

Building a farmhouse in Bangladesh

Abstract:

Exploring the ways to go about project management and the tools and templates that can be used for efficient project planning. Building a farmhouse in Bangladesh is a complex project which I go through using the stages of a project life cycle, applying methods and tools which help lead to successful projects. Also, taking into consideration how useful research is in projects and what benefits can be found.

¹Project management is the application of processes, methods, skills, knowledge and experience to achieve specific project objectives according to the project acceptance criteria within agreed parameters. Project management has final deliverables that are constrained to a finite timescale and budget.

“A project is a unique, transient endeavour, undertaken to achieve planned objectives, which could be defined in terms of outputs, outcomes or benefits. A project is usually deemed to be a success if it achieves the objectives according to their acceptance criteria, within an agreed timescale and budget.” (Association for project management)

In order for a project to be carried out efficiently, the project manager must have certain characteristics that will help in managing a project. Desired characteristics in a project manager include; strong leadership skills, effective communication skills, technical expertise, good decision making, motivational and inspiring, competence and being able to work well under pressure. It is necessary for a project manager to have these attributes in order to carry out the project successfully with the desired end result.

There are many benefits that come with project management. Project management is a tool itself which helps an individual gain many skills that employers desire. Due to the fact that project management takes a lot of skills, it can improve an individual's skills and teach them new things along the way. Furthermore, project management helps to manage projects more efficiently, this initially saves time as problems can be solved quicker.

¹ "What is project management? | APM." <https://www.apm.org.uk/resources/what-is-project-management/>. Accessed 6 Jan. 2020.

There are many tools which can help in project planning. The scope of a project includes size, requirements and goals, the team is responsible for changing these and delivering the scope of a project. In order to deliver the project scope accordingly after it has been established, a project plan must be created in order to lay out the processes. In the planning and development phase of a project, the scope should be defined and established. After this has been done, a project plan should be created based off of the scope. Therefore, the goals and objectives for a project must be placed into a detailed proposal in terms of how to go about achieving them. The project plan is a vital component to managing work successfully, it should involve the “when, by whom, what and how” of a project. It would be useful to use a project plan template or a software program to organise all details. This is essential in projects that are intricate and complex.

A major part of project planning also contains planning for risks and potential hazards and how these can be prevented as well as how to deal with risks that do occur. Therefore, using a risk or issue register would be a very useful tool in order to identify, analyse and manage risks. These registers would be very useful as project teams can change and estimate the activities that they have planned out ensuring that they have taken into account the risks and issues associated with the area they are working in. Subsequently, this helps to manage their impact. In a project it would be highly beneficial to carry out a ²SWOT analysis, this is an analysis where all components of a project are explored in detail. The strengths, weaknesses, opportunities and threats of the project can be explored and explained in detail. Mapping out these details can be of great use for project managers as they find ways to work around weaknesses and threats, as well as taking opportunities where they find, and increasing the strengths. The strengths refer to factors within the project that can help to achieve the desired objectives. Weaknesses are factors that could potentially prevent the project’s goals from being achieved. Opportunities are external conditions that may help meet the objectives of the project and threats are external conditions that may hinder the objectives of the project. In addition to this, it would be very beneficial to have a project library where the details of the project could be kept up to date, this can prevent confusion between the team who are running the project and it ensures that everyone is kept on the same page about what is happening and what needs to happen. This is a crucial aspect in project planning - to have a centralised system where information and

² "Why You Should Do a SWOT Analysis for Project Management." 22 Apr. 2012, <https://project-management.com/why-you-should-do-a-swot-analysis-for-project-management/>. Accessed 6 Jan. 2020.

data about the project is logged and kept up-to-date, it is particularly needed in the more complex projects.

