Development of house using Project Management

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# Finalize client’s requirements in terms of scope

# Project Initiation Phase

The project is initiated and the requirements of the user are gathered by the appointed members. The requirements are then transformed into the scope of the project. The requirements are collected through the user story. The initiator of the project explains his demands, and the project development team proceeds to turn that user story into the initial scope for the starting stages of the project (Corvello, Javernick-Will, & Ratta, 2017). The scope is the basis of the entire project as it highlights the entire area which the project would cover. Everything that is mentioned in the scope is bound to be present in the finished project. Scope also highlights the things that would not be included in the final product so there is no confusion among the stakeholders.

**Requirements**

The client requires a house to be developed. The house is to be developed within the time span of 12 months. The total client budget is of AUD$ 500,000. Further details regarding the interior of the house and the location are also finalized with the client. Further details that the client highlights are about the overall structure of the house and what he wants the house to look like from inside and outside. Also, the highlighted things are the accessories that the house should be equipped with when the client moves in.

**Scope**

Creation of a customized house within 12 months of starting date and with the budget of total AUD$ 500,000. The house shall have the features as described by the client in his requirements that are as follows.

**Deliverables**

The house shall include the following deliverables. Each of the deliverables would be presented to the owner in the sequence mentioned.

* A blueprint of the house that has been finalized by the authorities and is according to the needs of the owner.
* 180 sq. feet finished single story home with 2 bedrooms, 2 bathrooms, a kitchen, and a lounge.
* Installed air-conditioning units and heating units in the main rooms of the house.
* A garage that can house a minimum of two average-sized cars.

**Technical requirements**

* The house shall conform to the laws with respect to the overall blueprint. This means that the dimensions of the overall house and everything that the law permits should be followed.
* Use of high-quality products in the construction of the house. The materials should be of A-grade quality so that there is no element of defect in the product that is given to the client.
* The house should be developed so that it can withstand seismic activities. The foundation of the houses, as well as the walls and roofs, should be able to handle earthquakes.

**Exclusions and limitations:**

Following is the list of things that would not be included in the final product.

* The hose would not come with the interior items such as furniture, cabinets, etc.
* The development of the house shall be totally based on the items described in the scope and deliverables section. Any other item that would be demanded by the owner would result in a renegotiation of the scope and the time/budget allocated for the project.
* The project team shall work on the project from Monday to Friday. Weekends shall be considered off.

**Milestones:**

The following milestones would be achieved during the process of completion of the house

* Permits to start the project gained
* Foundations have been poured
* Completion of the house
* Final inspection of the house completed with the accessories.

**Cost estimates:**

The budget allocated for the project would be divided into the following areas

* The share of the company that is in charge of developing the project. It would cover the salaries of the people that are involved with the projects as well as the company’s own share.
* The material that would be utilized in the development of the project. It would include all the things including the equipment that would aid in the development of the house. The vendors would be paid accordingly.

**Stakeholders**

* Owner of the house: The owner is the initiator of the project. They are the clients that hire the company for the development of the project which is, in this case, a house. The main role of the owner is to define the requirements as well as allocate the finances and time period for the project.
* Project manager: the project manager is in charge of the project. They make sure that everything is running smoothly by monitoring the overall progress. They are responsible for analyzing and planning of the entire project. They would select and motivate the entire team and ensure the full satisfaction of the customer.
* Project team members: The team members include the developers, workers, team lead, etc. All these members work on the project to ensure that everything is working according to the plan laid out by the project manager.
* Material supplier/Vendors: the vendors are responsible for delivering the necessary materials and other supplies for the development phase of the house. These could include many things like concrete, cement, sanitary, etc. (Elias, 2015).

