Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
Trinity Saint David

Project Management

Assessment 1

Student name: Nina Angelova

Student ID: 2023254

Lecturer's name: Dr. Molly Jack

Executive summary

Critical evaluation of the crossrail project had been done in this report based on the completion time, budget, quality stakeholders and the risk management process. The reason behind the delay of the project had been mentioned and explained in this report. It was also explained in this report how a political plot twist in the country, changes the scenario of the project. The reason for the over budget of the project had also been included in the discussion. The various techniques of the risk management process and how the process is gracefully implemented, were also part of the discussions.

Table of Contents

Introduction	4
Review on Budget	5
Review the completion time of the project	7
Review of Quality Stakeholders	8
Review of Risk factors of the project	9
Conclusion	12
Reference List	13

Introduction

Here in this report, the cross-railway project has been critically evaluated based on the various directions of the project. The evaluation will be done on the core elements of the project such as the completion time of the project, budget of the project, qualities of the stakeholders and the various risk factors involved in this project. The new East-West line across London, well known as Elizabeth Line is delivered by the cross-railway project. The new cross-railway project, the Elizabeth line includes new tunnels 42 km long (Crossrail, N.D.), 10 new railway stations and railways of work to the surface. It also includes different maintenance facilities and associated depots across London. The construction of the Elizabeth line started in progress in 2008 with an initial budget of ⊠15.8 billion (Inews, 2022) and it took almost 11 years to complete the overall project. The brand-new Elizabeth line will exponentially increase the overall capacity of the Central Railway of London by 10%, according to the Transport for Rail (TFR). According to the Rail transport department, it will be able to carry more than 200 million people in a year to decrease the load of old transport systems (Sandle, 2022). In this report, the various reasons for the unfortunate delays of the cross-railways project Elizabeth have also been included. Factors related to the budgets and how the factors involved in the increment of the budget are also addressed. This project has a present net value of ⊠ 42 billion to the economy of the UK over a period of 60 years.

Review on Budget

The final budget estimated for the crossrail project, also known as Elizabeth, by the National Audit Office is going to be £18.9 billion after several delays from 2008 to 2019 ((Inews, 2022). Initially, the budget calculated for the completion of the Elizabeth line is near about £14.8 billion. The extra financial support of £4.1 billion is provided due to the delays of years and years for various reasons such as accidental deaths of workers, changes in political viewpoint and many more. In the year 2018, the envelope of funding was raised to £17.6 billion to complete the vital portion of the project. Additional funding of £825 million was given to the rail program in December, 220 and a total of £390 million was provided by both Transport for London (TFL) and Department for Transport (DFT) to the crossrail project. All of these together made the overall budget of the cross-rail at the end of completion £18.9 billion (Crossrail, 2022).

The main purpose of this crossrail project is to increase the overall capacity of the central rail of London by 10% over a year. It also decreases the load of the previous transport systems as it carries more than 200 million people across London (Sandle, 2022). Through introducing the dramatical improvisation of the transport system, the rail project is built to minimise the travelling time of the passengers and also enhance the travelling experience of the passengers in London and the Southeast area.

The crossrail project has suffered from several setbacks over the 11 years, which was initially granted by the former Prime minister of the UK, Gordon Brown in the year 2007. Although it was granted previously, the initial budget of the project was introduced in 2010 during the property-owning ceremony of the project. From the approval date in 2009, almost two years were possessed by the Government body TFL to sanction the project and allowed to occupy the land for the Elizabeth project. The official deadline of the project was 2018, but due to the lack of funds, and accidental deaths of the workers, it was completed in 2022.

In the initial stage of the crossrail project, the property occupying process started in the year 2009 by owning several properties in the area of Tottenham court road. The famous music venue, the Astoria had also been included in this process for the expansion of the overall area of the project. The preparatory work had been in the process after the successful purchasing of the legendary Music venue. Unfortunately, in the year 2010, the project was delayed by the Government as the first Coalition Election was going to be held. To celebrate the Coalition

Election the government of the UK cut down the budget of about £ 1 billion out of £1.3 billion from the promising budget and as a result, the project was on hold due to the lack of budget (Tunnicliffe, 2022).

