

**INTERNATIONAL JOURNAL OF ENGINEERING SCIENCES & RESEARCH
TECHNOLOGY****APPLYING MICROSOFT PROJECT PROFESSIONAL SOFTWARE, SAFETY &
RISK MANAGEMENT SYSTEMS IN CONSTRUCTION PROJECTS****Gaetan ^{*1}, Saurabh Singh ², Mayank Varshney ³ & Saidu Ibrahim ⁴**^{*1}M.Tech (Construction Engineering & Management), Suresh Gyan Vihar University Jaipur, Rajasthan²Research Guide Head of Department, Department of Civil Engineering, Suresh Gyan Vihar University, Jaipur, Rajasthan³Professor, Department of Civil Engineering, Suresh Gyan Vihar University, Jaipur, Rajasthan⁴M.Tech (Construction Engineering & Management), Suresh Gyan Vihar University, Jaipur, Rajasthan

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ABSTRACT

The research project task is to Apply Safety and Risk management systems in construction projects, and to use project management software as important tool, which is designed to assist a project manager in developing a plan, assigning resources to tasks, tracking progress, managing the budget, and analyzing workloads.

Every one of us is a manager of projects of our own life. From a house wife to an employee to financial analyst, from banker to doctor, from engineer to administrator, from a teacher to a student, we all work on different tasks with deadlines. Regardless of our occupation, norms, or location in an organization, we all work on tasks that are full of risks and involve people who do not usually work together. The project may have a simple goal that does not need many people or a great deal of money or it may be quite complex, calling for diverse skills and plethora of resources. But the bottom line is that every one of us manages projects. Construction in many countries, does in a Traditional way, this sometimes proves Uneconomical & Tedious too. Traditional way also proves to be Time Consuming, more risk and Confusing. The presented work will provide an Opportunity to clearly observe the difference between the Microsoft Project (MSP) and the Traditional Planning Techniques which speeds up Construction projects, risk management plan and also make the Project Cost Effective with Proper Planning with the help of the project management skills.

Rwanda has recently been named as one of the fastest growing country in Africa, this important research will support in infrastructure development of our country and succession of multiple construction projects and risk control. Therefore, in this connection of project management tool with safety and risk management systems in construction projects, I hope many project managers, engineers and stakeholders will benefit in this research.

KEYWORDS: Microsoft Project Software, Safety, Risk Management Systems & Construction Projects**I. INTRODUCTION**

The construction industry is perceived as a pillar industry in national economies. Construction projects encounter significant risks and uncertainties in term of safety, cost, time, and quality. These risks threaten the successful completion of these projects, slow the pace of development, and could impact the whole society.

The construction industry, however, is recognized as the one of the most hazardous industries [1]. The construction industry is also well known for its safety challenges [2]. The harsh work environment and the high workforce turnover negatively impact jobsite safety [3]. The work environment features high intensity of physical work, constantly changing site conditions, and less formally defined construction processes [4]. Its labor-equipment intensive nature places workers in harm's way. It is common that multiple trades work in the same area and therefore creates congestion and possible lack of coordination that could affect the safety of individual workers. All these factors dramatically increase the work-related injuries and fatalities. Site injuries and fatalities do not only bring suffering to the workers and their families, but also cause project delays and additional costs due to loss of productivity, disrupted schedules, and accident investigation and reporting.

For example, in preparation to host the 2022 FIFA World Cup in Qatar, more than \$40 billion in infrastructure projects are planned. This includes a new airport, a metro system, a high-speed rail network, and 40,000 more hotel rooms. It is estimated that 500,000 construction workers are currently in the country. Additional thousands of workers are likely to arrive as mega infrastructure projects are launched [5]. Such a huge construction boom raises concerns about worker's safety. Similar to other developing countries, Qatar is experiencing high percentage of construction-related injuries and fatalities. Since 2012, almost 900 worker deaths were reported in Qatari infrastructure construction projects. The International Trade Union Confederation [6] stated that if the conditions did not get any better, at least 4,000 construction workers fatality are expected by the time the World Cup kicks off. This situation has recently raised many concerns about the construction industry health and safety problems.

Main objective of this research

The purpose of this project is to apply project management software skills, safety and risk management systems in construction projects and how the practitioners are managing risks in everyday situations.

