

ENGINEERING MANAGEMENT

SEMESTER 2, 2015

ASSIGNMENT BRIEF

Submission Deadline:

The full report including Question 1 to 4 as 1 document not exceeding 2500 words in total should be handed-in electronically through AUT Online and Turnitin :

Organisational Scenario:

Additional Waitemata Harbour Crossing Study

New Zealand Transport Agency (NZTA) prepared the business case looking at a range of public transport options, including heavy rail. The Transport Agency and Auckland Transport is working together on this part of the project, including any necessary route protection for public transport.

In 2013, the Government announced its support for a tunnel in preference to a bridge, to work in conjunction with the existing Auckland Harbour Bridge. The preferred route for the additional crossing is a tunnel running underground just south of the Onewa Road interchange on the North Shore and reach the isthmus at depth under Westhaven Marina. An additional crossing is likely to cost between \$4 billion and \$6 billion, and is likely to be needed between 2025 and 2030.

The creation of an additional harbour crossing to carry the bulk of SH1 traffic offers flexibility for the transport system to evolve over time and maximise benefits of infrastructural investment. The existing harbour bridge, for example, could be used to extend the Northern Busway into the CBD.

<https://at.govt.nz/about-us/reports-publications/waitemata-harbour-crossing-study/>

Assignment Requirements:

As an engineering management consultant you are required to prepare a risk management report about Additional Waitemata Harbour Crossing.

The aim is to achieve an understanding of the risk management process, tools and techniques. You are required to follow the risk management process specified in “Risk Management: AS/NZS 4360:2004”.

