Project Management Coursework: Panama Canal Expansion

Introduction

The Panama Canal, it allows a vast variety of commercial products and cruise ships to pass through which saves a lot of time and money rather than ships travelling through the Atlantic and Pacific oceans. Cargo ships are built to fit through the width of the canal. However, nowadays with a constantly increasing demand on near enough everything, cargo ships are built to be even bigger in order to carry the large amount of goods that no longer able to travel through the canal due to their size. For this issue as well as issues such as traffic at the canal led to a need of expansion of the canal. The narrow but essential shipping lane has recently undergone a major expansion and it is considered by many to be a megaproject. The upgrade of the canal opened in 2016 where the canal had been doubled in terms of capacity, which allows those all-important extra-large cargo ships to pass through along with other ships at free flow.

What is a megaproject?

Megaprojects are project that are of a large scale and complexity. They are mainly found in modern cities. For this reason they cost billions and take many years to complete, due to development, issues with investors, issues with the public as it may affect their lives etc. with this consideration megaprojects put in place to change the shape of society for the better in terms of facilities and services. Megaprojects should not be considered as just a bigger version of a normal project, they are completely in contrast in terms of their goal, duration, complexity and investors. Which is why they need a committed approach to project management to be delivered successfully. They need to pay attention to similar projects to try and gauge the duration, the cost and the workforce of the project.

With a rapidly increasing demanding world, megaprojects are beginning to become more frequent across all industries of work, such as infrastructure, IT, defence, urban redevelopment, energy, and many more. Examples such as airports, Olympic stadiums, motorways and in this case the Panama Canal expansion.

The benefits of a megaproject are mainly economical; they create thousands of jobs for the community, which pumps money back into their economy, the community benefits based on the project for example, transport roads and motorways, health, leisure etc. These projects are seen as transformative and can put a city on the global platform. The knock on effect of this is that it attract visitors, investments, jobs, which eventually provides a better quality of life for residents. Another benefit is that some of these projects such as the Panama Canal expansion are essential as it accounts for an important share of the countries GDP. These projects are not just for business, but are even lifesaving. For example without the North Sea protection works, much of the Netherlands would be submerged under water due to its low laying land.

As much benefits a megaproject brings, there are also just as much disadvantages to

megaprojects. Some of the main disadvantages are issues such as delays, being over budget, and not fully following with assured benefits. In an important study by Bent Flyvbjerg, estimated nine out of ten projects go over budget (Flyvbjerg, 2014). The reason for delays and being over budget is usually that there is far too much optimism for the project especially when it considers the complexity of such large projects. When I comes to mega projects, no other project has ever been done like it before, not even similar. Therefore, the workforce have very little if any experience whatsoever. This results in project members treating the megaproject as if it was a normal project, and consequently underestimate the challenges faced ahead of them. When considering going over budget, a large proportion can be blamed on flawed decisions that are made early in the projects life, particularly during planning and set up. They usually happen due to an unfit board, along with poor communication between the ranks of hierarchy, investors, workforce and contractors. Also in some cases some projects being over optimistic and the complexity of the project, some project managers in a sense tamper with the data until the funding is approved, so therefore the project is doomed from the start. For some projects, they do not really get a lot of funding so therefore they have to budget low. This can lead to the temptation of skipping steps and cutting corners to reduce costs so they can be better utilised elsewhere. Another disadvantage comes from the public residents; many projects can be severely delayed or in worse cases scrapped due to protests over issues such as the environment, whether it benefits them, deconstruction, etc.

Panama Canal’s expansion

The third set of locks is a new passageway for traffic that is parallel to the current locks. The project is designed to allow the Panama Canal to be more than doubled its current size due to the demand of the world’s needs. It allows the passing of larger vessels as well as normal vessels and reduces their travelling time. The complexity of this project is not just to do with the sheer size of the lock with staggering dimensions, and workers of all nationalities. In addition, certain factors have to be considered such as enormous technical, geological, and environmental challenges. These factors play a part on which materials are used, as they have to be the most suitable, efficient and sustainable for the structural design.