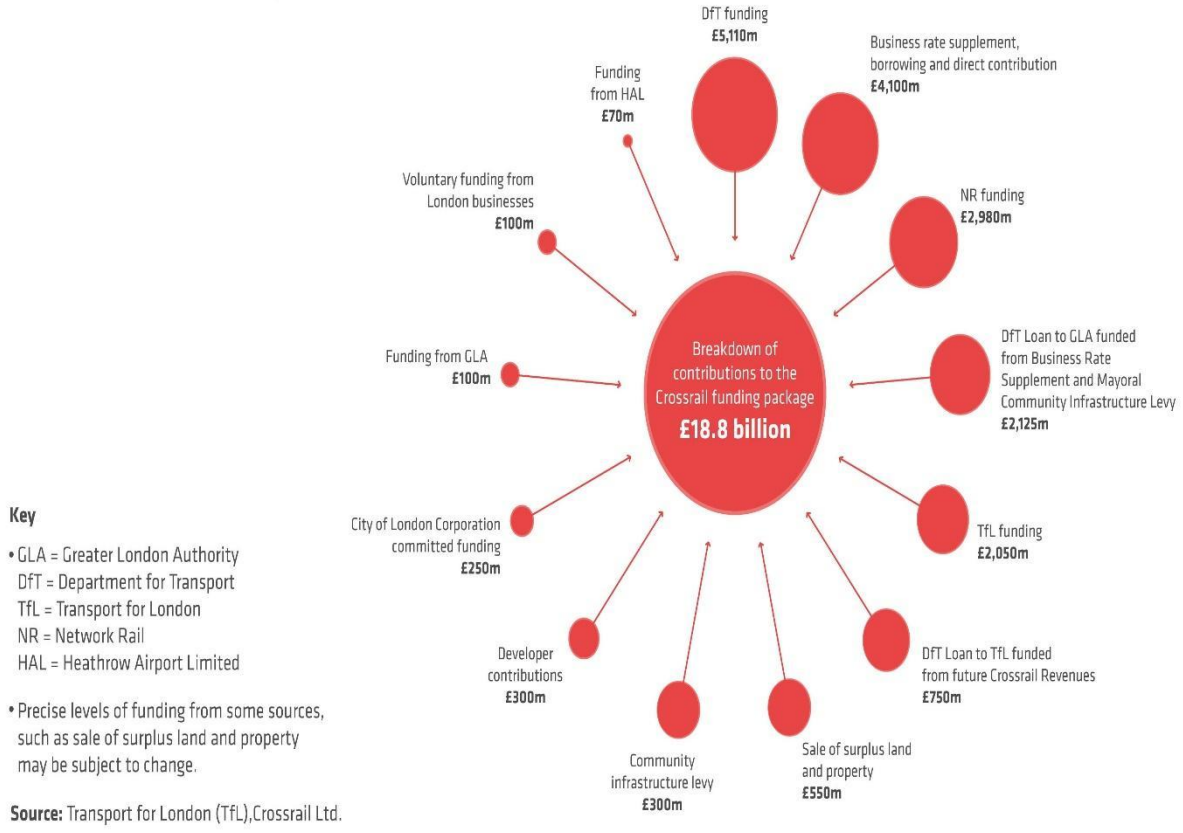

Figure 1: Funding and Financing of the crossrail project

(Source: Crossrail, 2022)

Review the completion time of the project

The company Cross-rail Ltd. was founded to build railway tracks and new stations to extend the connectivity of the central UK through rail lines. Cross-rail ltd, managed by the TFL was monitored by both government dept. and transport operator, which will add tracks over 100km and 41 stations. With new infrastructures, new stations, new trains and new tracks, it is very important to complete the Elizabeth line phase by phase to ensure its reliability, performance and safety. The Elizabeth line is going to operate across an east-west line of the capital of the UK, although it is a very complex line in terms of construction and engineering design. In order to make the rail line more complex, the trains of the Elizabeth line will transit effortlessly between 3 signalling processes which ensure to carry 200 million people safely (Tunnicliffe, 2022). The commissioning process and elements of the Elizabeth line are tested rigorously to maintain the safety standards and expectations of the project.