**Ensure efficient and effective communication with all stakeholders**

**Plan Communications Management**

**Purpose**

Communication Management is essential for the success of the project. All the stakeholders need to be properly communicated regarding each and every step of the project to ensure the project progresses smoothly. Communication is the way through which all of the stakeholders can be on one page when it comes to the progress of the project. The inclusion of the entire team is essential in the success of the project; therefore, communicating with them about the progress is of paramount importance. Communication is the main component that keeps all the stakeholders together for the successful completion of the project (Smit, Bond-Barnard, Steyn, & Fabris-Rotelli, 2017). If there is any lapse in the process of communication, it could result in fatal errors and delays in the project.

**Communication Requirements**

The client needs to be updated regarding the project and what is the progress each day. As he is the main role player, he should be fully included in the development process of his house. Material and equipment need to be procured at regular intervals which shall be also managed by the project development team. The contact with the vendor would be arranged in advance so that there are no delays. The Project Manager shall be updated regarding the progress of the team. The project manager would be able to judge the details of the entire project and make sure that everything is on track when it comes to the time and budget.

**Communication Purpose**

The main objective of communication is to keep the entire stakeholders communicated about the progress that is being made regarding the house.

* All the stakeholders except the material providers would be communicated about the progress daily. The update interval would be agreed upon by the client and the company.
* The material and equipment providers would be communicated whenever new things are required. The vendors would also be contacted in an emergency if there is an urgent need for any material for the development process if the house.
* The owner and the project manager would be contacted immediately in case of any issues that may arise during the development of the project. He would be briefed about the issue and the team shall act upon the decision that would be taken by him.

**Communication Methods**

The means of communication that shall be established are as follows

* Daily updates shall be delivered using email to all the stakeholders. This would include images of the house as well. The update would include the entire information regarding the stage the project is in, what are the next steps involved, what has been done that particular day and any other information agreed upon by the parties.
* In case of emergency, cellphone shall be used to communicate the issues
* Other means of communication would include face to face meetings which shall be used in case any major discussions are required. The face to face meetings would be utilized to discuss things like changes in the overall projects, any new plans regarding the development of the house, etc.

**Subcontractor/Vendor Management**

The subcontractor and vendors are two stakeholders that have the main role in the development of the house. The vendors are responsible for providing the necessary equipment to the developers while subcontractors provide the necessary services. Both of these stakeholders play an extremely vital role in the development of a house. No development project can be done without the use of the necessary equipment and material. The use of exceptional quality material and their timely delivery is of the extreme importance when it comes to timely development of a house. This also essential for the project to be within budget that has been allocated. This makes the involvement of both these parties extremely important towards the success of the project.

**Interest and influence**

The two stakeholders that have a paramount role in the project development is of vendors and subcontractors

* Vendors have an interest in the project such that they provide the necessary material for the development of the house. These can include concrete, steel, cement, paint, electric equipment, etc.
* The subcontractors shall provide the necessary services like the labor, etc. for the completion of the project. They might be contracted by the main company to provide the necessary services in the project, and thus having a share in the overall finances.

**Develop the Communication Management Plan**

The process of communication is essential for the success of any project. Proper communication is required among the material and service providers so that the projects can be completed in the stipulated time.

* The vendors shall be communicated whenever the need for new material is present. The vendors shall be informed in advance through email or SMS. In case of any emergency need of any equipment and material, the vendors would be called so that the delivery can be made.
* The subcontractor shall be reached through email as well as SMS whenever there is any update on the stipulations of the project. The subcontractor would be communicated about the success of the project to the project manager and the owner through daily emails.

**Lean project management for finalizing the scope of the house**

When speaking about the requirements of the owner and the scope it is necessary to find out what are the components that the owner is most interested in, and which of them are given priority over the other. By identifying the requirements and the scope, the requirements should be numbered so that more focus, budget and time may be allocated to those points.

