

## MANAGEMENT AND PROJECT PLANNING IN CONSTRUCTION ENGINEERING- A REVIEW

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### ABSTRACT:

The project management in construction industry plays a vital role in success of any construction project. Planning is one of the basic preparations needed before starting any project. The most of the construction projects in India are delayed due to improper management and planning. The project planners have to take care of timely delivery by considering all the factors affecting the project management. The construction projects are to be planned according to available resources, manpower, funding, permissions and assurance of timely completion with better quality. Authors have tried presenting the review of various means of construction management and planning by the literature survey carried out on the papers from different countries and the opinions are concluded.

**KEYWORDS:** Construction, Project Planning, Project Management, Risk Management.

### INTRODUCTION:

With the fast advancement of information and communication technologies, especially internet and web-based technologies during the past 15 years, various systems integration and collaboration technology have been advanced and deployed to different utility domains, along with architecture, engineering, construction, and facilities management (AEC/FM). These technologies offer a regular set of solutions to assist the collaborative creation, management, dissemination, and use of information via the complete product and project lifecycle, and in addition to integrate humans, approaches, commercial enterprise systems, and information more efficaciously. This paper offers a complete review of research literature on systems integration and collaboration in AEC/FM, and discusses difficult research problems and future research possibilities. A survey on time performance of various kinds of construction projects in Saudi Arabia was carried out to determine the reasons of delay and their significance according to each of the project participants, i.e., the owner, representative and the contractor. The field survey performed covered 23 contractors, 19 consultants, and 15 owners. Seventy-three reasons of postpone have been recognized in the

course of the research. 76% of the contractors and 56% of the consultants indicated that average of time overrun is among 10% and 30% of the unique period. The most common reason of postpone identified through all the three parties isn't proper management & planning

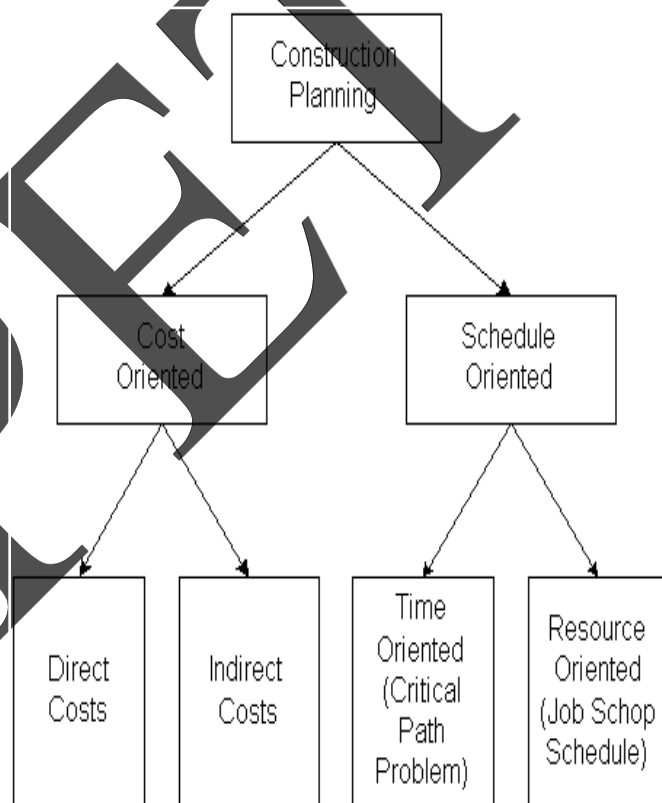


Fig.1: Overview of construction Planning

### PRE-PROJECT PLANNING:

Even before design and construction procedures begin, there is a level of "pre-project planning" that can be crucial for project achievement. In this procedure, the project scope is established. Since construction and design experts are frequently not concerned in this project scope level, the terminology of describing this as a "pre-project" procedure has arisen. From the owner's attitude, defining the project scope is simply another phase within the procedure of obtaining a constructed facility. There are different factor affecting on the construction engineering