The theory of the risk management process will be compared to the actual practice in order to investigate similarities and differences. In other words, the main idea is to see if the construction project is working in safe manner and how risks are managed by applying project management software as important tool and risk management plan as one of the PMBOK

Relevance and Motivation for the research

The issue of workplace health and safety is extremely relevant, since by failing to adhere to its principles, it affects moral, legal proceeding and financially both social, psychological and economics of the society. Workers on construction sites are exposed to extremely high risks, since working conditions are constantly changing, various construction equipment and 4

Mechanisms are used, and workers of various professions/professional levels are involved. How to organize the work to ensure a safe, risk management systems and healthy work environment is crucial. Furthermore, improving the health and safety risk management of the construction projects has repeatedly been shown to save lives, time, and money, and to increase business goodwill and good reputations (Rwamamara, 2007; Kikwasi 2010). At the same time, the right to safe and healthy working conditions in construction industry has been a central issue in the global campaign where current health and safety laws and regulations have separate sections specifically for the construction industry (ILO 2005; ILO, 2007; CRB, 2010). Meanwhile, safer and healthier working conditions make an important contribution to poverty alleviation and sustainable development as construction is labour intensive, particularly in developing countries (Charles et al 2007).

From the researcher's experience working in the construction management field, the knowledge of the actual practice of risk assessment and communication of health and safety in construction projects are very important. As a master graduate in Construction Engineering and Management, this has provided me a strong foundation for understanding the importance of construction management especially the cost of labour issues in the construction industry. However, in author's professional practice, especially in preparation of the tender documents and the tender evaluation process, the issue of health and safety must be considered clearly. It has been always hard to judge if the conditions of contracts have made enough provisions for health, safety and risk management.

II. THE NATURE OF CONSTRUCTION WORK

This chapter provides the theories used for this research. A construction project involves a lot of activities and participants, and to understand the process and the interacting elements there is a need to understand the whole system. System thinking has been used in this study to show the setup of construction projects on construction sites and the flow of information having an impact on safety applications and risk assessment and communication. From the system thinking perspective, construction projects have been guided by regulations and system which influences, safety applications, risk management and risk assessment and communication. In addition, some social aspects from social theories of risk and risk management will be discussed in this chapter to give more comprehensive context for understanding factors contributing to apply safety and risk management systems in construction projects, also the frame of how project is organised and descriptions of different members involved in construction projects.

Definitions of the important Terms in this research

The field of safety applications and risk management systems faced with difficulties in defining and agreeing on principles. Safety and Risks are dealt with differently across different countries, industries and sectors and fields. Terms, definitions and interpretations are as varied as the number of sources providing them. There are no agreed unified definitions of safety, risk analysis, assessment and management. There are often misconceptions. Different terms, for example “risk analysis” and “risk assessment”, are often used interchangeably (Lingard and Rowlinson, 2005)

Safety

Safety is related to external threats, and the perception of being sheltered from danger. According to the business Dictionary, safety is defined as a relative freedom from danger, risk, or threat of harm, injury, or loss of personnel and/or property, whether caused deliberately or by accident. Safety can also be defined as the control of recognized hazards to achieve an acceptable level of risk. In this study, safety means freedom from danger, harm, and injury to the person involved in construction activities.

Hazards

A hazard is always connected with a circumstance or activity that, if left uncontrolled, can result in danger. HSE (2004) define hazard as source of potential harm, damage or adverse health effects on something or someone at certain conditions at work place. Basically, a hazard can cause damage or adverse effects. In this study hazard mean something which has the potential to cause harm to people if no action taken in construction projects.

Health

Health is the general attitude of a human being in mind, body and spirit, always meaning to be free from illness, injury or pain. The World Health Organization (WHO) defined health in its broader sense in 1946 as "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity" (WHO, 2006). In this study health means being free from illness, injury or pain which can be caused by construction work.

Risk

Risk has been traditionally defined as a measure of the probability and severity of adverse effects (Haimes, 2009). Rowel (1982) provides that risk is related to hazard whereby risk becomes the hazard level (hazard severity) combined with the likelihood of the hazard leading to hazard consequence. The general concept of all definitions of risk provides that risk as a danger of not needed and unfortunate events. For the purpose of this study risk is a probability of occurrence (likelihood) of an event and the magnitude of its consequence (Kaplan and Garrick, 1981; Mondarres et al 1999)

Risk= (S, P, C): where S= Scenario leading to hazard
P= Probability of occurrence
C= Consequence (severity)

Accident and Injury =33%

The word ‘accident’ and ‘injury’ are used in accordance with the meaning adopted at the first World Conference on Accident and Injury Prevention (WHO, 1989); that is, an accident is an unintentional event which results or could result in an injury, whereas injury is a collective term for health outcomes from traumatic events (Andersson, 1999).

