



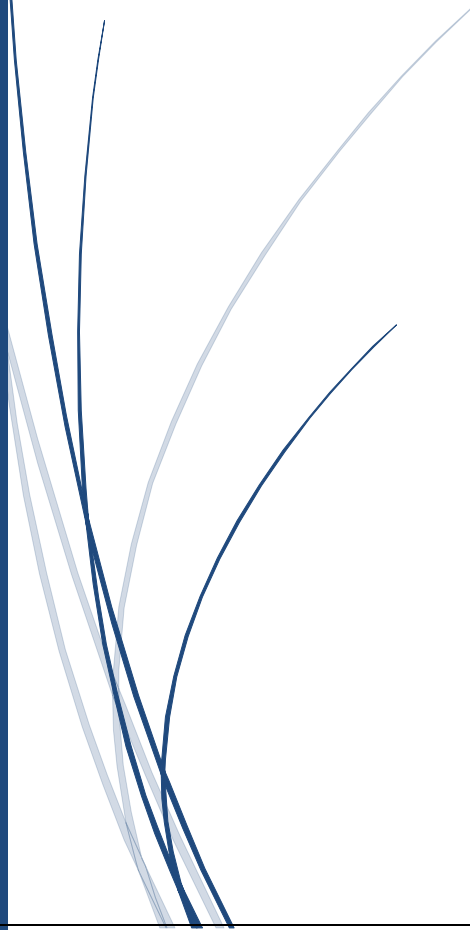
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Executive Summary

The study represented a comparison between actual and planned project management plan of the waste recycling project. The area checked whether the process has achieved all objectives or not along with its benefits. The discussion analysed the effectiveness of project timeline and budget to outline the scope of the project. The study made critical comments to reduce the presence of risks while the execution. The project shed light on the learned lessons from this PM planning and provided the recommendations based on that.

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Introduction

Project management is a crucial job where a project manager needs to keep an eye on each activity. The project provides a detailed analysis of the UK's "waste and garbage recycling" project. The assignment reviews the project timeline, budget and other necessary elements. The study has its complete focus on the difference between its scheduled process and actual process. All the objectives are scrutinized well to check whether they are achieved at the end of the process or not.

Almost 24% waste materials are thrown at UK landfills. Almost 12 tons of wastes are recycled, and the rest is kept in landfills. The objective of the second phase is to check the suitability of waste management planning featuring its risk factors, areas of improvement and other unavoidable circumstances while conducting the process.

Discussion on achieved objectives

The fundamental objective of this project is to promote a sustainable waste management plan for waste recycling. In waste recycling bending projects, managers' mission is to control the garbage that is thrown to affect nature. This is thoroughly maintained in the process. Environmental pollution has gained maximum focus in this project. The aim of the project is to help in segregating non-recyclable and recyclable wastes in a productive manner, which is efficiently followed throughout the process (Ajmal, Khan and Al-Yafei, 2019). The managers have effectively used **PRINCE2** methodology to recognize its success factors.

The additional focus is provided at the risk elements and challenges that may freeze the project's success factors. Project managers have targeted competitive advantages through systematic organisation, measurement, and accountability and execution strategy. Precisely, the project has fulfilled all possible objectives in its completion phase. The managers have followed the strategic communication process and stakeholder analysis as scheduled in the plan. The project carries a high value of sustainability in its process (Ajmal, Khan and Al-Yafei, 2019). Managers and stakeholders have demonstrated a good knowledge of PRINCE2 approach in the process as per the planning. The project has also carried high value to utilize essential surveying tools to achieve progressive success. In this regard, the project managers have used productive tools as per the plan to retain employees in a long process and to motivate them in sustainable initiatives.

Discussion on benefits

The project is scheduled to pass through some significant steps to achieve its goals and benefits (Ajmal, Khan and Al-Yafei, 2019). The UK produces a huge amount of garbage daily. The project has effectively managed the waste amount and come up with a solution to recycle them successfully. Some of the major benefits of this project are,

- This reduces waste amount to the incinerators and landfills
- Project conserves natural resources and increases economic security
- This is helpful to save energy and pollution prevention
- The assignment supports UK's manufacturing and resource conservation
- This is also helpful to create different jobs for different stakeholders in recycling industry
- Project protects the country's ecosystem and controls the demand of raw materials
- The project carries a huge benefit by reducing the climate-changing CO2 emission for the country
- Apart from that, the project provides cheap disposal and waste collection method
- This is also helpful to eliminate cost of landfill maintaining
- The project introduces a sustainable waste management framework for the daily garbage
- This is helpful to maintain global warming and pollution

These benefits are expected to be achieved by this project. The team to improve sustainable waste development in the country adopts the project (Ajmal, Khan and Al-Yafei, 2019). Initially the project is scheduled focusing on these benefits. The managers have serious doubt about the execution and project delivery. However, the process is seen to fulfil all expected benefits at the end. Needless to mention these benefits are achieved fulfilling all objectives. The PRINCE2 approach has maintained a large part in achieving these benefits. Estimated benefits have influenced project timeline and cost figures as well.

