Construction Estimation Project

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Abstract— The method of developing a comprehensive project cost estimate is critical for a project to be adjudged successful on completion. Projects' costing is one among the foremost critical and most generally used project management tools. This Software shoul make exact budget needs impossible to forecast accurately. The study sampled the opinion of fifty-three selected project professionals who had worked on related construction outfits in Owerri, Imo State. The score of respondents to the factors were analyzed using descriptive and inferential statistics, mean score value and factor analytic approach because the major tool with the help of SPSS. This was followed by therein order; number of bidders tendering, location of project, closure and blockade of borders, scale and scope of construction, materials price availability, contractor's workload, constraints. Construction cost constitutes only a fraction, though a considerable fraction, of the entire project cost. However, it's the a part of the value under the control of the development project manager. Since design decisions made at the start stage of a project life cycle are more tentative than those made at a later stage, the value estimates made at the earlier stage are expected to be less accurate.

Keywords: Admin login, Builder login, Contractor login Resource calculation, Labor calculation, Day calculation, Cost calculation

I. INTRODUCTION

Construction cost estimating is a cumbersome process. It takes an extended time for an estimator to finish an accurate estimate and construction contractors must prepare cost estimates very often so as to organize bids for brand spanking new projects. This presents a challenge to an estimator who has got to prepare several estimates during a short period of your time. In recent years, computers and estimating software have reduced the quantity of manual work this can be accomplished by using the newest CAD and visualization technologies. Improvements are often made in how information is transferred from design files to estimating applications and in visually matching CAD elements with estimating database assemblies.

II. METHODOLOGY

The objective of this study was achieved through administration of structured questionnaire and private interview to get information from key project stakeholders on factors affecting the accuracy of project cost estimation. Key participants in construction related projects were the targets of the survey. Self-administered and e-mailed questionnaires were randomly distributed to target respondents and they include Architects, Engineers, Project Managers, Builders, Quantity Surveyors and other related professionals in the construction related as well as government agencies, private property developers, project consultants and main contractors with abundant hands-on experience in project cost estimation within Owerri metropolis, Imo State. The research adopted a radical and deterministic method by way of responses. The list of things affecting the accuracy of project cost estimation were obtained from the literature as potentially influencing cost estimating for the respondents to supply opinion on the extent of influence of each of the factor on a four-point Likert-type scale viz; (4-strongly agree, 3-agree, 2-disagree, 1-strongly disagree). The principal component for data collection is the questionnaire and interviews where sixty (60) respondents were sampled from a valid response, while fifty-three (53) responses from the respondents.

III. USER PRIMARILY BASED PROBLEM

There's an understatement within the incontrovertible fact that everything else can go right a construction project, but if your cost estimates are off, it can still finish up costing your firm time, money and reputation. Accurate construction estimating is important for your firm to prosper. All too often, the issues in your construction cost estimating aren't immediately obvious. You see the consequences, but not the causes. Finding those problems, particularly when they're small and seemingly innocuous, is that the initiative towards bringing greater efficiency into your business. If you're

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battling this issue, here are 5 cost-estimating mistakes you're probably making.

1) Using Hand Calculations
2) Expecting Software to Solve All Your Problems
3) Failing to Allocate Enough Resources in Estimates
4) Not Creating a Risk/Assumptions/Opportunities Register

IV. OBJECTIVES

To achieve the research goal, the subsequent objective and approach are completed:

1) A visualization module has been developed to assist the visual estimating process using the Microsoft Direct X graphic library.
2) A virtual environment for a 3D model is provided by both geometry and material information extracted from a 3D CAD model.
3) Components have been developed to navigate and interact with the 3D model.
4) This approach is based on the findings of cognitive theories which emphasize visualization, in the form of images or walkthrough, to help reduce the user's memory load.
5) Database technology has been used to store cost information that is necessary for construction cost estimating.
6) An estimating application has been developed to provide an interface that uses the latest findings in cognitive science, virtual reality, and interactive visualization to simplify the cost estimating process, making it more intuitive.

V. CONCLUSIONS

Cost and time project estimate may be a critical preparation in project management process. Both of top-down and bottom-up approach is beneficial and applicable in specific situations. Estimation as well as preparation for project, especially mission critical ones, should be done so that it can reduce risks in implementing project, control and assess this implementation process. The initial view stated in the preface of this guide was that the objective of an estimate was to provide the most realistic prediction of cost and time, no matter at what stage the estimate was undertaken. To realize this objective there's a fundamental need for relevant data. The main problem areas in estimating relate to difficulties with access to data and with the methodology for the manipulation of data, particularly at the early stages of a project. The cost management of construction project may be a complicated system working and wishes all employees' participating. Through pre-control, control in process, enterprises can strengthen the calculation and control of the project cost altogether phases of construction, and may realize the goal of saving and reducing the construction cost. Only in effective cost management, construction enterprises can ensure to urge the simplest economic benefits while the targets of quality, progress and safety are reached, and lay an honest foundation for the sustainable development of them. Cost forecasting or planning and scheduling is an efficient tool of cost management, it's worthwhile to be learned and applied by engineering contractors during the development project and with the development of information technology projects, cost estimating and scheduling will be more widely used in process of various construction projects. To provide data for future cost management, an evaluation is usually administered to organize an in depth analysis of the finished project and to develop lessons learned to improve future design decisions. The cost data captured should even be fed back in to the owner's database to tell future estimates and budgets. We should also include a review of energy performance of the building during occupancy, to determine if the info used was accurate for the particular performance.

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