The use of the term ‘accident’ in this research is based on an event which cause physical harm or damage to the body resulting from an exchange, usually acute, of mechanical, chemical, 7 thermal, or other environmental energy that exceeds the body's tolerance.

Risk Assessment

The Health and Safety Executive (HSE), (1998) defined risk assessment as a process that identifies the hazards associated with particular activities/tasks, evaluates the effects of exposure to these hazards and implements the measure needed to control the risk of injury/ill health to as low a level as possible. In addition, risk assessment



has been defined as a structured process that identifies both the likelihood, and extent, of adverse consequences arising from a given activity, facility or system (Kaplan and Garrick, 1981; Gillett, 1998). The assessment of risks informs risk control decisions, the implementation of which is monitored and reviewed to ensure that risk is controlled and remains within tolerable limits (Lingard and Rowlinson, 2005). Assessing risks allows someone to prioritize the action to be taken to control them.

Project Risk Management

Project Risk Management is useful aspect of project management. Risk management is one of the ten knowledge areas defined in [PMBOK] Project risk can be defined as an unforeseen event or task that can impact the project s' progress, result in uncertainty matter.

Risk Communication.

Risk communication. is the process of informing people about potential hazards to their person, property, or community? Scholars **define risk communications** a science-based approach for **communicating** effectively in situations of high stress, high concern or controversy.

Risk Control

Risk control is the techniques by which firms evaluate potential losses and take action to minimize or eliminate such threats. It is a method that utilizes findings from risk assessments, which involve identifying potential risk factors in a firm's operations, such as technical and non-technical aspects of the business, economic policies, and other policies that may impact the well-being of the firm. Risk control also implements changes to minimize risk in work operations.

III. EQUIPMENT & APPLICATIONS

The Construction Stage Health and Safety Plan is the primary management document for health and safety on site. It should be well prepared before construction activity starts in resources sheet. However, it is a live and dynamic document that will change and grow during the construction project.

Updates will occur to the risk assessments if changes are needed. When using the plan, make sure to re-save it when you make changes. This Construction Stage Health and Safety Plan.

The objective of this research is to provide practical guidance on technical framework for safety and health in construction with a view to:

- (a) Protecting from accidents and diseases and harmful effects on the health of workers arising from employment in construction;
- (b) ensuring appropriate design and implementation of construction projects;
- (c) providing means of analyzing from the point of view of safety, health and working conditions, construction processes, activities, technologies and operations, and of taking appropriate measures of planning, control and enforcement as reference to the [international labor office Geneva article].

Application

- (a) Construction activities which covers:
 - (i) Construction of buildings, together with excavation and construction activities, structural alteration, renovation, retrofit, maintenance and demolition of all types of construction buildings.
 - (ii) Civil works, covers excavation and the construction works, structural alteration, repair, maintenance and demolition, let's say, airports, docks, harbors, inland waterways, dams, river and avalanche and sea defense works, roads, highways, railways, bridges, tunnels, viaducts and works related to the provision of different services such as communications, drainage, sewerage, water and energy supplies;
 - (iii) The erection and dismantling of prefabricated buildings or structures, as well as the manufacturing of prefabricated materials on the construction workplace;
- (b) The fabrication and erection of oil rigs and offshore installations while under construction on shore. The provisions of this guide should be considered as the basic needs for protecting workers.

General duties of competent authorities

- (c) The competent authorities should, on the basis of an assessment of the safety and health dangers involved and in consultation with the most representative organization of employers and workers, adopt and maintain in force national laws or regulations to ensure the safety and health of workers

employed in construction projects and to protect persons at, or in the vicinity of, a construction site from all risks which may arise from such work.

General duties of employers

- (d) Employers should provide adequate means and organization and should establish comprehensive programme on the safety and health of workers consistent with government laws and regulations and should comply with the prescribed safety and health measures at the workplace.
- (e) In particular, construction works should be so planned, prepared and undertaken with much consciousness.