The Panama canal expansion project ran into unforeseen problems which led to delays. Some of the issues came from debateable decisions, whilst other problems came from natural causes. One of the main issues that arose was in relation to the quality and the sustainability of the concrete that was used for the new locks. The concrete that was used came from the material that was rummaged from the pacific side of the canal, this was used to form the concrete, despite the advice from associations saying not suitable. This was done due to the money that was budgeted for the concrete was small, and using this concrete was far cheaper instead of importing from a different source. So the consequences that followed was the concrete began to crack, and so more money had to be spent repairing this.

Complex problems were not just manmade, some of the problems the project ran into was due to mother nature. As the project was coming to its completion, the water levels in the lake began to fall. This was blamed on a regular weather occurrence called “El Nino” which leave Panama in a drought that can last for one or two years (Bogdanich et al., 2016b; Henson, Rae, Masters, & Brown, 2016)

Another complexity that plays a part in this project is the timescale that was allotted fort he

project. The project suffered a few set backs with delays coming from the issues with concrete, repairs, communication errors, and delays due natural causes forced the project to overrun its cause by two years.

The complex project management controls issues that this project may have encountered would have been planning, scheduling, budgeting, tracking, financial, and risk assessments.

The project would have encountered many planning issues, such as numerous schedules in multiple set-ups. This can be dealt with by utilizing the sources of information at different levels of detail within different departments. Maybe a lack of integrated schedules to create one main schedule, which could have led to a lack of labour or construction equipment information and some schedule that do not support the main schedule. From planning problems can lead to scheduling problems especially if the progress activity and the duration of these activities are high. This can lead to delays for the project. To overcome this measure such as having weekly meeting to know where the project is at could be helpful. Like majority of projects, they always go over budget, so it would not have been a surprise if this one did too, especially considering the delays and the problems the project ran into. The money would have been made available; the question would have been how much? Therefore, for this it would have been essential to look at the finances and find ways to get the project done as efficient and cost effective as possible. Tracking would have looked at multiple units of measure for related if not the matching items that had been used by different departments. Especially on such a huge project, equipment would almost be certain to go missing at some point, in order to overcome this systems such as a tracking or checklist you have to be available to keep track of equipment. Finance issues may have been an issue due to low budgeting in some departments could have led to cutting corners. However, on a huge project with very little experience on it would be hard to put a financial figure on the project so the project has to prepare for potential requests for extra finance. Throughout the project there would have had to be near enough constant risk assessments throughout the duration of the project, especially given the nature, equipment and the location of the project.

Projects governance model

Project governance the framework of management within a project. The main role for this framework is to make the decisions that are logical, robust, and are able to be explained in a way so that investors understand. The governance of this megaproject is particularly intricate, given the nature of the project. It was filled with difficult issues regarding finance, contracting, public profile, use of technology, political issues, and conflicting interests from public, workers and investors (Muller, 2012). In order for this project to be successful, the framework would have had to make vital decisions to satisfy all of the problems. These decisions would have begun with how the workforce work, e.g. managers would have to be very versatile in how the manage a particular part of the project. In addition, the framework would have to consider how to get all who is involved in the project on common ground and get a shared understanding of where the project is up to and where it is going. Team sessions would have had to been held in order to discuss the performance during the project in order for different department to collaborate instead of conflicting with one another.

Conclusion

To summarise the Panama Canal expansion establishes great potential to be successful. It has many critics about the budget and the overrun of duration of the project. However, we need to consider majority of project overrun their duration and budget so we have to ask are we surprised, considering the size and the complexity of the project. This project has brought the canal back into the competitive game with the likes of the Suez canal and has brought economic benefits to the country and a sense of pride for its residents. Concerns do remain around the safety and environmental issues, some claim that it was a project for the elite and that the economic benefits will not find its way to the people of panama.

References

1. Bent Flyvbjerg, “What you should know about megaprojects and why: An overview,” Project Management Journal, 2014, Volume 45, Number 2, pp. 6–19.
2. Bogdanich, W., Williams, J., & Méndez, A. G. (2016b, June 22). The New Panama Canal: A Risky Bet. The New York Times.
3. Müller, R., 2012. Project governance. In: Morris, P.W.G., Pinto, J.K., Söderlund, J. (Eds.), The Oxford Handbook of Project Management. Oxford University Press, London, pp. 297–320.