³Project planning usually takes place in five phases. The phases being; initiation, planning, execution, monitoring and control, and closure. These stages can often be referred to as the project life cycle. The initiation stage includes the project mandate which is put in place to clarify the purpose of the project as well as defining and establishing a clear budget for the project. It is essential to build a business case for a project so that you can justify the need for your project and the benefits that it will have. In addition to this, a feasibility study should be carried out which is determining the problem and how a project will solve it. Referring to the project that I will be exploring, which is building a farmhouse in Bangladesh, the main points for the business case for this project would be that there are many farmhouses in Bangladesh as almost half of the population rely on farming as a way of earning for their living. In addition to this, there is a lot of land in the rural areas of Bangladesh and this is where most of the farms are located. Every place in Bangladesh benefits from local farms therefore building a farm in a village in the rural area will benefit locals immensely as they can get their food from the farm which is close by to them. Furthermore, it would be highly beneficial as food can be imported from farms in Bangladesh. Many fruits, vegetables and fish are available in areas like Bangladesh which are not available in countries like the UK. A project initiation document should be created which is the foundation for a project, this document should involve the key components which include your business case, the scope of the project, organisation of the project, constraints of the project, stakeholders and stakeholder benefits, risks that come along with the project, project controls and reporting framework, and a criteria that is needed for closing and reviewing the project.

The second stage is project planning and definition. This is the stage where the goals are set, in order to set goals, project managers can use the SMART method or the CLEAR method. Both of these approaches help to refine and define goals for the project as sometimes when planning, some goals may be too out there and unattainable so it is important to be rational and realistic. In addition to the goals being set, the project scope must also be defined and set which will then lead to the creation of a project plan and work breakdown schedule. A communication plan should also be put in place to ensure that any external stakeholders are aware of what is going on, as well as a risk management plan. The work breakdown schedule involves many features such as costs, resources that you have and time; as well as, milestones, progress checkpoints,

³ "5 Phases of the Project Management Process | TeamGantt." 15 Aug. 2017, <https://www.teamgantt.com/blog/5-crucial-project-management-phases>. Accessed 6 Jan. 2020.

quality, roles and responsibilities for the project, risks and resources that can help to resolve unforeseeable risks and issues and baseline performance measures.

The third stage is project launch and execution. This is where your project plan is put into action. Project managers can direct work at this stage by communicating to stakeholders, overseeing the team and managing the budget and resources. Furthermore, it would be very useful to carefully maintain careful monitoring and control in this stage as this helps to keep the project plan on track. The fourth stage is project monitoring and controlling which initially means recording project progression and performance in the project library and dealing with any issues that may arise and ultimately keeping the project on track. Key Performance Indicators can be used to ensure that the project is kept on track according to the budget, resources, time, tasks and issues being resolved. The last stage is project closure, this includes sorting everything out which can include releasing staff and resources, archiving project documents, completing all activities, preparing the final project budget and report and initially finalising all the details that are required. In addition to this, a post-implementation review can be carried out to determine the success of the project as well as deciding what could be done differently next time and improvements that could have been made.

Now that I have explained the process of project planning, I will go more in-depth and use a real example of a project so that the project management process can be applied. I will be explaining how building a farmhouse in bangladesh as a project will be managed. ⁴Bangladesh is a country located in South Asia, it is home to the world's largest river delta. In Bangladesh, almost half of the population are farmers, 18% of the nation's GDP is farming. Therefore, building farmhouses in Bangladesh are very common. I will go through an action plan and explain how the plan will be executed. Furthermore, I will be going in depth as to how this project can be planned, executed and any challenges that may be faced. Not only this but I will also go through the strengths and weaknesses of the plan that I have created as well as stakeholder benefits that may come from building a farmhouse in bangladesh.

The first thing a project manager must do is issue a project mandate and build a business case. Therefore they will have a vision and a rough plan for how they will oversee their project. It is important to brainstorm ideas and to start creating a detailed

⁴ "Farmers in Bangladesh survive the monsoon by ... - BBC.com." 1 Jan. 2019, <https://www.bbc.com/news/av/world-asia-46634600/farmers-in-bangladesh-survive-the-monsoon-by-building-floating-farms>. Accessed 6 Jan. 2020.

plan. It would be useful to use task planning software such as a spreadsheet to ensure organisation as this is a crucial element of project planning. There are core components of project management. These core components include; developing a management plan and putting the plan into action, monitoring progress against plan, defining the reason as to why a project is necessary, managing the budget for the project as well as managing changes, issues and risks in the project, maintaining communication between the stakeholders and project organisation and keeping the project delivery team motivated and leading them successfully. In addition to this, project managers must establish timescales and plan down to the last detail.