General duties of self-employed persons

- (a) Self-employed persons should comply with the prescribed safety and health measures at the workplace according to national laws or regulations.
- (b) **Co-operation and co-ordination**
- (c) Whenever two or more employers undertake activities at one construction site, they should co-operate with one another as well as with the client or client's representative and with other persons participating in the construction work being undertaken in the application of the prescribed safety and health measures.

General rights and duties of workers

- (a) Team should have the right and the responsibility at any site to participate in ensuring safe working conditions to the extent of their control over the equipment and methods of work and to express views on working procedures adopted as they may affect safety and health.
- (b) Workers should have the right to obtain proper information from the employer regarding safety and health risks and safety and health measures related to the work processes. This information should be presented in forms and languages which the workers easily understand.
- (c) Workers must have the right to control themselves from danger when they have good reason to believe that there is an imminent and serious danger to their safety or health. They should have the duty so to inform their supervisor immediately.

General duties of designers, engineers, architects

- (a) Those concerned with the design and planning of a construction project should have trainings in safety and health and should integrate the safety and health of the construction workers into the design and planning process in accordance with national laws, regulations and practice.
- (b) Architects, engineers and other professional workers, should not include anything in the designs.
- (c) Facilities should be included in the design for such work to be performed with the minimum risk.

General duties of clients

Clients should:

- (a) Co-ordinate or nominate a competent worker to co-ordinate all construction activities relating to safety and health on their construction site;
- (b) Inform all contractors on the project of special risks to health and safety of which the clients are or should be aware;

Safety of workplaces

General provisions

All appropriate precautions should be taken:

- (a) To ensure that all workplaces are safe and without risk of injury to the safety and health of workers;
- (b) To protect persons, present at or in the vicinity of a construction site from all risks which may arise from such site. All openings and other places likely to pose danger to workers should be clearly indicated.

IV. MICROSOFT PROJECT SOFTWARE AS TOOL TO HELP CONSTRUCTION PROJECT MANAGER TO REDUCE & MANAGE RISKS.

The management of the construction project is the application of knowledge, skills, tools and techniques to execute projects effectively and efficiently.

[Rwaburindi * et al., 7(2): February, 2018]

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The construction project management work is the complex process and task of planning, organizing, motivating, and controlling/monitoring resources, procedures and protocols to achieve specific objectives in scientific or daily difficulties. The main first challenges in management of construction projects is to achieve all of project goals and objectives while honouring the preconceived constraints. The primary constraints are scope, time, quality and work budget. The second and more ambitious challenges are to increase the allocation of necessary resources and integrate them to meet predefined objectives.

Project Life Cycle

A project life cycle is a summation of generally d and sometimes overlapping project stages whose name and number are defined by the management and control needs of the company or organizations involved in the project.

While every project has a definite start and an end, the specific deliverables and tasks that take place in between will vary widely with the project. The life cycle gives the basic framework for managing the project, regardless of the specific work involved.

