

Project Management System using Salesforce

Prof. Chachal Bansal, Prof. Nisha Rathi, Nitin Jaiswal, Ritik Kumar, Sarvesh Nigam

Acropolis Institute of Technology and Research, Indore, Madhya Pradesh

Abstract: *Project management has been considered very important by many scholars in recent years. Project management in construction is under researched and is a relatively new concept in India with limited amount of researches addressing the subject and many projects have failed to achieve desired outcomes. A successful construction project management can be carried out only through effective project management system. The integration of time and cost management of construction projects has been recognized as the most effective way for close management. It has been not effectively used due to the presence of a large quantity of data with many complex interrelationships. As business become increasingly become dependent on information technology on their operations, project managers find pressure under themselves to remain innovative and go forward to deliver quality projects, on time and within project constraints. Some organizations still find it hard to plan and track project components, stake holders and resources. Additionally project managers, team members and customers do not communicate frequently to share their expert opinions. To this end, with the advent of information technology, there has been an increase in the demand for software that makes jobs easier for people. Thus a computer solution for an existing problem using software will have a higher potential for application. This work has aimed to put emphasis on information modeling, i.e., representation of construction process in data to facilitate exchange and interoperability of information. This paper presents a study on project management system, challenges confronting project management, need of monitoring and control in project management system, influence of information technology on project control, database management system, web-based project management system.*

Keywords: Project management

I. INTRODUCTION

A project can be simply defined as a task to be completed within a given time period. Projects can be grouped into three major categories; Industrial projects, Manufacturing projects, Management projects. Projects may differ in scale, but there are some notable characteristics that each project has, these characteristics may include; 1) Projects are to be completed within a specified time period. 2) Projects have specific, measurable, achievable, and realistic objectives. 3) Projects are completed within a specified budget. Project management is the employment of knowledge, expertise, tools and methods to project activities that satisfy project requirements. The term project management is used to describe an organizational approach to the management of ongoing operations. The key successful project is the planning. All the detailed planning work for different aspects of the project is integrated into one single plan known as project management plan.

II. LITERATURE REVIEW

2.1 What is a Project Management System?

Project Management (PM) is defined as the application of knowledge, skills, tools, and techniques to project activities in order to meet stakeholder needs and expectations from a project.

Project Management Institute (PMI) in their PMBOK GUIDE defines project management system as software that has the ability to help strategize, organize, and manage resource streams and develop resource approximations. Depending on the complexity of the software, resource breakdown structures, resource availability, resource rates and various resource calendars can be defined to assist in optimizing resource utilization. There are different types of project management systems are used to handle projects. They are unique in operation, depending on the kind of project one is managing. Mohamed, A (2016) explained five types of project management systems. Those are as follows:

- 1) A desktop management is implemented as a programmed that runs on the desktop of a particular user. Users and organizations can purchase it as a desktop package. The advantage of this type is the highly responsive and graphically-intensive user interface.
- 2) A web-based project management system is implemented as a web application to be accessed via a web browser, or an extranet. It is multi-user and can be accessed from any computer without installing the software. They are usually less responsive than desktop applications, and users can not access project information if they are offline.
- 3) A personal project management system is designed for handling simple or home projects. It usually has a simple interface, and mostly overlaps with single user systems.
- 4) A single-user project management system is programmed with the conjecture that only one used will ever need to work on the project plan at once.

2.2) Need of Monitoring and Control in Project Management System

In order to ensure success of the project, effective monitoring and control is required throughout these phases. PMBOK (2013) suggested that regular monitoring is necessary to maintain good control of the project performance. Regular monitoring means that various activities throughout the project life cycle should be evaluated and reported at regular intervals in terms of time, finance and quality. These regular intervals may be daily, weekly, monthly or annual. The daily reports present the actual manpower and equipment available at site, material deliveries and work executed on that particular day. In the weekly reports, identify the SPI and CPI, comparative analysis of actual versus planned activities, potential risks and strategic decisions required from client or senior management. In addition, hold weekly and monthly project review meetings between the client, consultant and contractor in which the current status of the project is reviewed and necessary decisions are taken to ensure that the project stays on the path to success. On the basis of these weekly and monthly meetings where the progress reports are discussed, the areas of concern are highlighted. Delayed activities, status of approval of materials and IFC drawings, quality of work and safety reports are analyzed. The reasons are discussed and mitigation steps are taken.