Scope analysis

The study says that the project stays inside its original scope as seen in its scheduled timeline, budget and tolerances. The assessment has efficiently used each of the stakeholders in a process that helps them to maintain the correct scope (Ajmal, Khan and Al-Yafei, 2019). It takes them a long time to identify their suitable stakeholders before starting. They have maintained a strong relationship between them at the project execution phase.

The project's timescale is fully justified during the process. Some variations are followed in completion due to the additional time requirements. However, each step is thoroughly followed in the process. The initiation phase consists of four activities, which takes 16 days. However, in the plan 15 days are allocated for this task. Planning is a crucial task; however, managers have allocated 45 days for this in their plan. In reality, the planning phase has taken 50 days. On the other hand, 70 days are allocated for project execution, while in the actual process; the task has taken 60 days. After this, 40 and 60 days are allocated for the control and closeout tasks respectively. In reality, both of these processes have taken 50 and 5 days respectively. This process has taken five additional days to meet its closure. Apart from that, project managers have not followed all the steps sequentially in the process (Hajali-Mohamad, Mosavi and Shahanaghi, 2016).

As an example, while "planning", managers have first scheduled the task plan and then proceeded with risk analysis. Communication process is planned after that. Lastly, the budget figures are confirmed. Similar to this, execution and control phase have also followed the same. It is true that the team has taken some additional days to finish the project. However, they have shown their great involvement to follow all processes systematically. Their dedication towards timely project completion carries a significant value. Cost management is one of the most important aspects of this project. The project has estimated eight major areas of expenses. Human resource cost, financing facilities, equipment expenses, software, location surveying cost, staff fess, cost of legal contracts and cost for beneficial regulatory are those elements in the plan. A budget of £50,000 is allocated at the initial planning (Hajali-Mohamad, Mosavi and Shahanaghi, 2016). However, the project has demanded some additional cost in this regard. Almost every element has required additional expenses while its execution.

This calculation is proven an absolute misfit to this project. Financial experts must have provided more attention to the budget figures before the actualisation. Human resource cost has been £2000, while it is planned as £1500. On the other side, an amount of £1500 has been measured for financial facilities in the actual process, while the planned budget for this task is £1300. The expense for physical equipment is allocated £15000. This budget is little crossed in the actual process. On the hand, £7000 is allocated for software applications; however, it actually takes £10,000. Location surveying cost is estimated around £1500, which is marginally crossed while the execution. The whole process has required one additional contractor due to the absence of the previous one. This pushes the budget up to £22,000, while the actual expense is estimated to £20,000 (Hajali-Mohamad, Mosavi and Shahanaghi, 2016).

Both legal expenses and beneficial regulatory costs are also seen to go over the scheduled budget. From the analysis of both the timeline and budget, it can be said that the project has fulfilled all the scheduled properties with some additional resources. Managers have provided their complete dedication to complete the project within the estimation. However, unavoidable circumstances and requirements are responsible to reduce the value of the project in some respects (Jayaraman, 2016). Even after all these, it cannot be said that the process has completely gone away from its scheduled scope. Project managers' involvement, effective use of methodological approach and systematic timeline follow-up has made the process fulfil its scope.

Changes compared to the original plan

At the initial stage, the project managers have identified many risk factors and challenges in the process. Changes are made to reduce those challenges while the execution. These changes are made as per the risk figures (Crispim, Silva and Rego, 2019). Some of the major changes that are implemented in the process are,

- Internet-enabled latest tools are used to monitor the project progress, which is not in the plan
- An additional financial expert is hired to fulfil the budget-related risks
- The timeline is changed as per the project expectations and requirements
- The budget figure is re-calculated while the implementation
- Apart from that, some stakeholders are changed during the process
- One contractor is replaced with another one while the execution
- Some additional software is also introduced in the project
- The surveying tools are replaced due to some usability issue
- The communication system is also changed while the process, which makes it more sustainable in manner

These changes are done to satisfy project requirements. The planners have missed and miscalculated many project elements (Shishodia, Dixit and Verma, 2018). These changes are brought to complete the recycling project within its scheduled scope.