Moving to the project, the main sequence that the scope should be set accordingly is first the development of the house, secondly the installation of air conditioning and heating units. In this way, the main chunk of the budget and time would be spent in the development of the house. Another main thing that should be kept in mind is the technical requirements. Priority should be given to the blueprint of the house so that there are no discrepancies when it comes to the law. The main people working on the project should ensure that there is no overproduction which would lead to material loss (Salgado & Dekkers, 2017). Those areas should be focused and prioritized that have been selected as important. Some of the lean principles that can be utilized in the scope are

* Waste reduction: Only those items are ordered that of utmost importance and avoiding the advanced ordering of materials so that there is no waste in the end. Utilizing every material that is ordered and carefully inspecting them before ordering ensures the least waste.
* The human element: Any project is majorly dependent on the expertise of professionals. As the scope is defined, it should be ensured that the teams are selected as such so that the employees would work with maximum efficiency. No task should have an extra number of employees working on it whereas no employee should be idle.
* Level production: This is an important concept that can be applied. It features measuring the performance so that it is known in advance what would be the amount of work done each day. Thus, for house development, only a certain amount of materials would be ordered which would be utilized that day. This would mean that there would be no need to maintain inventory.

**Lean Project Management to Ensure Effective Communication with Stakeholders**

A very important aspect of project management is communication. Communication is the means which make the success of a project possible. It is necessary that all the stakeholders involved in the project are properly updated with the information related to each stage of the project. This ensures that the time is saved and any problems that may arise may be properly handled at an early time. This would eliminate the problem when it is just at the root. The lean principles can also be incorporated in the process of communication through the following

* The human element: As described above, the human element is of paramount importance when it comes to the house development project. Communicating with the proper personnel at the right time is necessary. It would ensure that all the people that are connected to the project are timely updated about the entire project so that there are no delays or discrepancies of any sort. It allows time to be saved by early detection and resolution of issues that might occur and cause troubles later on.
* Just in Time Production: This principle can be utilized in two ways. Firstly, the communication with all the stakeholders should be done just in time. As the interval is selected in the communication management process, so there should be no need to go out of the schedule. Secondly, it is also necessary when speaking to the vendors. By ordering just the right amount from the vendors, there would be no need to keep unnecessary stock in the inventory. The number of products that are ordered should be utilized there and then that day.

**Lean Project Management for Effective Management of Subcontractors/Vendors**

The use of lean principles is also utilized when it comes to the management of stakeholders and vendors. It is necessary that they are onboard when it comes to the process of success. They should be fully aware of their participation in the project and when their concentration is required. The following principles can be applied

* Waste reduction: When ordering from the vendors, only those products would be delivered that would allow the full quantity to be used so that there wouldn’t be any leftovers. Having no extra leftover would help to remain in the budget as no extra cost would be paid by the client. The subcontractors would be utilizing the products. They should be fully aware of the details of the project and know how much quantity of each element would be utilized at each time. Having such knowledge would result in a house that is created within the budget (Marodin, Frank, Tortorella, & Netland, 2018).
* Just in time production: For the success of Just in Time production, it is necessary that the vendors provide the materials as they are needed and within the quantity that they are needed. It’s necessary for the project to remain in budget and time. Since both of these factors are what the client focused on, so it is the responsibility of the team to deliver it. This would also ensure that there is the least amount or no inventory that is left behind. From the subcontractor’s point of view, it is their duty to utilize all the products that have been delivered. The subcontractor should be well aware of their capacity in advance. This would ensure that only those materials are ordered that can be utilized on that particular day.
* Level production: Since the main goal of lean project management is less wastage, so the subcontractors should be well acquainted with the tasks that each day would bring. This would allow an indication in advance of how much material should be ordered, and thus producing less inventory and wastage. Only those items would be procured that would be fully utilized on that particular day. This would also ease the process of procuring as the vendor would know in advance what he must deliver each day for the success of the project.
* Defect detection through automation: Such a principle of lean project management can be utilized by the project developers. They could hire those vendors that would have materials that are properly tested and graded. This would result in the procurement of components that would be reliable and are liable to produce less defective end results. This would make sure that there is no wastage and cost incurred on the rebuilding of the defective parts. The materials decided also depend upon the budget allocated for the project. So, the best items that can be procured, should be a priority of the team while keeping within the budget.

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