Building a farmhouse in Bangladesh will require a lot of planning. When planning an architectural project, it is vital that every aspect is taken into consideration as this is a more complex project. The weather and climate must be taken into consideration in order to know what type of foundation would be best for a farmhouse in Bangladesh as well as which materials will be the most durable and beneficial. "Bangladesh has a subtropical monsoon climate characterized by wide seasonal variations in rainfall, high temperatures and humidity"⁵. The weather in Bangladesh can affect the planning for the project, this is why it is essential to plan everything in great detail and to carry out a lot of research. In order to get the right timescales for building in Bangladesh, the weather must be researched. It would be near impossible to build a farmhouse in heavy rainfall and Bangladesh has one whole season which is monsoon season. From June to October, it is rainy and cool as it is monsoon season, from March to June, it is hot and humid - this is summertime in Bangladesh, from October to March it is dry and cool winter. Bangladesh is also known for flooding as Typhoon season starts from August and ends in November. Typhoons can cause flooding which can cause a lot of damage to the infrastructure, furthermore the flooding can last for several weeks which could lead to the project being postponed, if the time management is not planned properly. According to the BBC, "Bangladesh is prone to frequent, devastating flooding", farmers in Bangladesh have started to build 'floating farms', these are farms which rise and fall with swelling waters and could improve food security immensely. The location of the farmhouse for which I am planning to build will be in Jalalpur point, Sunamganj road, Sylhet. This is located in the Eastern part of Bangladesh, on the outskirts of Sylhet. Building a farmhouse would take approximately six months to a year. Due to the fluctuating weather in Bangladesh, the timescale for project planning, designing and building must be planned out accordingly. It would be wise to start project planning

⁵ "Climate of the World: Bangladesh | [weatheronline.co.uk](https://www.weatheronline.co.uk/reports/climate/Bangladesh.htm)." <https://www.weatheronline.co.uk/reports/climate/Bangladesh.htm>. Accessed 6 Jan. 2020.

during the monsoon season, as it would be nearly impossible to start building at that time. It would be very hot and humid which would make the conditions hard for the builders and they would require more time to rest which would increase building time, which can alter the plans and timings. Furthermore, typhoons can cause floods which can have catastrophic effects on infrastructure⁶, if the building phase begins during the monsoon season it would take longer for the farmhouse to be built as it can be affected by extraneous variables such as the heavy rainfall and flooding.

Therefore, project planning, the first phase, will take place during June to October. Three to four months will be spent planning the project and sorting out the costs of the project as well as buying everything that is needed. There will be a schedule for the whole project, and four phases for the whole project. The first phase will be planning, the second will be designing, the third will be building and the fourth will be maintenance. First and foremost, the project mandate and the budget for the whole project must be decided, this helps to avoid overspending and burying yourself in debt. In addition to this, the scope for the project must be established as well as its size and goals. After researching where you would like to build a farmhouse, the cost of the land that is being bought will have to be established. After the land has been bought, it is essential to seek planning permission from the local government, in order to begin planning how to build the farmhouse. After that, research must be carried out to figure out the costs for the architect, plumber, builders, electrician, painter, tiler, supplier, contractor and any other people who will be needed to complete the project. After the costs have been decided and the planning permission has been granted, we can move onto phase 2 which will be designing the farmhouse. It is very important to have a vision and idea of the type of farmhouse that is desired. Furthermore, it is essential to talk to the architect and come up with a design together. The architect's job is to plan and design the blueprints for the farmhouse.

I have created an intricate plan for building a farmhouse in Bangladesh, including all risks and problems that may be faced by project managers, builders, and the other team members of project planning. There will be two storeys, with five bedrooms, dining room and kitchen. In the dining room there will be a bassinet as well as two bathrooms, one upstairs and one downstairs. One shed for cattle will be built with a minimum capacity of 10, one shed for organic chickens, a shed for goats, a rooftop shed for pigeons and a shed for the storage of food for all of the animals and birds. In addition to this, a pond

⁶ "Hurricanes, typhoons, cyclones and monsoons - Travel.gc.ca." 10 Jun. 2019, <https://travel.gc.ca/travelling/health-safety/large-scale-emergencies-abroad/hurricanes-typhoons-cyclones-monsoons>. Accessed 6 Jan. 2020.