Lessons learned

This project planning has one fundamental mistake from the very beginning. That is resource management and thus the budget calculation. The project managers properly maintain even the

timeline (Grau and Abbaszadegan, 2015). However, improper budget calculation has ruined the whole lifecycle. This has pushed the managers to think about rescheduling this whole process. No task can take place properly if the payment is not made. Additional cost requirement makes a process to be elongated without any reason. The project management team has to go through a lot of barriers due to this. The project also lacks innovative strategies and software applications at its monitoring phase. This has made the team to include BIM tools. The most important lesson learned from the process is any successful project seeks a good fund and strong financial estimation (Guilherme, Ronaldo and Rodrigo, 2018). Without them, the project management team needs to go through several challenges and barriers. Timeline is another strong point that needs to be properly maintained. No matter how good the quality is, a project cannot be successful until it is finished within time and estimated budget. This is the most important segment of this assessment to learn for future project-management work. The process says that identification of appropriate location and people located near the recycling program is an essential factor to ensure success or failure of the project as it can induce risks for the project environment by the local people during development of a recycling program within a location without acknowledging themselves.

Recommendations (based on learned lessons)

Some of the most critical recommendations can be made based on the learning. They are,

- Accurate project requirements and proper documentation are essential
- All stakeholders need to be checked before the selection
- Prioritization must be provided at the cost estimation and time scheduling
- Proper communication platforms need to be decided at the initial stage of the planning
- Realistic project milestones are needed to be set at the beginning
- BIM is a good approach to modern construction. Waste management requires many processes. One of them is site monitoring and landfill testing. BIM can be a good solution to measure waste materials, its recycling costs and much more

Earlier Risks identification and preventive mitigation actions

According to the project of garbage and waste recycling vending, it is analysed that different types of risks could be there before starting the project. It is analysed risks identified in assessment 1 with uses of **PRINCE2 methodology** will help to consider different project risks before starting a project if the methodology is implemented earlier into the project. It is

analysed that different types of significant project risks are there as follows, which could have been identified earlier in the project.

Health and Safety Risks

It is analysed that major problems with the project of recycling vending for waste and garbage management are risks related to health and safety of the environment and individuals involved in the project. It is analysed that project teams working in the waste and garbage recycling process have to collect garbage, which can increase risks for team members regarding musculoskeletal problems that can be dangerous to health (Cruvinel *et al.* 2019). Apart from that, during collection and lifting of waste and garbage particles into recycling vending machines with a container could create accidents for the project environment. Besides, collection of wastes and garbage from landfill sites for recycling processes can release untreated chemicals, such as polychlorinated biphenyls, mercury, and cyanides, which are toxic and can lead to death or major disease.

Community Awareness risks

It is analysed that pollution and infections have been induced from waste and garbage that are disposed into a landfill (Dunichkin and De Souza, 2020). It can run through river and groundwater that can be contaminated into the atmosphere. It is analysed that risks related to mortality and cancer can be considered within project development to ensure a useful approach that can be further improved for health and safety measurement. It has been found that identification of appropriate location and people located near the recycling program is an essential factor to ensure success or failure of the project because it can induce risks for the project environment by the local people during development of a recycling program within a location without acknowledging themselves.

Contractual risks

It has been identified that the project environment needs to develop a contractual agreement with garbage and waste suppliers with ensuring facility for sustainability of project operation. In contrast, development of a contract with suppliers can be changed by only contacting the suppliers regarding new guidelines of the project (Zolnikov *et al.* 2018). Otherwise, a contractual agreement related risks could be generated within the project environment. Hence, before starting a recycling project, a risk assessment on contractual agreement needs to be evaluated.

Budget Risks

It analyses the efficient collection of wastes and garbage for further recycling projects; organisations need to buy new recycling requirements and bins with ensuring flow of

performance. In contrast, development of budget is essential before the project establishment. Poor budget preparation or avoiding any cost plan can induce risks in the entire project. Hence, starting a recycling project using vending for waste and garbage management required risk assessment that can help to identify potential risks that could be generated prior and during project accomplishment (Korucu *et al.* 2016).

Preventive actions on project risks identification

It is analysed that major threats or preventive action could be lack of resources availability and capability of project risks identification. Lack of planning and assumptions from the project environment can prevent in identifying possible risks that could be developed with the project. Apart from that, lack of skills, knowledge, and experience of project managers can tend to less identification of project risks.

However, it is analysed that all the identified risks can be predictable and avoidable to ensure sustainability in the project environment.

Conclusion

The project has reviewed the completely waste-recycling project. This discussion has out its concentration in comparing the actual and planned progress of the project. The analysis has shown that the process has suffered a lot due to its unachievable budget calculation and little time overrun. The process has shown some good contribution from project managers to fulfil its objectives. Certain benefits are achieved in this waste vendor-recycling project. The assessment has provided a detailed review of the scheduled waste recycling process with the help of PRINCE2 methodology.

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