



جامعة الجميع الذكية
EVERYONE'S SMART UNIVERSITY

Everyone's Smart University

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1-Introduction

The purpose of the research is to explain the Manufacture of fiberglass boats suitable for the purposes of fishing, sports or picnic and service job inside Ports and others. The sizes of these boats' variety according to the nature of their use, as their weights range from 150 kg. to 2000kg. As project manager the main goal of projects to complete the project with success within the budget on time and meets the scope.

The cost and the period for the project completion and customer requirements depends of the size and type and scope of modification.

The nature of this kind of project has some uncertainty of outcomes, as marine industry it is known that such this kind of project it has uncertainties its hard to find it out during the process of maintaining the engine or installation the new one that can affect the plan of schedule delivery to the customers, which will cost over budget.

A relatively large budget of boat manufacture project and come up with visible recommendations to increase the business value. Starting with Cost optimization which is a business-focused, continuous discipline to control spending and cost reduction, while maximizing business value. It includes: Obtaining the best pricing and terms for all business purchases. Standardizing, simplifying and rationalizing platforms, applications, processes, and services.

Cost control is a key factor in cost optimization that must be applied in any company to ensure driving a profitable business. The main benefit of putting cost control in place is lowering company's overall expenses to maintain and run a sustainable and profitable business.

Finally, project budget calculation is one of the key activities during the process of the project.

Methods and approaches would be the following:

- Planning for the organization budget, objectives and targets.
- Manpower planning for better utilization and control of labor costs.
- Using appropriate purchasing and outsourcing techniques to control cost as it sources out material or goods from different reliable sources with cost-effective price.
- Using an appropriate design methodology led to reduce the product costs and increase its values.
- Continuous improvement.

2- Literature review

Launching a new company is a risky activity even for experienced business owners. According to Harvard Business School, 30-40 % of startup go out of business and end up liquidating all assets. Companies go out of business when they fail to achieve enough profit to sustain the operation, which requires selling enough products or service to cover costs.

There are key factors influencing the cost optimization process, below are the following:

- Planning:

Cost project might seem like an easy or a simple thing, but it isn't always as easy as it sounds. It's more than just spending less; it involves creating a measurable plan of how suggested changes will affect your bottom line. Going into cost project calculation without a strategy doesn't make good financial sense.

According to Farah Khalid (2019) the poor planning may lead to several negative effect in the duration and completion of a project. These negative effects can be reduced or prevented by increased pre-project planning and successful project management as they are one of the most critical success factors of the project accomplishment. Therefore, it is very important to plan for minimizing costs and maximizing values. An organization is to plan for minimizing costs by planning all processes starting from initiation planning, material planning, production planning and daily work schedules in order to avoid unnecessary costs of mistakes, reworks, and non-value added.

- Manpower:

According to Adekunle (2014) the concept of manpower planning and the rationale for its advocacy in organizations to include: reduction of labor cost as excess staff can be identified and thereby overstaffing can be avoided. The study states challenges of manpower planning in organizations and possible solutions. Challenges are mentioned in this article are lack of communication, lack of sensitivity to problems and solutions, short term profit goals, lack of criteria.

Even though the study is done based on Nigeria, the same challenges are observed in Saudi organizations. However, there is more critical issue shall be considered in manpower planning. It is lack of utilization of Saudi local personnel in most of private sector companies. Saudi government implemented the Saudization program intensively in order to create new job opportunities for its citizen, as all countries do.

“Job creation has been one of the major issues facing the Kingdom for the past several decades (Al-Dosary and Rahman 2005). Saudi economy has been heavily dependent

on foreign workers (Looney 2004) and has undertaken many steps to involve and employ its citizen proactively. Al-Harbi (1997) refers to Saudization as replacement of expatriate labor force with a trained and qualified Saudi labor force in a planned and phase-wise manner.”

- Design

According to Claudio Favia, Michele Germana, Marco Mandolinia (2016, P.277), “it is well-known that, although design costs consume approximately 10% of the total budget for a new project, typically 80% of manufacturing costs are determined by the design of the product”

There are three design methodologies can be used to have efficient design:

- Design for Manufacturing: It is defined as an approach for designing a product at minimum cost and effort in terms of processing and handling requirements.
- Design for Assembly: it is a systematic procedure to maximize material utilization and reduce assembly time.
- Design to Cost: it is used to estimate the costs related to a set of activities before they have been executed.

