Project Scope Management

PJM 6005

Assignment 4

Title: Business Analysis Core Concept Model, Governance, Design Option & Analysis of Project Success

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Executive Summary

The client is a billion-dollar manufacturer and marketer of beauty, personal care, and household products around the globe. The organization desires to expand its global appeal soon and therefore is in search of a new manufacturing facility which has 475,000-square-foot area with state-of-the-art technology fully functional within a year (Case study, n.d.).

Business Analysis Core Concept Model

BACCM consists of 6 core concepts:

Core Concept	Integration with project
Change	Renting the facility instead of purchasing it.
Need	Insufficient funds Time-bound Sponsor satisfaction
Solution	Renting the facility would eliminate unnecessary cost as it would be only a fraction of the purchasing price. The remaining budget maybe used to cover other expenses such as electricity, equipment, material, labor for construction. The surplus funds after contingency reserves maybe invested by the sponsor in another project.
Stakeholders	This change would mainly benefit the sponsor. The sponsor would not have to invest additional funds into the project as there would be more control over the project. Customers would also be a stakeholder as they would be the ones who would receive this high-quality product quicker.
Context	Purchasing the facility may blow a big hole in the project's budget with unreasonably limited funds for construction and other expenses. In addition, the sponsor expects quick results which is not possible if the land is purchased due to extensive paperwork and other time-consuming formalities.
Value	The tangible value associated with renting the facility is that the budget would be dependent on time taken for completion. The sooner the construction is completed, the lesser is the investment into the project and the product would be delivered faster to the market.

Business Analysis Governance

The concept of 'Governance' will be explained with the help of the change mentioned earlier- purchasing the facility.

Decision making

The decision makers in this case were: the sponsor and the Subject Matter Expert (SME) on real estate.

Change Control Process:

- Change proposition

Before approaching the sponsor with the change request, a document covering the affected elements such as schedule, budget and scope were taken into account. Since this change had been identified between the initiation and planning phase of the project, the change did not have a very big impact on the remaining project phases although it did alter some deliverables in the execution phase.

- Cost and time estimates

In case of any project and especially construction projects, cost is directly proportional to time (schedule). A longer project completion time would translate to the project being over-budget. Whereas, a shorter duration would reduce the budget involved. Renting the facility would save a lot of time as a place for rent is easier to seek than one to purchase.

Property tax on purchase varies between 0.27% in Hawaii to 2.4% in New Jersey (Kiernan, 2018). This adds on to the unrealistic nature of purchasing the land. Renting the facility negates this expense and permits more flexibility as only a fraction of the amount has to be paid over a period of several months.

- Benefits

1. "A 12-month lease is a whole lot easier to break or buy out than a 30-year mortgage- nevermind the added stress moving can place on an already suffering relationship" (Hamer, 2017).
2. The organization would not have to account for the cost associated with the maintenance of the new facility. The expenses associated with maintenance shall be borne by the land owner.

- Risks

1. Real estate prices are likely to fluctuate. This may impact the cost of renting the place. Therefore, rent cannot be estimated as a consistent parameter during the project lifecycle.
2. It is highly possible that in the long run, the rent would add up to being much more than the actual price on purchasing the land.
3. The operation of the facility is likely to be disrupted by the monthly inspection.

4. The control over the facility's operational capabilities lies with the land owner. There is a low possibility that the land owner may not extend the lease.

Prioritization

The expected value of the project with this change along with a shorter schedule and smaller budget were an asset to the organization as a whole. The sponsor was definitely looking out for something in this direction that would fit his needs and at the same time be an economical option. Renting the place was given priority over purchasing the facility due to the advantages offered by the former and limitations of the latter.

Approval

The decision makers were impressed with the analysis and after careful consideration of all the aspects of this change, they decided to go ahead and give this change a shot for its exceptional benefits.

Design Option

- **Purpose**- To reduce the time taken to complete the new manufacturing facility.
- **Description**- Purchase and rebuild on another organization's existing manufacturing facility.
- **Opportunity:**

1. Purchasing another organization's existing manufacturing facility would mean that the additional construction associated expenses would be eliminated. The design of the new manufacturing facility maybe manipulated according to the boundaries set by the purchased manufacturing facility.
2. Rebuilding the manufacturing facility would require very less time in comparison to construction of a whole new manufacturing facility from scratch.

- **Challenges:**

1. Finding an organization that manufactures similar products.
2. Convincing the owner to sell the facility.
3. The selling price is not reasonable.
4. The location of the facility is far from the market.
5. The existing facility's layout is not similar to the new facility's design.

Evaluation of Project's Success

The project's success rate has been estimated based on the probability of achieving all the success factors.

Note: 1. Each success criteria is treated giving equal importance.

2. Each success criteria has been estimated using either qualitative or quantitative analysis depending on the nature of the particular success criteria.

3. For example, the probability of the manufacturing facility's capability to produce 1000 products/day/line was estimated using PERT (Quantitative analysis). On the other hand, developing a good reputation for the organization was estimated based on risk data quality assessment and expert judgement.

Success Criteria:

- Gain significant market share, two months after the manufacturing facility is open and operational. (65/100)
- Deliver affordable and good quality products. (77/100)
- Manufacturing facility is capable to produce 1000 products/day/product line. (80/100)
- Payback period is less than 7 months. (55/100)
- Develop a good reputation for the organization. (60/100)
- Become the leader in the cosmetic industry globally. (60/100)
- Set an example that can be used as a reference for manufacturing of new facilities worldwide. (75/100)
- Lean manufacturing principles employed reduces the production defects by 40%. (70/100)
- The final quality inspection for a batch of products has no more than 0.5% defective products. (60/100)
- The cost of the improved quality product is not greater than 20% of the product's original price in the market. (90/100)
- The company sells more than 70% of the products produced within 3 days; after delivery. (55/100)

Project's success is measured on all the above factors. Therefore, the probability of success has been taken as the average of attaining each success criteria.

The probability of the project's success is **67.91%**

Assumptions:

- Employment of lean manufacturing principles along with high-functional capability of the facility produces large quantity of products as well as reduces the number of defects by 40% in a particular batch.
- The payback period is estimated to be 6 months. But the success criteria has been defined as 7 months- an additional month, taking into account any uncertain factors/unforeseen event(s).
- The series of quality inspections are strict, eliminating 80% of the defective products in the first stage itself.
- Products are dispatched for delivery on the following day of production.
- Production cycle will be continuous for 3 months.
- Once every 3 months, a maintenance crew will conduct a thorough inspection to identify and rectify weak/susceptible areas that are not performing to full capacity.
- 90% products are estimated to sell within 1 week after manufacturing. Therefore, 70% sold within 3 days has been defined as a success criteria.
- Overhead and rework cost is minimal. Therefore, there is no need to sell the product at an exorbitantly high price. A profit margin of 15% can be easily accomplished with 20% increase in the product price.

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