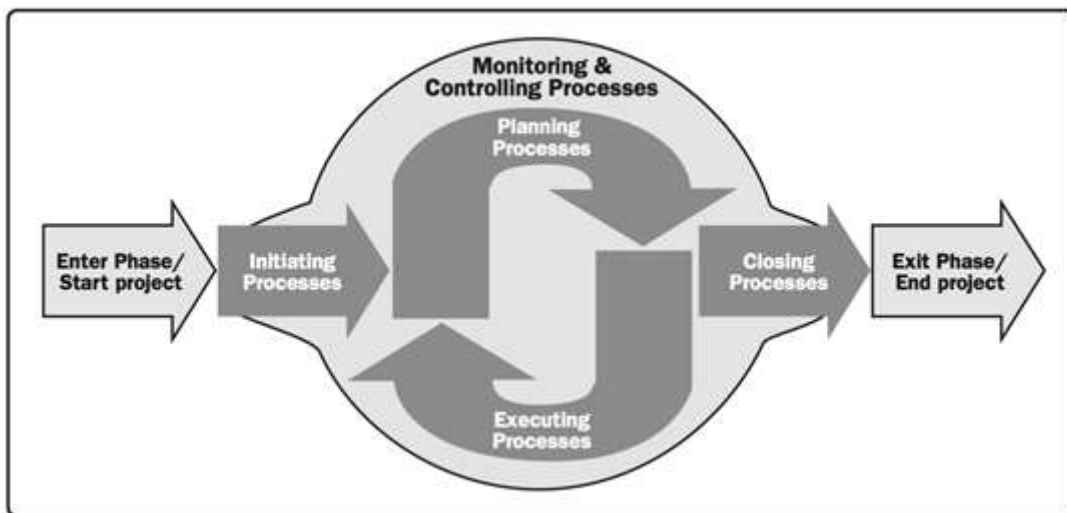


Figure1.2: Project Life Cycle

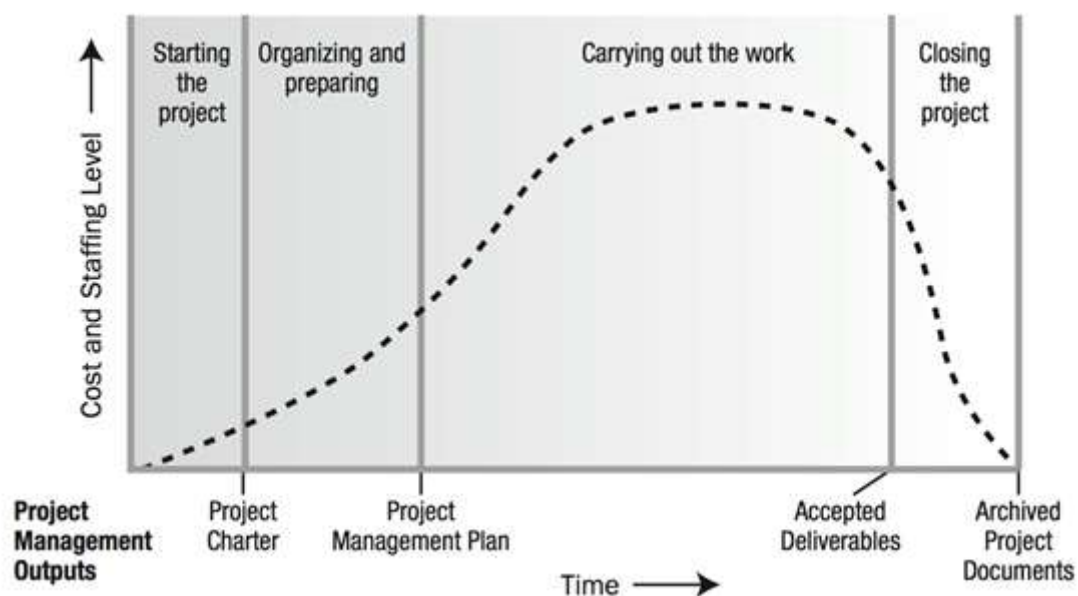


Figure1.3: Project Management Output

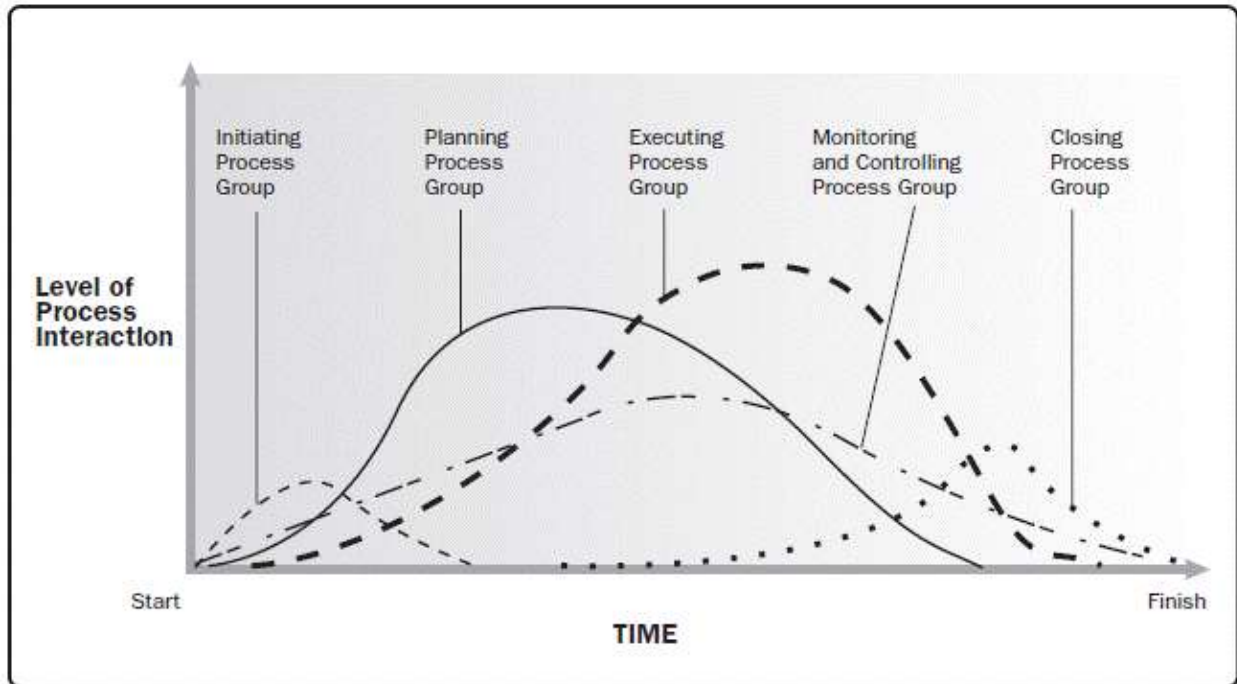


Figure 3-2. Process Groups Interact in a Phase or Project

Project Risk Management

Project risk management includes the process of conducting risk management planning, and controlling risk on a project. The objectives of project risk management are to increase the likelihood and impact of positive events, and decrease the likelihood of negative events in the project.

Project Tracking

In construction projects, as one of the expensive and full of risks, project manager uses Microsoft project software as tool to track the progress of the project.

Tracking is the process of collecting, entering and analyzing of actual project performance values, such as work on tasks and actual durations. The tracking is the Second major phase of project management. The main thing to focus on project planning is developing and communicating the details of a project plan before actual work