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Module Title: Project management and Control

Assignment Two: Critical Evaluation of team's performance on the Sodor oil terminal design, planning and construction.

INTRODUCTION

The Sodor oil terminal project is an oil rig project which consisted of building a jetty, three oil terminals, control room, safety equipments, office and shops. The project was awarded to group 15 and our duty included planning, procurement and construction of the Sodor fuel oil distribution depot project all through the life cycle phase.

This Sodor project report evaluates the project group (group 15) on how well the Sodor project was managed, the risk that was encountered throughout the planning phase of the project, the decision made and the effect it had on the project execution and the team's organisation. The report also gives an account of the group's performance from the baseline of the project down to the project's close out

TEAM ORGANISATION

For the period of the Sodor project, there was a group formation comprising of five members, Alencar and Almeida, (2010) describes project team formation as a critical decision making aspect made by group of people, also Antoniadis (2012) making reference to Belbin indicated the importance of team selection. The project team for the Sodor project was made up of five members, each of the members were from the same departments, however this is contrary to the works of Scott – Young and Samson, (2008), where they described that project team which comprised of various departments improves the project durability, reduces the estimated slip, reduces the project's overall cost, cooperation during team work was also described to be a necessity for a project success, (Keogh and Venables, 2009).

The team was made up of different five (5) different nationals, in Cervone, (2014) in his research work indicated that if the cultural issues regarding communications are not looked into at an early stage of the project they would be a risk in the completion of the project, however the group members were all on the same page when it came to means of communication.

The project group decided to have meetings regularly, twice a week so as to keep to dates with changes and new information that would be added during the project phase, the meeting periods and venues were agreed upon on the initial project group selection.

During the first project meeting, each member of the group were given positions, and a project manager was selected, it was agreed that throughout the project phase we would have just one project manager, the other posts that the team was comprised of included the procurement manager, which was in charge of the cost and financial issues, the IT manager, who was in charge of the updating and scheduling using the ms project, the secretary, who was in charge of taking minutes and making sure information about the next minutes and venue gets across to every member of the group and the project manager whose role was to monitor the overall project all through the phases, the role selection was aimed on selecting various aspects / knowledge that would be needed for the successful implementation of the

Sodor project, (Ashurst et al., 2009) indicated that a team which is balanced and effective increases the chances of a project's success.

Although each member was given a position in the group, every member of the group participated in each task that was given, but based on the role the individual in charge of the task heads the task and receives suggestions from other members of the group.

As a way of keeping track of our project requirement, a checklist was made during the first meeting, for every meeting that was held a minute was recorded so as to keep track of shortcomings and other useful information discussed during previous meetings, (Cervone, 2014) also pointed out the importance of having meetings and keeping records, also of effectively communicating with the project parties involved in the project

As a means of communication, the team utilised the Google mail account (Gmail) to send and store information used during the project, this is in line with Scott – Young and Samson, (2008) where they indicated that project teams working together can communicate or share information by the use of technology. The minutes of the meetings was distributed to project team members during the end of the meeting and it was later sent for reference purpose through the Gmail account, the Gmail account was also used to send, store and share other useful documents such as the ms project plan to all members of the group, the importance of communication was also indicated in (PMI, 2013), where they attributed that one fifth of every unsuccessful project is linked with bad communication, but Cervone, (2014) wrote in his research that personal one on one meetings are more effective than using social media, Emails, etc as a means of communication. The project group utilised both the personal meetings and use of technology such as phone calls, text messages and Gmail account as a means of communication all through the project.

SODOR PROJECT TEAM EVALUATION FROM START TO PROJECT CLOSE OUT

The Sodor oil depot project consisted of six (6) stages, from the first phase which included the initial planning of the project using the ms project till the final stage which is project close out.

Session one

The first task required of the group was to appoint each members of the group with a position and decide which member of the group would be the project manager, also a checklist was made to monitor the group's performance and the group decided that every member of the group would retain the post appointed all through the project, but also every member would participate in each task equally so as to have a good knowledge of the project at all times.

The group was also tasked with creating an initial project plan based on limited information presented at the first stage of the project, the task was collectively done but the IT personnel was heading the planning. Part of the initial plan requirement was to have the head office work, jetty design, jetty erect, pipe installation, testing and painting as critical task, also there were some specifications such as delivering the fire fighting equipments towards the end of

the project and that the painting can only be started after two months of when the fire fighting equipments have been installed.