will be built to habilitate fish and fruit trees as well as vegetables will be planted. In order to be more energy efficient, solar panels will be installed on the roof. This will be a major stakeholder benefit as it reduces the cost of electricity bills due to electricity being generated from the solar energy harnessed by the solar panels as well as low maintenance costs. The maintenance costs are very low due to only having to clean the panels a few times a year, also only the inverter and cables need some maintenance, there are not many repair costs. Solar energy is renewable⁷, which is a major advantage, it can be harnessed anywhere and does not run out. In addition to this, in the winter, electricity costs may rise, however even having solar energy run most of the farmhouse in the summer will save a lot of costs and be more beneficial for the environment. Moreover, it can have diverse applications, as the energy can be used to generate electricity in a place where there are no power grids. As this farmhouse will be located in the rural village area of Sylhet, it will be extremely beneficial to use solar energy. In addition to this, the energy can be used to distil water in places where there are not many clean water supplies. Although there are also many disadvantages that come with solar panels such as the actual solar panels being quite expensive, and that solar energy is weather dependent, the advantages outweigh the disadvantages as it will have more long-term benefits and save more costs in the long-term.

It is vital to plan out all of the risks that may be faced during the building stage. We have already established that a big risk can be heavy rainfall and flooding, this will postpone the project and lead to the schedule being pushed back which may affect the time it takes for the project to be completed which in turn will increase project costs and may go above the budget. Another risk is that animals and crops can die out which is why they must be tended to at all times, there must be local workers that have sufficient knowledge in agriculture and farming⁸. In addition to this, there may be thieves who steal cattle and tools from the site. Another risk is that the infrastructure may not be able to sustain damage by typhoons, this is why the research stage is crucial and each material must be suitable for the climate in Bangladesh. Furthermore, to prevent any hazards for the builders who are working onsite, they must be provided with the correct uniforms. This involves wearing helmets and safety goggles, as well as fluorescent jackets if working at night and work boots. In addition to this, the workers must be made

⁷ "Advantages & Disadvantages of Solar Energy (2020" 19 Dec. 2019,
<https://www.greenmatch.co.uk/blog/2014/08/5-advantages-and-5-disadvantages-of-solar-energy>.
Accessed 6 Jan. 2020.

⁸ "Bangladesh Agriculture, Information about Agriculture in"
<https://www.nationsencyclopedia.com/economies/Asia-and-the-Pacific/Bangladesh-AGRICULTURE.html>.
Accessed 6 Jan. 2020.

aware of every risk⁹ and how to prevent risks and resolve issues. Project managers must monitor and control risks, budget costs and the progression and performance within the project.

The final phase is maintenance and closure. This house will be created for the people who will be operating and looking after the farm, although there will be workers who do not live on site but locally, it is important to have people who live on the farm. This is due to a series of reasons, farm animals must be tended to at all times and looked after properly, furthermore it is important that no harm comes to animals on the farm as we are against animal cruelty. Animals will have to be fed normally with the right nutrients and they must not be given artificial chemicals and 'steroids' which would increase the muscle of animals. In addition to this, there are many cases where local thieves may steal cattle and other farm animals and tools. Although it may seem strange to be stealing animals, it is important to know that Bangladesh is a very different environment than the UK. The way of living is completely different as well as the culture there. Due to Bangladesh being a Less Economically Developed Country (LEDC), many people work in agriculture or factories to earn money. People may steal cattle and other farm animals so that they can sell them to earn money. This is why it is also important to have the correct security measures in place. Additionally, it is important that the right food is selected for the animals and the right fertilizer for the plants and grass is used. All of these aspects go hand in hand as the cattle graze on grass and they must gain all the nutrients that they can. It is crucial that all animals are cared for and are raised organically. Once the project is finalised, the farmhouse should be up and running, providing food for locals and to be exported to other countries.

In conclusion, project management is a very detailed process which involves a lot of aspects that project managers must take into consideration. It is essential that project managers have the right characteristics to run a project, and that they have the sufficient knowledge that it takes to manage a project. It is crucial that the stages of the project life cycle are followed and that the benefits and disadvantages of every situation is outweighed. Furthermore, organisation is a vital component in project planning and there are project planning tools which are very useful to use in order to have a successful project.

⁹ "8 Construction Site Safety Best Practices - eSUB Construction" 12 Dec. 2018, <https://esub.com/improve-construction-site-safety/>. Accessed 6 Jan. 2020.

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