starts. When work begins, the next phase of project management is tracking progress. Tracking means recording project details such as work did by whom, when the work was done, and at what cost. These details are usually called as actual.

The first phase of managing your projects is planning. After the planning is completed, the implementation of the project starts. Construction projects are implemented according to the planned, but it is not possible in many situations. In general, the more complex is construction project plan and it takes the longer duration than its planned duration, there is possibility of variance. Variance is the difference between what you thought would happen (as recorded in project plan) and what really happened (as recorded by tracking).

Properly tracking actual work and comparing it against the original plan ensures you to identify variance and adjust the incomplete activity of the plan not to cause any risk or danger in construction project.

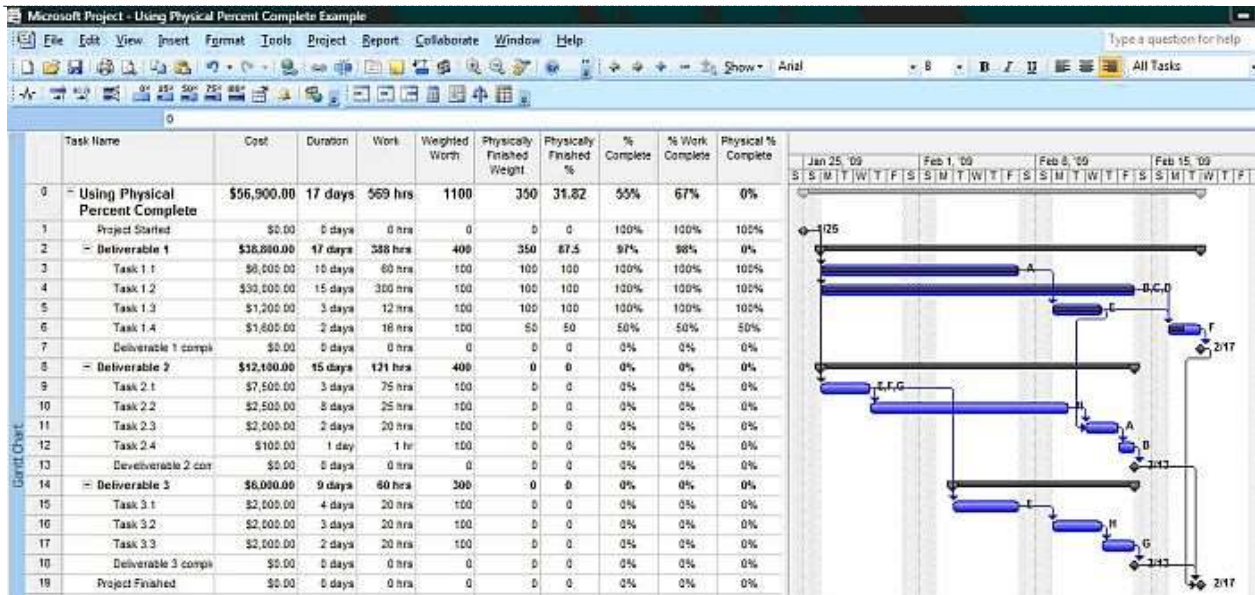


Figure: Track Project Progress with physical % complete.