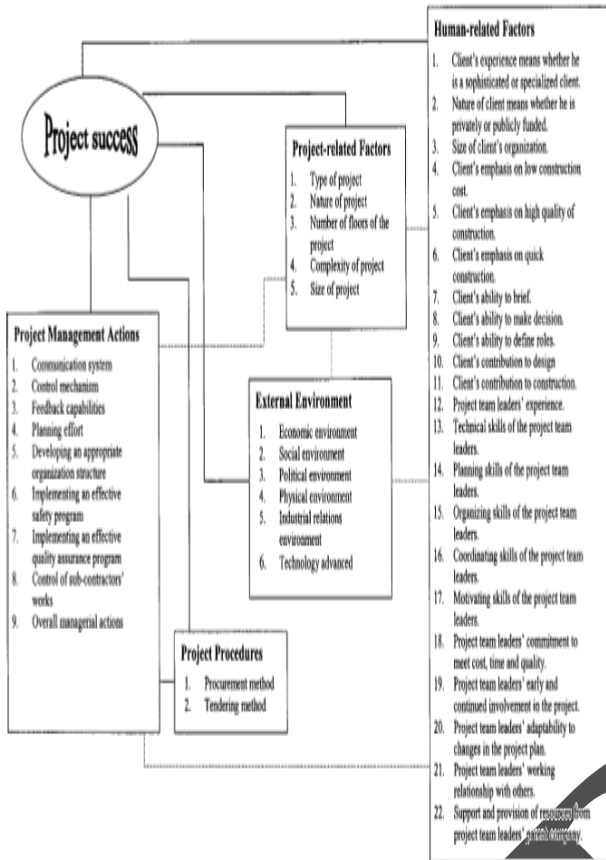


Fig.2: Factors affecting the project planning

**DESIGN METHODOLOGY:**

At the same time as the conceptual design procedure can be formal or casual, it is able to be characterized by a sequence of actions: formulation, analysis, search, selection, specification, and modification. However, at the early level within the development of a new project, those actions are extraordinarily interactive as illustrated in below fig 3. Many iterations of remodel are predicted to refine the purposeful necessities, design principles and economic constraints, even though the analytic tools implemented to the solution of the problem at this level can be very crude.

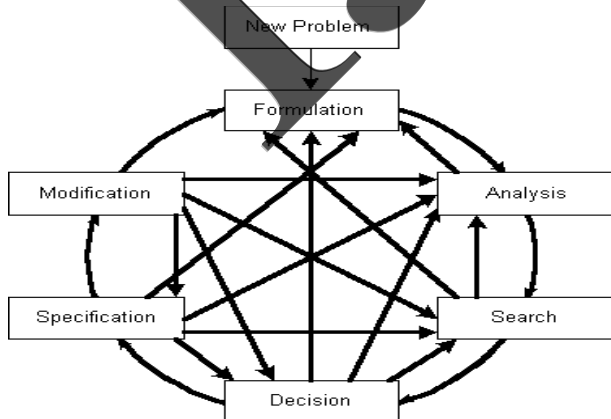


Fig.3: Conceptual Design Process

Here are different step regarding the project planning formulation refers to the definition or description of a design problem in wide terms via the synthesis of thoughts describing alternative facilities. Evaluation refines the problem definition or description by way of keeping apart crucial from peripheral records and with the aid of pulling collectively the important detail. Interpretation and prediction are commonly required as a part of the evaluation. Search includes accumulating a set of ability solutions for performing the desired functions and fulfilling the user requirements. Decision means that each of the potential solutions is evaluated and in comparison to the alternatives until the best solution is acquired. Specification is to explain the selected solution in a form which includes sufficient detail for implementation. Modification reefer's to the change in the solution or re-design if the solution is determined to be wanting or if new statistics is determined inside the process of design. As the project actions from conceptual planning to designated design, the design procedure becomes greater formal. In general, the actions of formulation, evaluation, search, decision, specification and modification still hold, however they represent particular steps with less random interactions in specified design. The design technique hence formalized may be applied to a variety of design problems.

**CONCLUSION:**

Project managers in modern construction industry are faced with a scenario whereby the essential roles and capabilities they carry out are witnessing a sluggish shift in focus. To maintain their professional competency, practicing project managers in construction adapt to this changing industry surroundings by relying on information and abilities obtained via training and experience. The extent to which such training enables project managers to effectively adapt to changing demands have tremendous relevance not only for the training of future project managers, however greater importantly, the form of management and general manpower development regulations that construction organizations can adopt. The paper offers a study that focuses on the development of construction project managers and how they preserve their expert talents in a converting construction business environment. The paper first sets out the areas of expertise and ability required for project control certification, and argues that the conventional engineering orientation of those necessities are inadequate for modern-day construction project manager. It identifies the general knowledge and ability elements which might be perceived as essential for developing project management competency through

a survey of project managers in the construction industry.

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