This part constitutes the SLL phase. In the next phase, i.e. DLL, all this working goes to the monthly meeting which is held at the senior management level. Here, the top management reviews whether any of the issues are pertaining to the organizational system and if required; they approve changes within the system to ensure better performance in future projects.

2.3) Influence of Information Technology on Project Control

Aaron. A.Izang et al. (2016) mentioned the tendency of project managers to remain innovative and go forward to deliver quality projects, on time and within budget constraints. With the advent of information technology, there has been an increase in the demand for software that makes that makes jobs easier for people. He introduced a web based software project management system for project control which solves the problem of unity and lack of communication.

2.4) Web-Based Project Management System

The application of DBMSs for project control has been explored by a number of researchers. William J Rasdorf and Mark J Herbert (1990) presented a Construction Information Management System(CIMS) for the control of information used by project management. CIMS integrates scheduling, cost, inventory and document control application programs with a central Database Management System using stand-alone software, a DBMS programming language and a spread sheet. Abudayyeh (1991; Abudayyeh and Rasdorf, 1993) developed a DBMS to support automated cost and schedule control functions. He used the work package model to represent the project data. His system, however, only supports the application of earned value for progress reporting. The earned value method (Canadian General Standards Board, 1999, Department of Defense, 1967) integrates time and cost to overcome the limitations of traditional control methods, which use cost as the only indicator for the performance of a task. The method is widely accepted as an integrated project control tool(Fleming and Koppelmam, 2000). However this method only tracks cost and schedule variances, and neither supports reasoning to explain unacceptable performance nor advices on possible corrective actions. Diekmann and Al-Tabtabai (1992) presented a knowledge based approach for project control.Fayek et al. (1998) proposed a prototype rule-based expert system to improve project control. A.A.D.A.J Parera and K.Imriyas(2004)

conducted a research to establish the feasibility of the use of MS Access™ and MS Project™ to provide an integrated time and cost management information system encompassing estimating, scheduling, cost control, resource monitoring and costing and financial control.

III. FUTURE APPLICATION

The future of project management is not dependent on the degrees/ experiences/ certifications. The methodologies and the concepts of project management are changing towards the Non-project managers and it is already afoot. A Non-project manager is a person who manages projects as a part of their everyday job and he/ she can be from marketing, sales, engineering, IT, designing, or any domain and ends up managing projects as a part of their responsibilities. Although project management roles are a very important part of an organization's success and it's a day-to-day activity as a manager, managing projects can still be a demanding job. So do you think that there will be a need for the typical project managers to manage projects? A project manager with huge experience and a degree from giant universities? Of course, there will be requirements for certified project managers when managing complex projects during complicated situations as they have special skills to break a leg.

So, what's the future of project management?

According to research, PMI says that by 2027 project managers will need 88 million people for the project-related roles. Earlier, project management was complicated in the past with models like waterfall, CCPM and more but now we are moving towards a model where project managers follow whatever process that will help them achieve project success. Basically, managing projects their own way. This requires the tools also to be flexible. Now that there are many tools, the process of managing projects has become very vast and has everything right from assigning tasks to the project closure. But the skills play an important role here. No matter if you are a certified project manager/ a person with no experience in project management (Nonproject managers), basic skills like leadership, management, communication, ability to handle failures are still important. So project management isn't dying or becoming obsolete.

When there is a lot of conversations revolving around project management, Asana says that most of us spend 60% of our time just coordinating and that affects the overall work cycle of the project. The factors that they used earlier like budget plans and resource allocation to determine how long it would take to complete a project. But now, it is different. Project managers have started to evaluate them based on many personal factors like mental health, the capability of a person, and so on.

There was a time when you kept checking on people to understand if they are in the loop, to check the status, to know if the project is going as planned, and most of the time was consumed by the face-to-face meetings. But the present and the future strategies are very easy and adaptable. There are many tools to manage everything from one place, one tool.

The future of project management is in our hands and the roles are not just in the hands of certified professionals but mostly in the hands of Non-project managers.

IV. SUMMARY AND CONCLUSIONS

Efficient project management is a primary mechanism for the construction industry to increase its productivity. As construction projects become larger and complex, an efficient way to provide such information is through the use of information management systems. The study suggested that a regulatory system be put in place to inspect, monitor and control challenges of project management. It is recommended that a web based project management system should be developed wherever the need to manage projects efficiently arises.

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