V. RESULTS & CONCLUSION

Construction Projects as one of the complexity activity, very expensive, full of risks compare to other projects which brings more disputes, loss of properties, lives and other many conflicts in the entire company or institution. Traditional way of planning doesn't sub divide the main task which future gets the hurdle of over allocation of resources, improper judgment of resources for particular activities etc. Microsoft Project is the modern tool of Project Management that aid to overcome the challenges faced during planning and management that may come up with project failure. It ensures the project manager for the optimum and effective organization of activities which helps to give the vision to complete the project in planned duration, cost and meet the scope..

VI. REFERENCES

- Johnson, T. (2008). Project Management Professional (PMP) exam success series: certification exam manual. Texas: Crosswind Project Management Inc
- Creedy, G.D. (2005). Risk factors leading to cost overrun in the delivery of highway construction projects. PhD thesis, Queensland University of Technology, Australia
- Laryea, S. (2008). Risk pricing practices in finances, insurance and construction. In: COBRA Research Conference, September 4th – 5th, Dublin Institute of Technology
- Loosemore, M., Raftery, J., Reily, C. & Higgin, D. (2006). Risk management in projects. London: Routledge
- Bennett, F.L., 2003. The Management of Construction: A Project Lifecycle Approach.
- Oxford: Butterworth Heinemann
- Bing, L., Akintoye, A., Edwards, P.J. and Hardcastle, C., 2005. The allocation of risks in
- PPP/PFI construction projects in UK. International Journal of Project Management. Vol. 23. pp. 25-35
- Chapman, C.B. and Ward, S.C., 2003. Project risk management: Process, techniques and insights. 2nd Edition. Chichester: John Wiley and Sons
- Chege, L. and Rwelamili, P., 1999. Risk management and procurement systems – an imperative approach. Available at:
- <http://www.buildnet.co.za/akani/2002/jul/paper2.pdf>. [Accessed 31st March 2011]
- Edwards, P.J. & Bowen, P.A. (2005). Risk and risk management in construction: a review and future direction for research, engineering, Construction and architectural management, 5(4): 339-349.
- Zayed, T. Amer, M. & Pan, J. (2007). Assessing risk and uncertainty inherent in Chinese highway project using AHP, International journal of project management, 26: 408-419
- Vargas-Hernández, J.G. (2011). Modeling Risk and Innovation Management. Advances in Competitiveness Research, 19 (3-4), 45-57.
- Olamiwale, I.O. (2014). Evaluation of Risk Management Practices in the Construction Industry in Swaziland. Master of Quantity Surveying Thesis, Tshwane University of Technology, Pretoria, South

Africa.