The group (group 15) was also tasked with creating an initial cost model based on the information provided, the cost model included the cost of head office work, materials, contractor cost, site supervision, contingency, profit percentage and so on, the cost model was created using a Microsoft excel.

At the end of stage one, a peer assessment was carried out by other groups and supervised by the coordinator.

Session two

In preparation to start the second stage of the project, any drawback / fault from stage one was looked into and corrected.

The team was tasked with choosing vendors from a vendor list that was provided, and giving detailed account for the methods used for the vendor selection process, also to update the initial cost model with the vendor that would be selected using the vendor list provided. The vendor list contained the vendor name, the vendor rating, the duration it takes to deliver (delivery time), and the cost.

Vendor selection process is a complicated process that involves many criteria that has to be looked in to such as the cost, quality and delivery system before selecting the suppliers / vendors, (Mwikali and Kavale, 2012). Chakraborty et al., (2011) described the vendor selection process as a multi decision making problem due to the fact that various supplier cost, delivery time, quality of service differ making it more complicated when selecting vendors, However based on the list provided, the group agreed upon selection process was not to focus primarily on the vendor ratings but to compare the prices of the fastest delivery time with the second fastest delivery time, the method used for the vendor selection process was based on the price and delivery time not the vendor ratings. (Bayazit, 2006) indicated various methods that have been / are being used for the vendor selection process, they include the analytical hierarchy process; (this is a mathematical way of solving and analyzing difficult decision in selection process), total cost ownership; (this is an estimated cost which aims to help the client have an idea of the total cost of the product), statistical approaches and the analytical network process. Shil, (2009) reported that quality and price should be considered during a vendor selection process

The group's task also included providing / creating a document which indicates the environmental factors that should be taken into consideration when an environmental impact assessment is being carried out on the project, Bhatt and Khanal, (2010) reported that environmental impact assessment is seen as a requirement for large projects, Amuga and Ayinde, (2013) being more specific in their report indicated the need for environmental impact assessment for large projects, being oil projects. Nwoko, (2013) further explained that environmental impact assessment is a way of preventing subsequent harms to the

environment that would arise as a result of development, that is; it is essential to carry out environmental impact assessment in order to have a sustainable work.

The issue of overtime was deliberated upon by the team members so as to meet the required target of 98 weeks, Hanna et al., (2005) described overtime as the numbers of extra hours worked over the regular forty hours (40hrs), (the sodor project normal working hours was 37.5) which is expected in a week. Overtime was used on some of the critical task to achieve this, similarly (Guldmond et al., 2008) reported that overtime is used to meet due dates that are given at projects, however it is important to know the limit in which these overtime can be added.

At the end of stage two an updated cost model, a document containing the environmental factors to be considered during EIA, a document describing the vendor selection process and an updated ms project plan was developed.

Session three

A clearer picture of the shipping of the pipes materials was realised in this stage from the purchasing department, the new information indicated that the pipes would be shipped in two sessions (simple valves and complex valves), the simple valves would be shipped in first then the complex would be shipped when the simple pipes 75% complete. More explanatory information in regards with to the mobilisation was made available thereby making it possible for the team to reduce the original overtime added and save a little cost.

At the end of stage three the team updated the cost model, reducing the initial excessive overtime that was added, and also the ms project plan was updated with the new information that was given, a peer assessment was carried out at the end of the stage.

Session four

Before the beginning of the session, all shortcomings from the previous session was looked into and resolved. The task for stage four includes setting a baseline and updating the ms project with the new additional information that was made available.

The baseline was set with the starting date of the project being the first Monday in June of 2015 and the overall project duration was 97.8weeks with the target being 98weeks, by setting the baseline, no further changes such as vendors can be changed.

Using the information provided for the session four task, an update is required on the ms project plan and the cost model because further details on the delivery time have been adjusted, the information provided shows the slippage of the vendors selected based on the ratings, since the group selection process wasn't solely based on the vendor rating we realised that this new information could bring a setback in the group's actual accurate plan which met the target of 98 weeks, Shil, (2009) in his research indicated that the cost is often used as a selection tool for vendors, that is going for the vendor with the cheapest cost but not taking into consideration the consequent charges that would be incurred if there's a failure to deliver as planned, it was further elaborated in the research paper that cost that is related to a delivery

time that is not reliable, quality of service that is not certain shouldn't be included as a selection criteria method.

