

Section o'donoghue,
2013). "it is a vital link



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Section 1: Goal, Scope and Rationale The Channel Tunnel is a rail tunnel that links Folkstone, United Kingdom with Coquelles, France. The Channel Tunnel consist of 2 single line rail tunnel and one service tunnel that is at an average of 40 metres under the seabed and 50 kilometres long (Grant, 1997). The first idea for a tunnel linking Great Britain and France dates back to 1880 and a 2kilometres length tunnel was already built but was abandoned due to political reasons (Thomas and O'Donoghue, 2013).

In 1985, a firm decision to build a fixed link was taken and various design was submitted to the French and British government. A design by Eurotunnel was accepted and construction was handed to TransManche Link(TML) which consist of 10 construction companies and five banks (Grant, 1997). " The Anglo-French Treaty states that the tunnel shall be financed without recourse to government funds or to government guarantees of a financial or commercial nature "(Grant, 1997, p. 2). Construction began in 1988 and completed in 1994, which involved approximately 13000 engineers, technician and workers (Hereford, 2003). The initial cost estimated was ? 5.5 billion and loan financing were achieved through a worldwide consortium of 206 banks (Hereford, 2003).

Eurotunnel received a concession that gives them the rights to manage the tunnel for 55 years which was later extended to 65 years and Eurotunnel will hand back the tunnel in good working order (Hereford, 2003). The Channel Tunnel was built as a " potential stimulus to trans frontier and possible catalyst for regional economic development" (Thomas and O'Donoghue, 2013, p. 107). The tunnel provides a direct route from London to Paris which takes around 2 hours and 15 minutes and London to Brussels

which takes about 2 hours (Thomas and O'Donoghue, 2013). The Tunnel also provide a larger capacity of cross channel transport systems, aiding ferries and airlines in terms of transporting goods across the channel (Thomas and O'Donoghue, 2013).

“ It is a vital link in the construction of Trans European high speed rail network, improvement in the rail network would facilitate closer economic links within single European market, enhance European integration” (Thomas and O'Donoghue, 2013, p. 106). The Channel Tunnel is an option for tourist travelling from Europe to The United Kingdom and vice versa because airlines are considered to be costly and travel by ferry is considered to be time consuming. Section 2: Strategy Alignment The major shareholders for the project is TransManche Link and Eurotunnel.

The Channel tunnel was arranged to be under Build-Own-Operate-Transfer (BOOT) concession and was expected to operate before the summer of 1993 (Grant, 1997). Due to this time constraint, the project management was under pressure to complete it in time. Advance technologies were used to construct the tunnel which includes the state of the art tunnel boring machines that uses rotating disc cutters and high-pressured water jet (Eurotunnel Group, 2017). According to the initial estimates, the tunnel cost a total of ? 5. 5 billion but due to several complications, the cost risen significantly.

The project has a cost overrun of 80% (Gafari and Aminzadeh, 2014). When TransManche Link first receive the project, the design was incomplete and required some modification to meet the specific standards of the

Intergovernmental Commission(IGC) on safety aspects such as cooling systems and signalling system (Gafari and Aminzadeh, 2014). IGC also insist on a strict fire prevention measure and demanded to increase the length of the train doors. Furthermore, there are other reasons that contribute to the increase in cost. The geological conditions were not according to the previous site investigation, " dry chalk was the main underground medium on the British side. However, it turned out to be a lot wetter and highly ? ssure" (Chang and Ive, 2007, p.

400). This lead to modification of the boring machine (Chang and Ive, 2007). Eurotunnel as a company only existed once the proposal for the project was announce so it does not have any mission or strategy regarding to the tunnel prior to the start of construction but it does have a strategy once construction started. The mission of theEurotunnel Group is to encourage the local economy due to its close proximity to the Calais region and reachable via the A25, A26 and A16 motorways in France.

It is also the focal point of traffic between Great Britain and continental Europe (Eurotunnel Group, 2017). The mission of Eurotunnel as a developer is to gain interest of the locals toward tourism and economy (Eurotunnel Group, 2017). This is done by accommodating retail activities and contributing to the growth of local economy (Eurotunnel Group, 2017).

Section 3: Management of Risk The Major risk of the project is the safety of the workers. During the early years of construction, the Channel Tunnel have a significant death toll (Chang and Ive, 2007). The death toll was a cause of concern for the government and the public. The government issued a prohibition notice and management was forced to stop construction works of

two tunnel boring machines (Byrd, 1996). This causes significant delays in the progress of the construction.

The management was also under pressure from the media that raised the question mark over the safety of the workers (Byrd, 1996). Thus, the management implemented DuPont safety practises and alteration to the already in use safety plan was made. The management was forced to reanalyse the construction area and identified several safety issues that were not detected in the earlier part of construction (Byrd, 1996).

These issues were later resolved by the management. Moreover, a campaign using posters and other forms of medias such as video presentation and regular briefings were deployed to increase the awareness of the workers about safety on the construction site (Guth, 2009). Section 4: Conclusions: Evaluation of Project Success To evaluate the success of the Channel Tunnel project, two perspective must be taken into account, engineering perspective and financial perspective. From an engineering perspective, the tunnel is considered to be success but from a financial point of view, it can be said to be a failure. The passenger that travelled through the tunnel was lower than initially forecasted (Thomas and O'Donoghue, 2013). In 2012, 62% of cross channel travel are done through the tunnel but it is lower than the initial forecast due to the unpredicted rise of low cost airlines (Thomas and O'Donoghue, 2013).

The tunnel cannot compete with the low-cost airlines because the airlines offer faster journey to mainland Europe. The Channel Tunnel also unable to substitute ferries in the freight sector, “ 190 goods vehicle movement

through Port of Dover for every 100 via the Channel Tunnel” (Thomas and O'Donoghue, 2013, p. 105). The failed is also caused by the postponed construction of The Channel Tunnel Rail Link that link the tunnel with London (Thomas and O'Donoghue, 2013). The passenger service to connect the whole Great Britain to the tunnel also did not happen because lack of electrified rail lines in the British Rail network (Thomas and O'Donoghue, 2013). With a cost overrun of 80%, the tunnel had a big impact on the economy (Thomas and O'Donoghue, 2013).

“ British economy would be better off if the tunnel had never been constructed, as the total resource cost have been greater than the benefits generated” (Anguera, 2006, p. 314)