In the year 2007, the Crossrail project, well known as the Elizabeth line, was declared by Gordon Brown, the former Prime minister of the UK. The project overview and planning were successfully conducted after two years of the project by the Government body, TFL. The budget and permission for land occupation were approved that year. Almost 11 to 12 years were needed for the official completion of the project, which later on includes 10 new stations and more than 41 km long tunnels (Crossrail, 2022). The initial stage of the Crossrail project was started by purchasing the property of the legendary music venue, The Astoria in the year of 2009. This purchase was capable enough to host the starting flag of the Crossrail project.

In 2010, due to the first ever Coalition election the UK Government delayed the crossrail project as £1 billion was deducted from the overall budget. The huge dramatic plot twist in the political field was the main reason for the deduction of the budget, as a result, the project suffered from extreme negligence both from the Government and the construction company. The overall project was delayed by 1 year because of this political twist. After one year, the project was ready to begin and the boring and drilling process had proceeded with 20 gigantic tunnelling machines in 2012. Each gigantic machine was handled and controlled by a team of 12 people, well known as "Tunnel gangs". These teams were successful enough to build brand new tunnels of approximately 42 km by attaching 200,000 parts of the tunnel (Tunnicliffe, 2022).

In January 2014 the National Audit Office first ever warned by saying that Crossrail Ltd could have missed the deadline of the project because of the previous cut downs in the budget. Unfortunately, the sudden death of a 43-year rail worker was capable enough to delay the progress of the rail project. A section of roof fell upon the construction worker when he sprayed the walls of the tunnel with a concrete mixture. Including the sudden death of the worker, several incidents happened that charged the company with hefty fines totalling £1 million. As a result, more budget was assigned to the company through the financial budget declared by the TFL and Office of London's Mayor, as the company faced several fines. one more chaos was again getting up in Bond Street when five cross-rail employees were found to be dead because of low graded safety standards of the working site. Lastly, when the Covid-19 pandemic hit the country, the final delay of the project was faced by Cross-rail Ltd (Crossrail, 2022).

Review of Quality Stakeholders

According to international standards, the Stakeholder belongs to a group of individuals who has an interest in the decision-making of the company or any activity done by the company. The main investors of the crossrail project are the Secretary of state transport through the Department for Transport (DFP) and the Mayor of the UK capital, through Transport for London. The cross-rail Limited is responsible for the completion of crossrail projects, also known as Cross London Rail Links (CLRL). It was founded to develop and promote new technologies and rail projects to extend railway connectivity for the strong establishment of the business (Lobo and Abid, 2020). The partners of the crossrail project are Network Rail, the Mayor of London, the Department for Transport, Transport for London, Heathrow, the City of London, Canary Wharf Group PLC and Berkeley Homes (Crossrail, 2022).

The relationship between the sponsors was governed by the Sponsors Agreement as joint sponsorship regulated the composition of the governing board and set out the obligations of the crossrail project. The objectives set up by the stakeholders are-

1) support the plans of the secretary of the government of the UK for the provision of public transport.
2) Include value for money services at every stage of the process.
3) The whole life cost is optimised over 50 years.

4) Quality assurance, Security and safety regimes during construction, commissioning and design and Environmental assurance are implemented and established.
5) Ensure supreme quality of reliability and performance
6) achieves all objectives within minimum years of 50.
7) Achieve the service capacity of a total of 24 trains per hour by providing 200-metre-long trains.
8) The robust cost control process should be there throughout the mechanism.
9) deliver consistent and proactive communications and connections with the stakeholders, local communities and the media.
10) Ensure the project design includes all applicable standards and laws.

Review of Risk factors of the project

Risk management is an integral part of the completion of construction and the development of the construction since the projects are connected with uncountable risks. Risk control and risk assessment are important components of risk management for projects of construction because one can control the risk when it is known to him/her (CrossrailLearningLegacy, 2022). Like other projects, the main priority of the crossrail project was and will always be the proper management of risks. It is assured by the Government that the minimum influence of negativity can be achieved by keeping the commitments of different organisations on the procurement process of the crossrail project. Through the evaluation of different cross-rail projects, it can be assured that the success experienced by this project has been achieved by the proper risk of the governance. For the implementation and performance analysis of risk management, one committee known as Risk Sub Committee (RSC) was formed on behalf of crossrail in 2010. The Risk Maturity task which was one of the prioritised tasks was successfully conducted by the RCS.