However the decision made with regards to the vendor selection process may be linked with the fact that we were not efficient in utilising the limited information presented at the time, Mwikali and Kavale, (2012) made reference to the fact that the history of the vendor supply and delivery time should also be looked into during the supply process, this however was not made available during the Sodor project, therefore group members' decision was based solely on the document provided.

Abdelhak and Tkiouat, (2012) reported that slippage in projects is frequent among construction projects, they also shift the blame / cause of the slippage to the project manager, the project slippage is usually caused by a number of factors such as; issues arising as a result of wrong estimate, poor feasibility study, site hazards, etc, Abdelhak and Tkiouat, (2012). Debabrata, (2009) reported that a high number of engineering project experience slippage, this slippage if treated appropriately can be managed without causing any major effect to the project, however if it is not properly managed it can lead to an uncontrollable state which would not be good for the project success, Ubani et al., (2010) reported that when slippage occurs in project resulting from the quality, cost, schedule it indicates there is a high likelihood that the outcome of the project won't be successful.

The team was tasked with making decisions regarding the actions to take for the vendor selection and the slippage time. Based on the vendors' ratings (that is – 4 being the highest and 1 being the lowest) the consequences were zero slippage for vendors with 4 rating, 0.5 weeks slippage for every 10 weeks for vendors with rating of 3. These changes were to be added to the task which had already started as at week twenty five of the project. The team were given options on decision to take; paying a 5% of the original cost for every ten week slip, paying a 25% premium for the slip so that the materials can be delivered by air freight or to take no action. Options were also made concerning the contractors that were affected by the new decision.

The affected task were simple pipes (which had a vendor Mitsui with a rating of two), Jetty design (CCC also had rating 2), tank design (the vendor being Tankraft and had a rating of 2), the team decided to take no action and implement the slippage time and pay fine / penalty of extending week beyond the 98 weeks target because based on our team's cost model there was still enough money left.

After the stage's work an updated cost model including the fine for exceeding the 98 weeks target was included, also an updated ms project plan was presented with other documents during the peer assessment.

Session five

Previous shortcoming from the session four were looked into before the session five task began, the team task in this session was to update the project plan to week 45 of the project start date. New information was introduced, the information contained more explanation on

the delivery time; (suppliers with rating 4 – with scheduled delivery of 5 weeks early, suppliers with rating 3 – with scheduled delivery of 2 weeks early, 2 ratings – with scheduled delivery of 2 weeks late, suppliers with 1 rating – having a scheduled delivery of 6 weeks late). The new information provided indicated new delivery times for task that had already started as at the updated week 45 of the project start date; task like the jetty erect that had vendor rating 4 would be completing their task 4 weeks ahead, while task with rating 1 would be running six weeks behind schedule.

This new information was added to the ms project task and the cost model was also updated, it was also required of the team to document what they would do differently if they were asked to change suppliers if a new supplier was introduced, however after the group deliberated on the information presented, a written document was made indicating that we won't have made major changes to the vendor selection process.

Session six

The project was reviewed for any setbacks in the previous stage before the new information was acted upon. The task requirement for this session was the close out plan, the group had to update their ms project to complete and also the cost model had to be updated, other information was also available; new completion times for task that had not been completed as at the week 45 of the project start date (installation, painting, complex pipes and so on). After the new information has been acted upon, the project duration was 108.73 weeks, with the updated cost model is summarised below;

Item	Cost (£)
Project budget	7,361,000
Overall cost of project + overtime cost	7,462,561.5
Initial Debit	-101561.5
Penalty fee	-150,220
Overall Debit fee	-251,781.5

Table 1: summary of group 15 cost model

From the above table it shows that the group was over the initial budget.

CONCLUSION

During the Sodor oil depot project the group (Group 15) was organised with every member of the team being participative and cooperative, task were done as agreed by the group, each member of the group appointed to complete a task did it, but at the end of the project the group wasn't able to meet the target of 98 weeks and was also over budget.