- Westland J., 2006. Project Management Life Cycle: A Complete Step-by-step Methodology
17. for Initiating Planning Executing and Closing the Project. Kogan: Page Limited
 18. Winch, G., 2002. Managing construction projects, an information processing approach.
 19. Oxford: Blackwell Publishing.
 20. Yin, Robert K, 2009. Case Study Research: Design and Methods. 4th edition. Thousand Oaks: SAGE Publications, Inc.
 21. Zhang H. and Xing F., 2010. Fuzzy-multi-objective particle swarm optimization for time-cost- quality tradeoff in construction. *Automation in Construction*. Vol.19, No. 8, pp. 1067-
 22. Zou, P., Zhang, G. and Wang, J-Y., 2007. Understanding the key risks in construction projects in China. *International Journal of Project Management*. Vol. 25, pp. 601– 614
 23. Zou, P., Zhang G., Wang J-Y., 2006. Identifying Key Risks in Construction Projects: Life Cycle and Stakeholder Perspectives. Sydney: Faculty of Built Environment,
 24. University of New South Wales
 26. Jason, A. (2008). Organizing Informal Workers in the Urban Economy, The Case of the
 27. Construction Industry in Dar es Salaam, Tanzania. *Habitat International* (32) 292-202.
 28. Johnson R, Fisher A, Smith K, and Desvougues W.H. (1988). Informed Choice or regulated risk? Lessons from a Study in Radon Risk Communication. *Journal Environment*; 30(4):12-15, 30-35
 29. Jung, Y., Kang, S., Kim, Y.S., Park, C. (2008). Assessment of safety performance information systems for general contractors. *Journal Safety Science* 46 (4), 661–674.
 30. Kaplan, S. And Garrick, J. (1981). On the Qualitative Definition of Risk. *Journal of Risk analysis* 1(1).
 31. Kikwasi G. (2010). Client Involvement in Construction Safety and Health; *Journal for Building and Land development*, Ardhi University
 32. Kines, P. Andersen P, Spangenberg, S., Mikkelsen K.L., Dyreborg, J. D. And Zohar, D. (2010). Improving construction site safety through leader-based verbal safety Communication. *Journal of Safety Research* (2010).
 33. Kirchsteiger, C. (2005). A new Approach to Quantitative Assessment of Reliability of Passive Systems. *Journal of Safety Science*, 43(10), 771-777
 34. Kitumbo H.I. and Kirenga, A. P. (2001). Construction Industry in Tanzania, *African Newsletter on Occupational Health and Safety*, 11(1) 8-9.
 35. Kheni A. (2008). Impact of Health and Safety Management on Safety Performance of Small and Medium-sized Construction Businesses in Ghana, Doctorial Thesis, Loughborough University, UK
 36. Koehn, D, Hilgers C, Bons P.D, Passchies, C, W (2000). Numerical Simulation of Fibre Growth in Antitaxial Strain Fringes. *Journal of Structural Geology*. 22, 1311-1324.
 37. Kuyper, H. and Vlek, C. (1984). Contrasting Risk Judgements among Interest Groups. *Acta Psychology*. 56, 205-218.
 38. Lawrence, R, Gil P.M, Fluckiger, Y. Lambert, C and Werma, E. (2008). Promoting Decent Work in the Construction Sector: The role of Local Authorities, *Habitat International* (32) 160-170.
 39. Liao, C.W., Perng, Y.H., (2008). Data mining for occupational injuries in the Taiwan construction industry. *Safety Science* 46 (7), 1091–1102
 40. Lingard, H and Rowlinson, S M. (2005). Occupational Health and Safety in construction project management; UK Taylor & Francis.
 41. Lingard, H. and Holmes, N. (2001). 'Understandings of Occupational Health and Safety Risk Control in Small Business Construction firms: Barriers to Implementing Technological Controls',
 42. *Journal of Construction Management and Economics*, 19: 2, 217 — 226
 43. Ling, F.Y.Y., Liu, M., Woo, Y.C., (2009). Construction Fatalities in Singapore. *International Journal of Project Management* 27 (7), 717–72
 44. Lipscomb, H. J., Dale, A. M., Kaskutas, V., Sherman-Voellinger, R. and Evanoff, B. (2008). Challenges in residential fall prevention: Insight from apprentice carpenters. *American Journal of Industrial Medicine*, 51, 60-68.
 45. Planning & scheduling by using Microsoft project: a case study of “suggestion for construction and completion the science department for university islamantarabangsa Malaysia, Bandar inderamahkota,kuatan, Pahang” by Mohd Johari Bin Othman
 46. A Project Management approach using Erp and Primavera in construction industries by Miss AA. LAKADE, Prof. A K.Gupta, Prof. D B. Desai
 47. Project Planning Techniques for Academic Advising and Learning by Vittal Anantatmula Projects and Their Management by Guru Prakash Prabhakar



48. MS PROJECT for construction schedulers (2011) by Ron Winter, PSP, F. BurakEvrenosoglu
Analyzing project management research: Perspectives from top management journals by Young Hoon,
Kwak, Frank T. Anbari
49. Optimal planning and scheduling in multi-storied building by R.Prabhakar,G.ravichandran Project
management software and its utilities (2014) by Hoang, Nhat Minh Shrestha, Swostik Central Public
Works Department Analysis of Rates –Delhi
50. MAHARASHTRA JEEVAN PRADHIKARAN schedule of rates for the year 2012-13
51. Project Management Body of Knowledge (2000) edition

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