

An Advanced Methodology in Smart Construction Controlling

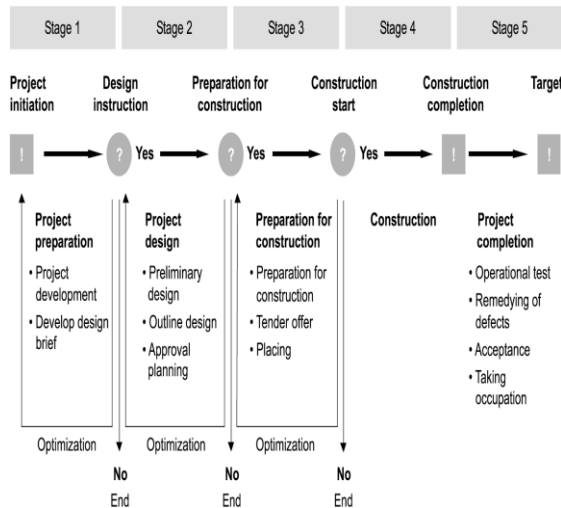
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Abstract— Construction is the important necessary needs of the human beings, where construction can be classified into various categories such as residential, commercial, industrial and heavy civil construction are available. The construction takes place according to the surroundings of the environmental such that in this paper discusses about the construction management technique in an advanced manner also ideas shared in this paper will take the construction management technology to the next level of stage.

Keywords: Residential, Commercial, Advanced, Technology, Construction Management.

I.INTRODUCTION:

The Construction Management usually used to manage the activities in a fulfil manner where the functions of construction management are normally takes the regular steps in the way of planning and make a sketch in a diagrammatic manner also budget & scheduling processing are to be taken in the initial stage. As increase the coordination of the process whereby increases the equipments and labour. Planning, Designing, Estimating, Contracting and Construction are the important term in the construction management.



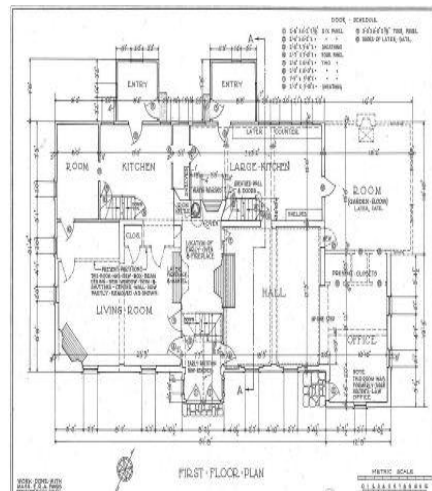
1. Stages of Construction Management

While this paper completely going to deals about the latest trends and techniques are to be implemented in the construction management

technique in order to produce a well defined system.

II.DETAILED DRAWINGS:

The drawing is important term in the construction as the drawings are the initial stage of implementation in the system. Usually some of the drawings are does not describe the complete idea of the building which is to be constructed, so by planning of detailed drawings can avoid some of the risk at the end of the completion of the project.

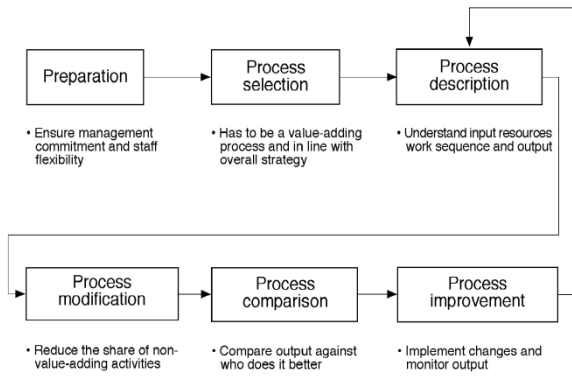


2. Construction Drawings

The figure 2 shows the detailed top view of the building it could be useful to constructing the entire building. But in our cases the drawings should have the both top view, front view and perspective view of the building which is to be constructed. This would be very helpful to others who depended in the construction management process.

III.BENCHMARKING:

The benchmarking is the term which are nowadays applied in the construction management system where this benchmarking process will helpful to the reference of the project and also it would helpful for the compare of the two process which are involved in the system.



2. Benchmark Process

The preparation is the initial stage of the benchmark process and the process would be selected & third stage is to describe and further improvement, comparison and modification are carried out. While following this processing technique it has to produce the continuous improvement.