According to Transport for London, the Alarm risk maturity model was considered to be the most relevant model at that time. The risks which can be involved in the process, are classified into 5 categories- Level 1 (Naïve), Level 2 (risk awareness) and Level 3 (risk defined). After the identification of the target areas, the other levels such as Level 4 (Risk management) and Level 5 (Risk enabled) are successfully assigned for the process. The documentation and description of the different aspects of the process of risk management are included in the Risk management

plan, such as interdependencies and responsibilities of the process. In the risk management plan, the process entailed four weeks of reviews depending on which the risks were aggressively reported on the basis of qualitative.

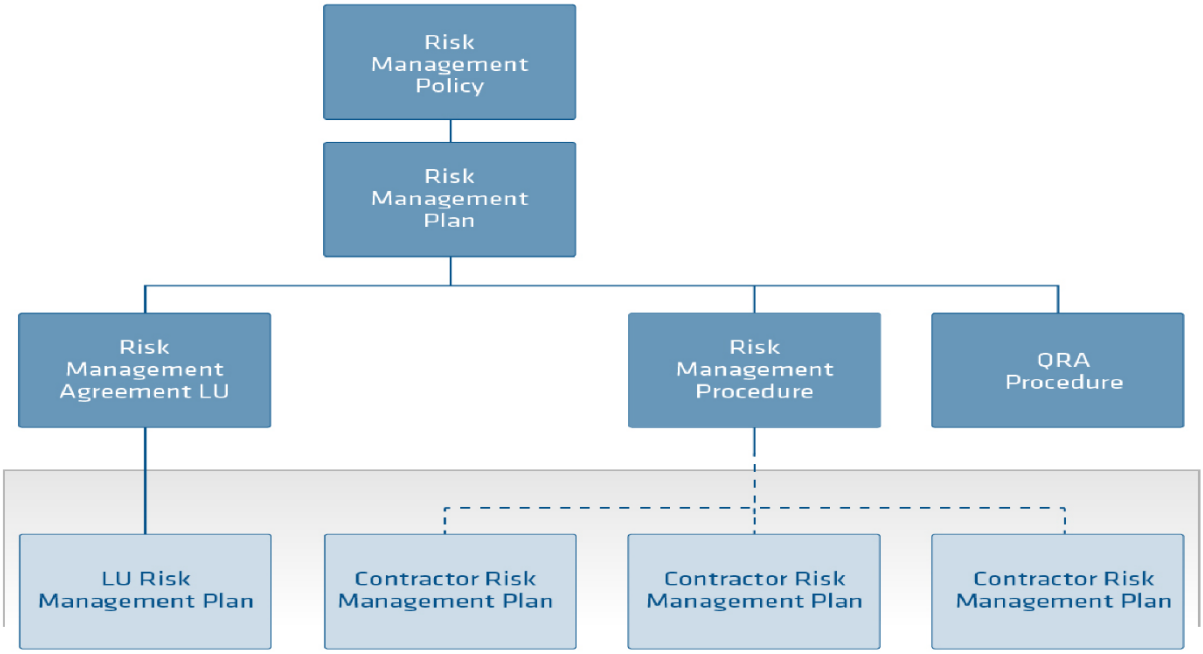

Figure 2: Risk Management approach of Crossrail

(Source: Crossrail Learning Legacy, 2022)

The risk management was implemented by the cross-rail ltd through the implementation of three core objectives. In order to reduce the potential consequences and likelihood of the events, the delivery of the Crossrail project was supported by the government, to reduce the negative impact on the project. Deduction of potential consequences and the likelihood of the events could increase the negative effect on the project. On the other hand, increment of the potential consequences and likelihood could bring a positive essence to the project. Through providing assurance to the external and internal stakeholders, could easily implement risk management to understand the possible risks and manage them actively (Crossrail, 2022). Risk management is also implemented by the improvisation of the decision-making through proper prioritisation and planning.