The cause of the project not being successful could be due to the decision made by the group with regards to the vendor selection process; the group was focused on saving cost and ignored the ratings not considering the effect of selecting a low vendor rating initially. The group was able to learn more and new ideas when planning a project, also from the mistakes made during the period of the Sodor project.

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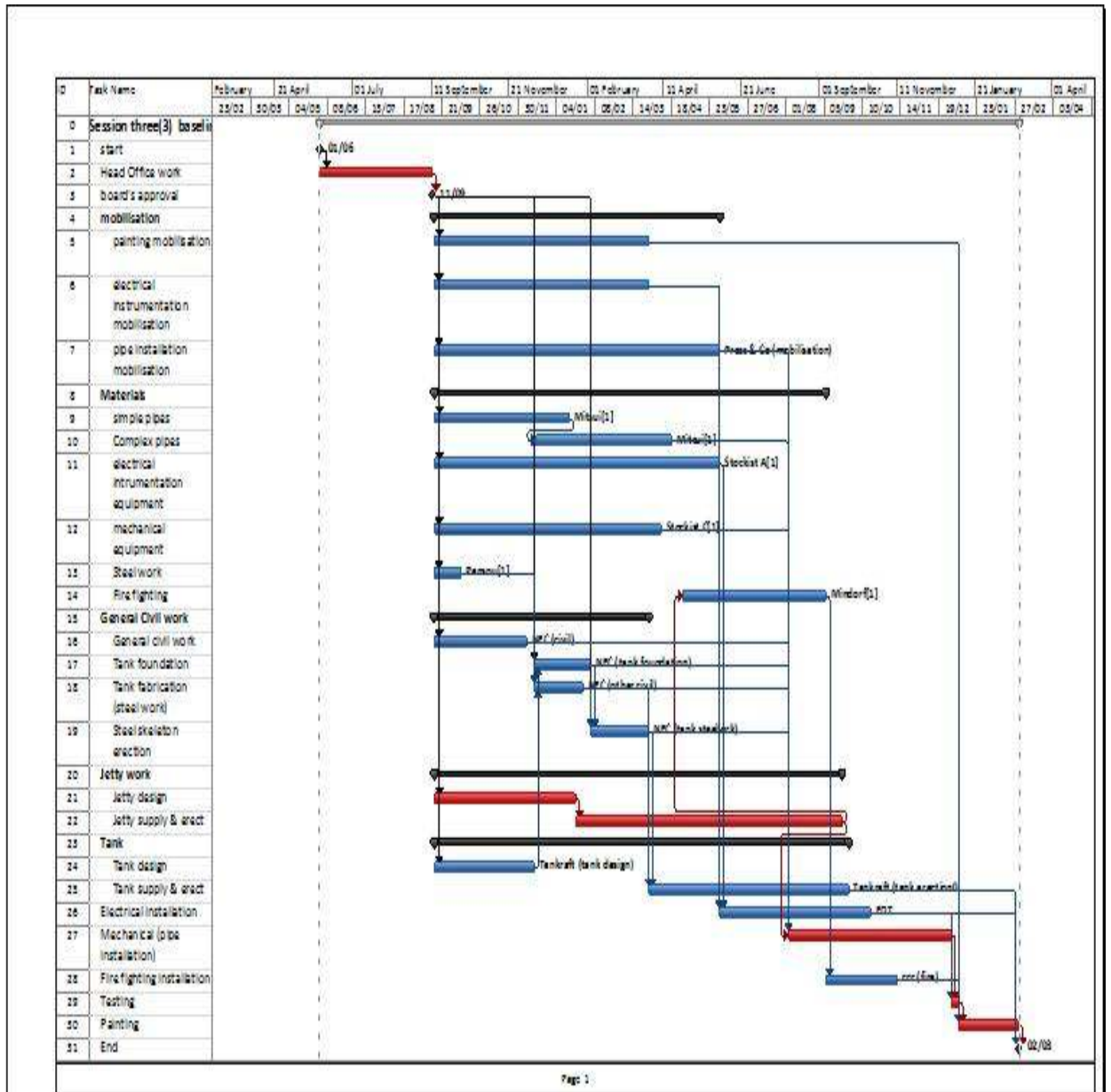
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APPENDIX 1 – BASELINE PLAN



APPENDIX 2 – PROJECT CLOSEOUT