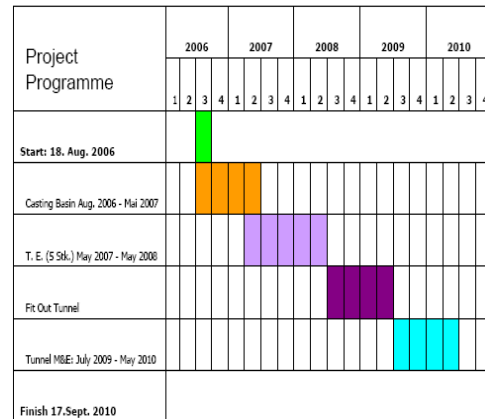
IV.IMPACT OF TECHNOLOGY:

The technology is applied in the construction management where this technology which is used for drawing tools for building architect and design in advanced technique such as used in the area of heavy civil engineer process.

Now a day's designing software are useful to the civil engineer their ideas are shown in the real time application manner. Before started to construct the design could be shown to the client for the acceptance and modification are also easily occurred in the system. Some of the 3D oriented software is very useful to engineer to design an ultra model for the heavy projects in the system.

V.ASSESSMENT & SCHEDULING:

The assessment is the process where the past and current situation has to be combined and to find the difference in the construction development. Also have to check the pervious profit margin and what affect the margin of previous construction. These activities have to be analysed by the engineer or contractor. The main important thing has to be followed that the project has completed at the proper scheduling. In some of the construction project is scheduled and the working process does not follow the sequent process.



3. Construction Schedule Chart

If the project does not follow the schedule manner then all the work of the construction get delay and it will become the long term process and other also will get pending due to this precede of the previous process. The above figure 3 shows that the chart of the construction project management where the work and the year are classified into x axis and the y axis. The x axis represents the year / month of the project run and y axis represents the work has done.

VI.PROCESS ESTABLISHMENT:

As benchmark process is followed in the construction project it normally applied for a process referencing. Sometimes the benchmark also gets failure without any proper activities are done so process establishment has to be taken over in the construction process system. Also existing process are can be updated in the system which could be produce the better results for the project. In the area of heavy civil project management there may be a situation occurs that is need of new process for the new problems are occurred. The process of the construction is classified into three stages, they are

- ❖ Review Process
- ❖ Analyse Process
- ❖ Activate Process

A. Review Process:

The review process states that the each and every time the process has to be reviewed then only the quality process will be produced this review process are to be taken out at the initial stage to the final stage of the construction this would be helpful to the engineers.

B. Analyse Process:

The second stage is analysing where the process discovered for particular problem is to be analysed by the analysing group of the project construction team so by analysing better project

could be defined in the construction process management.

C. Activating Process:

If the fault or any mistakes are occurred in the construction and it creates a situation to create a new process it would have to activate immediately without any delay of process.

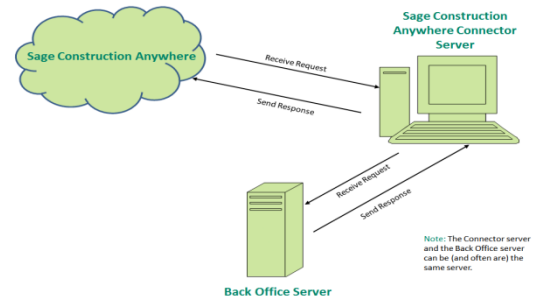
VII.CLOUD BASED TECHNOLOGIES:

Now a day's cloud based technologies plays the important role in all industries it is mainly used for the retrieving of information anywhere at any time at any place so it plays the important role in the industries and in the organization. While in the case of construction engineering the cloud is used to retrieve the project information at the site by the engineer or he/she can access in the office. Because of this reason the cloud technologies is very helpful to the engineers to update the project information at the needed time.



4. Cloud based Construction Process

The figure 4 shows the cloud based sage construction company where this process describes that the files of the complete project would have to be save on the cloud by uploading the files and this can be accessed from the office as well as in the job site of the project running so the every person who involved in the project can update their knowledge regarding the project. Normally the project construction company will collect all the project details and stored in the database it could be erased at any cost. So maximum construction company will move to the cloud based technologies for security as well as open access from any region.



5. Cloud Computing

VIII.OVERVIEW:

The smart construction engineering takes place that all the above activities should be carried out such as detailed drawings for the clear understanding to the builders and the engineer/contractor and various new processes are created to finish the project efficiently.

IX.CONCLUSION:

Thus the smart construction controlling defines the various new methodologies to improve the construction sector of the system and cloud technologies are applied, where it is to necessary and valuable methods to manage in an efficient ways.

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