In order to adopt the above objectives of risk management, the Governance of the Crossrail project provided support to the authority and senior management through the implementation of

an independent committee. This committee approached the planning of the risk management, as well as performance visibility through the robust performance indicators and framework of assurance. Cross-rail also implemented the approach of integrating safety and health risks into the overall risk management of the project which separates this project from others as the model of safety risk is separated from the business and trade risk model.

Conclusion

It can be concluded through the completion of this report that the significant economic and environmental benefits can be brought by the Crossrail, new Elizabeth line project. The strong business case can be indicated by the assessment of the costs and benefits. This rail project is able to handle 200 million people over a year which can eliminate the congestion of the central railway of London and allow London to rejuvenate vacancies. The critical evaluation of the crossrail project on the basis of budget, completion of time, quality of stakeholders and the risk factors have been included in this report. Different causes of the delay of the project and their reasons have also been included in this report. The objectives that are implemented by the stockholders and sponsors are also included in this report. These objectives are mainly used to maintain the quality control of the process, commissioning time and relationship between stakeholders, local commutators and stakeholders. The overall budget at the end of the new crossrail project is about £18.8 billion whereas it was initially approved as £14.8 billion. The delays of the project because of the first coalition election of the UK and several deaths of the cross-rail workers, were the main reason for the incrementation of the budget.

At the initial stages of the project, the safety measurements were not taken care of properly, as a result, many hefty fines of £1 million were charged against the company. Various types of risk management techniques that were implemented in the project, are also discussed in this report. Through the inclusion of proper planning and strategies, these techniques were implemented into the crossrail project. The flow diagram of the planning of the risk management is mentioned and explained in the report. The largest infrastructure project in Europe, Crossrail is successful in delivering the desired objectives of the construction. The brand-new crossrail line, also known as the Elizabeth line successfully increases the capacity of the previous rail connectivity by 10%. The project was conflicted at the beginning stage but to deduce congestion of the previous connectivity, it was very important to accomplish the project with flying colours. The Elizabeth line project is the perfect combination of the simultaneous ups and downs and by eliminating all hurdles, the Elizabeth line is now busy serving the passengers of the capital of the queen's country.

Reference List

Crossrail, (2022). *CROSSRAIL AND TFL CONSTRUCTION SITES TEMPORARILY SUSPENDED, HELPING LIMIT SPREAD OF CORONAVIRUS* [online] Available at: COVID-19: Update on Crossrail programme [Accessed 28 July 2022]

Crossrail, (2022). *Funding* [online] Available at: https://www.crossrail.co.uk/about-us/funding [Accessed 28 July 2022]

Crossrail, (2022). *Risk Management* [online] Available at: Risk Management - Crossrail Learning Legacy / [Accessed 28 July 2022]

Crossrail, (2022). *Sponsors and Partners* [online] Available at: Crossrail - Sponsors and Partners [Accessed 28 July 2022]

Crossrail, (2022). *Building the rail tunnels* [online] Available at: Railway tunnels - Crossrail. [Accessed 28 July 2022]

CrossrailLearningLegacy, (2022). *project lifecycle stakeholder engagement* [online] Available at: Project Lifecycle Stakeholder Engagement - Crossrail Learning Legacy [Accessed 28 July 2022]

Crossrail Learning Legacy, (2022). *Risk Management Procedures* [online] Available at: Risk Management Procedure - Crossrail Learning Legacy [Accessed 28 July 2022]

Inews, (2022). *How much did the Elizabeth Line cost? When the Crossrail project started and delays in its opening explained* [online] Available at: How much did the Elizabeth Line cost? When the Crossrail project started and delays in its opening explained [Accessed 28 July 2022]

Lobo, S. and Abid, A.F., (2020). The role of social media in intra stakeholder strategies to influence decision making in a UK infrastructure megaproject: Crossrail 2. *Project Management Journal*, *51*(1), pp.96-119.

Sandle, P., (2022). *London's $24 billion Crossrail finally opens* [online] Available at: London's $24 billion Crossrail finally opens | Reuters. [Accessed 28 July 2022]

Tunnicliffe, A., (2022). *A timeline of Crossrail delays* [online] Available at: A timeline of Crossrail delays - Railway Technology [accessed 28 July 2022]