global level through diverse industries across countries as a method. In any of the fields, ventures have their own characteristics and factors that need modifications to the underlying principle of project management. IT, telecommunications, transport, the financial sector, pharmaceuticals, banking, engineering, the security sector, law enforcement agencies, airports, the public works department are some of the industries that utilise project management methods. Among them, private sector IT, telecommunications and technology were selected, while government agencies and public sector corporations were selected from the government sector. It was important to recognise the major contributors to the Project Management (PM) activities based in Bangalore in order to choose the sectors suitable for this analysis in Bangalore. It was also important to ensure that while researching the field, main aspects of PM activities are not blurred, so it was decided to select IT, Telecom, Infrastructure from the private sector; ISRO, Indian Railways, KRIDL, CPWD, KPWD were chosen from the government sector; and BSNL, KPTCL, Rural Electrification Company, BESCOM were considered from the public sector organisations. IT, telecoms, and utilities are some of the main contributors to the country's GDP. On ventures, they invest a considerable amount of time, commitment and resources. They have the highest pool of expertise employed on project management,

and these are also deemed to be ideal industries for our research analysis.

REVIEW OF LITERATURE

Method visualisation is a method used in a project to illustrate the different measures involved. Essential route analysis and PERT are two tools that are used in method mapping. Both were created by the U.S. military in the mid-20th century and have subsequently been commonly adopted in the corporate sector. The method of defining and counting the activities in a phase is the Project Assessment and Analysis Technique (PERT). To see how several activities will overlap and affect each other can be highly useful. The Critical Path Approach, which describes the critical activities involved in a plan, is strongly similar to PERT, those whose completion will have a favourable or negative effect on the project time line. (In 2005, Richards Leigh). Gantt maps are a system control tool that can be used to evaluate and coordinate very highly complicated procedures. Usually, Gantt maps are used to provide those interested in the execution of a project with a timetable and to better track if the project is on budget. (In 2005, Richards Leigh).An critical tool for setting the project scope is the Task Breakdown Framework. It defines the arrangement for what is included and what is not included in your end deliverable between you and your consumer. (2012 Mohammed K Barakat).

Microsoft Project is a well-suited platform for allocating funds to project activities and monitoring project achievements and deadlines. MS Project does not use a graphical dashboard to enable users view a project summary, nor does it enable members of the team to render annotations or feedback available to everyone. Provided the traditional Microsoft gui, in Project, several companies begin the scheduling phase and then move the file to a more dynamic project management framework. (2010: MacKechnie Chris)

Some organisations' initiatives have been unduly criticised for being badly designed, controlled, and allocated to them with inaccurate expense and time estimates. Whatever the reason, often, in terms of resources, time, or workers, it turns out that a project can cost too much. If the proposal continues to shift in this path, it could be recommended to spike it (Roberts Trevor, 2011). One of the potential solutions to paying so much for the project might be attempting to pay less for the product. (2012 at Woods Marian). Return on Investment (ROI) is a numerical calculation employed by a company to calculate the quality and efficacy of a project. There are several types of investment: financial , human resources , infrastructure and training programmes. (2010 Abudi Gina)

In India, studies on various aspects of project management are not big in amount. However, some famous Indian studies are taken into account here. The state of Indian project management has been researched by Mohanty and Tungare. Their research provides the first effort to outline the attitudes, judgments, articulations and aspirations of a variety of senior executives in relation to a range of challenges involved in the comprehensive management of the project throughout its life cycle. A good understanding of the existing state of affairs, major success drivers, and fiiture impeding developments in different business sectors has emerged from this exploratory analysis with different project leaders. This research provides a information base which can be beneficial in enhancing organisations operational productivity in meeting mission objectives for strategic value generation. (2007, by R.P. Mohanty and P.C. Tungare).

In India, partnership has not caught up. Faced with a shortage of accountability at both stages, there are unacceptable gaps on both public and private initiatives. Ashok Kumar discussed how the implementation of a technology that associated 70 organisations, 45 outside India who operated on the project, was one of the major exceptions in Indian project management. (2011 Ashok Kumar)

Sujoy Singh writing on the case study of producing a film in Project Management: Lagaan was one of the greatest accomplishments in Indian cinema, not just in terms of sales and worldwide recognition, but also for its massive size (including a foreign cast), remote location filming, 10,000 extras and a first-time director. While producing this video, this essay aims to capture the facets of project management and focuses on the reach, Job Breakdown Process, Risk Identification and Governance practises of the project. A virtual presentation of the whole phase of movie production can be presented through the viewpoint of Project Managers by integrating both. (In 2009, Sujoy Singh)

OBJECTIVES OF THE STUDY

- To define the resources and aids followed for project monitoring / control.
- To consider the challenges surrounding the strategy and method of project execution.

CONCLUSION

The paper aims to address the experience of authors in the implementation of major building processes in an IT business facility. Broad project management as a method of social cooperation to enhance the quality of civil works. The team has increased the efficiency of completing the cycles, reduced cycle times and removed delays. The authors take the view that attempts to introduce lean construction processes to Indian industry are at risk of failure if there are fundamental improvements to design and financial management in the processes involved. The authors also agree that a greater use of lean strategies with the above-mentioned process improvements will be more advantageous for all stakeholders.

REFERENCES

1. Abudi Gina, (2010) "Project Management Approach for Business Process Improvement" Project Smart London
2. Ashok Kumar, (2011) "How India's largest airport project was fast tracked" construction update.
3. AzzopardiSandro, (2010), "The Evolution of Project Management-Part 2", Project smart UK
4. BogoradIlya, (2009), "The Real Costs ofFailed Projects", Project Smart UK
5. Bennet P Lientz, Kathryn P Rhea, (2000),"On Time Technology Implementation", Academic Press UK. ISBN: 0-12-449975-9
6. Cleland I David and Gareis (2006)"Planning, Organizing and Controlling International Projects" (2nd Edition) - The McGraw-Hill Publications. ISBN: 978-0- 0714-6045-3
7. Clealand David I (2007) "Project Management: Strategic Design and Implementation" The McGraw-Hill Publications. ISBN-13: 978-0-07-147160-2.
8. Cleland, David L. Gareis, Roland (1994) "Global Project Management Handbook", McGraw-Hill Publications. ISBN- 0-07-011329-7

9. C R Kothari (2008) "Research Methodology-Methods & Techniques (Second Edition)", New Age International Publishers. ISBN: 81-224-1522-9.

10. Central Computer & Telecommunications Agency (2003) "Managing Successful Programmes", Stationary Office Books Publications. ISBN: 9780113309399 C R Kothari (2008)"Research Methodology-Methods & Techniques", New Age International Publishers. ISBN: 81-224-1522-9.