In order to gain the benefit of, manufacturing costs shall be decided during the design stage because that will affect the selection of materials, machines, tools, and human recourses to be used in the production process. Therefore, organizations shall not only focus on the cost of design process itself, but also to implement appropriate design methodology that take on consideration maximizing the product values and minimizing costs.

- Procurement

Satya Shah and Syed Hasan in their research article “Procurement Practices in Project-Based Manufacturing Environments” January 2016, stated that effective and efficient procurement requires good integrations in each procedure, from making tight cost control to emphasis innovation process by applying a variety of appropriate strategies. Procurement procedures are a system of life cycle stages. It is very important for stakeholders, purchasing department to contribute to the procurement procedures. The procurement procedures shall go through three different important steps: the first one is the program planning to identify the requirements and specifications of goods to be purchased, outcomes, and objectives of the procurement. The second step is procurement stage which is the activity of identifying suitable products on the market, supplier qualification, and supplier selection. The third step is performance monitoring

that aims to promote economical and efficient procurement by development of specific criteria to monitor suppliers' performance in terms of quality of products, delivery times or deadlines, after-sales service, documentation accuracy, responsive action, and collaboration. In this research article competitive strategy is discussed, the study uses a case study-based approach with gathering information on procurement practices and competitive strategy application.

Some of solutions to control material costs are:

- Value-based compensation is used to convince suppliers and manufacturers in achieving a mutual beneficial objective.
- Integration of competitive strategy with other procurement, manufacturing and other functional strategies for better decision making and value maximizing such as "Make or Buy" decision, or own local manufacturing / joint ventures.

A company shall establish procurement strategy and integrate it with other strategies within the organization, build procurement procedures, and monitor procurement performance.

- Information / Data

In order to have the right decision to set the optimal possible cost, business owners, managers, and all key personnel must have enough information and data about the business-related costs. Market prices play a dominant part in setting up the correct price. In big organization, for example, there is a market intelligence team whose main role is to gather enough information from different sources about the market cost price. Once the information is available, business key personnel will be able to have a clear view to control & optimize the cost accordingly. According to study conducted by McAfee and Brynjolfsson "Companies in the top third of their industry in the use of data-driven decision making were, on average 5% productive and 6% more profitable than their competitors" (McAfee, Brynjolfsson, Davenport, Patil, & Barton ,2012). Another study conducted by Forbes stated that 68% of executives are currently investing in data analytics and plan to invest more in the next 12 months. Same study also verified that big data analytic can have a major impact on companies by improving performance. (Columbus, Forbes, 2016).

3-Result and discussion

Table 1

Details of project budget

Task	Amount	percentage
Constriction	300,000	30%
Equipment's and tools	500,000	50%
Furniture	50,000	5%
transportation	100,000	10%
4 labors	50,000	5%
total	1000,000	100%

Table 2

Operational cost

Rent 3000 sqm	150,000	10%
Insurance	75,000	5%
Material	750,000	50%
Salaries	15000	1%
Utilities	30000	2%
Marketing	300,000	20%
Management cost	150,000	10%
Maintenance	30,000	2%
Total	1,500,000	100%

The total capital for the project

Fixed	1000,000	70%
operational	400,000	30%
Total	1,400,000	100%

Expected revenue.

Sales of 100 fiberglass boat in one year *200,000=2,000,000sar

- Average net profit (ANP) 500.000
- Rate of return on investment (ROT) 20%
- (PBP) within 5 years
- (NPV) 160,000
- (Value Added) 200,000
- (IRR) 20%

All cost shown in this table are not real, as based on my estimation vision its may deferred .

Recommendations

To improve and streamline , the following need to be implemented:

Action plan: A clear action plan & strategy needs to consider all challenges and issues related to the business to ensure to maintain the value.

Planning of manpower: effective recruitment, and selection, proper methods of performance management (KPI's), optimum productivity, reduction in labor cost.

Product Design: Design is the first stage of a product; once a product is designed and produced there is a little possibility to change it.

Innovation & Technology: technology can improve the manufacturing facility to produce finished good or a product, automation and CNC's machines can be used to manufacture a product with less cost, time and reduce/optimize the labor cost.

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