

Scheduling and progress monitoring analysis construction essay



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Effective project management is important in order to ensure that projects are delivered within budget, time and to the agreed quality. It demands a comprehensive understanding of the key stages, which are critical to success, in the life cycle of a construction project. In aid of achieving good planning takes time, but it ensures that the project will be on budget, on time and also risks are minimised. It makes sure that organisational values and client requirements are clear and understood. Good planning has as a result to reduce waste deliver better design. Furthermore, it helps the project team to manage better with risks as they happen, which otherwise possibly will cause greater delay and increased costs (Office of Government Commerce, 2003).

This section describes the scheduling and progress monitoring activities for managing the project with supporting processes like as change control. The schedule is also known as the time plan. ' The project sponsor, through the project manager, is responsible for scheduling and monitoring progress. A programme, in the context of construction projects, is a schedule that identifies the work to be carried out as a series of activities and plots the time periods required to execute and complete each activity and the interdependencies between each activity' (Office of Government Commerce, 2003). ' Schedule is a diagrammatic representation of activities and their time relationship. Also, schedule is known as project programme.'

(Construction Industry Council, 1996).

A programme also controls resources needed and their availability. It is essential to know possible risks or problems. The project manager must check the schedule and progress monitoring against progress already

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achieved in aid of understanding where difficulties and risks are possibly to arise and to establish different course of action in order to reduce their impact. (Office of Government Commerce, 2003). ' Risk management is a core process within any business or organization regardless of size, activity or sector. Individuals and organizations can lose substantial sums of money as a result of not paying sufficient attention to the identification and management of threats to their goals and to the projects they commission. Similarly, full advantage cannot be taken of potentially beneficial opportunities arising in the course of their activities if these are not recognized in good time'.

The project sponsor must be capable to identify those tasks that lie on the critical path. Critical path is the shortest possible time based on hypothesis about the tasks to be carried out and the resources available. Time for the processes should be integrated as specific activities in the schedule of the project. ' The schedule is an estimate that is based on considered assumptions on issues such as likely risk' (Office of Government Commerce, 2003). Some estimation might prove to be wrong. Some deviations might be expected but these will accepted if they do not affect the critical path and the project is finished on time. Techniques include bar and Gantt charts and network planning help with progress monitoring. Bar and Gantt charts define an uncomplicated view of activities aligned with timetables. Network planning is especially useful for complex projects because it links dependent activities in a logical order (Office of Government Commerce, 2003).

The project sponsor must make an effort in order that final schedule to be simple and straightforward. The networks of activities of the final schedules, <https://assignbuster.com/scheduling-and-progress-monitoring-analysis-construction-essay/>

and the interrelationships between them should be sophisticated and comprehensive. They must be rapidly understood of the project sponsor that is why color-coded bar charts are used as management control documents (Office of Government Commerce, 2003).

Schedule planning tasks

The project manager must report on schedule planning to the project sponsor on behalf of the project team. The project manager must produce a work breakdown structure (WBS). WBS ' defines the work content of the project in terms of basic elements, work packages, generic tasks and detailed tasks' (Office of Government Commerce, 2003). The main schedule planning must show how elements affect each other. It defines activities and also establishes the logical relationships of the activities. It determines the work content, the duration and the required resources of each activity. Furthermore, it also defines the critical path, which determines the duration of the project. Finally, it can optimize the time plan by resource leveling. ' Resource leveling compares the calculated requirements with those actually available and recalculates the network to spread resources more evenly' (Office of Government Commerce, 2003).

Progress monitoring

' Progress monitoring includes reviewing monthly progress reports produced by the project manager with others in the integrated project team' (Office of Government Commerce, 2003). Progress monitoring must focus on critical activities and warn the SPO's attention in the proper time in order to

appropriate actions to be taken as soon as possible. The project sponsor
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must understand the total rate of the whole progress in order to judge the forecast completion date. In order to measure the progress, the percentage completion of an activity can be measure in terms of cost and time. The planned progress must be compared with the actual progress. Also progress can be measure the work in progress by taking account of milestones of the project. Any impact on critical must be checked in order to finish the project on time. Furthermore progress can be monitored by the payment progress and from resources still required. (Office of Government Commerce, 2003).

An essential element of process monitoring is the process of time control. A time control system can cover time budget, time plan and time checking. Time budget represents the overall project duration as developed by specific constrains of the project in the contract strategy. It is the period which fixed one time and from that moment becomes one of the most important parameters for management of the project. Time plan is a division of total time into interlinked time allowances for identifiable activities, which can be defined start and finish points. Time checking is monitoring the time actually spent on each activity and compared it with the allowance in the time plan. If any divergence is identified, it must be reported as soon as possible. (Office of Government Commerce, 2003).

In the case that an activity on the critical path exceeds its time allowance later activities must re-sequenced, or try to shorten the planned time for future critical activities by increasing the resources (extra cost) for the specific activities. If neither is possible to be done, the project will finish late. The project sponsor must understand that time control is as essential during

the planning stages as the construction stages of the project. (Office of Government Commerce, 2003).

Progress reports

Progress reports are essential reports in the whole process of the project, because they keep the project sponsor informed about the project progress. They discover problems and choices for their resolution. Additionally, they provide the necessary information to enable the project sponsor to make decisions on time. Progress reports demonstrate that the integrated project team executes their responsibilities properly and that the management processes procedures and controls are operating successfully. They provide an authority, and a communication tool in a simple and comprehensive format, for the whole project team. Furthermore they provide a time reference for meetings and plans. In addition the gathering of statistics by the department permits external monitoring and identify best practice and support of improvement in performance. (Office of Government Commerce, 2003).

Change control

Change can be handled most successfully through project planning and control. Change for any reason must be treated as a project risk. ' Changes to design, especially after contract award, are one of the major causes of time and cost overruns and poor value for money. Changes arise mainly as a result of unclear or ambiguous project definition, poor communication, inadequate time spent in project planning and risk management, or changing circumstances' (Office of Government Commerce, 2003).
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Changes can be reduced by making sure that the project brief is comprehensive and has the stakeholders' agreement. They can be minimized by taking account of present and proposed legislation. Furthermore, early discussions with stakeholders must be done in the early stages in order to anticipate their requirements. Site investigations and conditions surveys must be undertaken early in the stages. The designs must adequately develop early in the project and definably before constructions plans are committed. Finally, a proactive project management in order to identify and managing risks will have as a result to minimize changes (Office of Government Commerce, 2003).

A change control procedure must consider the factors, which will mention below, before approval is given for the change. It must taking account of the reasons for the change, and for its source, which is responsible for wanting the change. The consequences of the change in terms of quality, cost and time. It must consider the risks and their impacts associated with the change. In addition, alternatives to the proposed change must be evaluated properly. It must checked proposals for avoiding time overrun and source of funding of any cost overrun. Finally, it must consider client approval for the change. After a detailed evaluation of the change confirms that it offers value of money and that the client accepts any impacts the approval of the change is given by SRO. Furthermore, the investment decision maker will approve any additional funding which exceeds the amount allowed in the risk allowance.