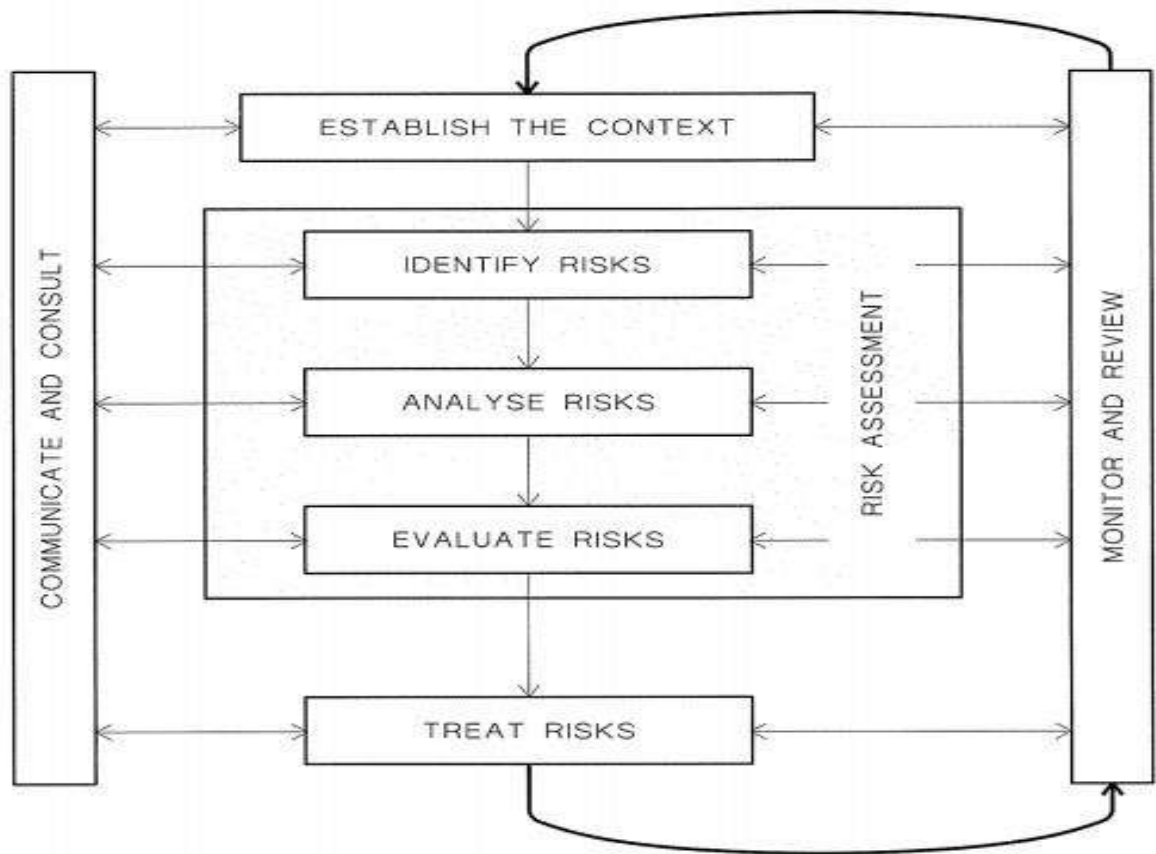


Figure 1: The risk management process (Adapted from Standards New Zealand, 2004)

Question 1 Project Context:

Critically analyse the project context (from a risk management perspective). Provide a summary of the project context in report format, suitable as a briefing for key stakeholders.

Question 2 Risk Identification:

Identify the risks of the proposed project. Produce an overall summary of risks identified and categorised the risks into main categories, such as technical, external, organisational, and project management. You should identify at least 10 risks.

Question 3 Risk Analysis and Evaluation:

Choose one major identified risk from each category (four risks in total), fully analysis and evaluate each risk using either a qualitative or quantitative analysis method.

Question 4 Risk Treatment:

Examine the best way of treating your chosen four risks from Question 3. Develop and present a fully detailed Risk Treatment Plan, justifying the reasons for your treatment choices.

Data Sources

Under no circumstances should you approach the agencies or any of the parties involved in the project for any reason.

Appropriate Secondary Data Sources

It is suggested that secondary data sources are extensively utilised e.g. electronic library sources / hard copy data / articles in academic journals / business press such as Journal of civil engineering and management – class notes should not be referenced and the ‘popular press’ not be used. Wikipedia references are not considered to be of the required standard and hence should not be included.

Final Reports

As in all decision making in business, generally there are no right and wrong solutions. Good risk management report are generally recognised as those where there has been identification of wide range of risks, consideration of the likelihood and consequence of each risk, and a convincing justification for why the chosen risk treatment is likely to deal with the negative impacts posed by the risks.

The range of risk issues that are to be addressed in the risk management plan presented, and the relative emphasis that is given to each risk, should be decided by you, this in itself part of the assignment. Your risk attitude is differ from your peer, than thus the content of your individual report will not be the same as other candidates, there is definitely not one “right answer”.

Submission requirements

- The assignment is to be submitted in report format and as such should have a formal structure and layout. It should be presented as a professional electronic document.
- ***The total submission should not exceed 2,500 words.***
- The assignment must be submitted electronically ONLY through AUT Online and Turnitin on or before the above submission deadline. Turnitin will be used to check the originality of the report.
- All students should be aware on the School's policy on plagiarism, collusion, late submission and special considerations.
- All submissions shall have a bibliography of references and sources used in the preparation of the project. **Students must use AUT APA referencing system when citing literature sources.**
- All submissions should have a cover sheet identifying the course, the date and the student's name.
- All submissions should be in Times New Roman 12pt 1.5 spaced (excluding table of contents, tables, references list and appendices).

Assessment criteria

You are advised to consider the assessment criteria and ensure that these areas are covered in your report. Assessment grading will be according to the following criteria:

Criteria	Marks	Remarks
a) Project Context	20%	Provide a summary of the project context from a risk management perspective with details, such as the project objective, scope, stakeholders, time, cost, quality, and deliverables.
b) Risk Identification	20%	Produce a detailed list of at least ten risks identified, with justification of the importance of these risks. Classify the risks into four main categories (namely technical, external, organisational, and project management).
c) Risk Analysis and Evaluation	20%	Choose one risk from each category (four risks in total, from your answer to Question 3), using either a qualitative or quantitative analysis method analysis and evaluate each risk.
d) Risk Treatment	20%	Identify the risk treatment for the four risks analysed and evaluated in questions 3. Full justify your choices, based upon your answers and reflection your answers to question 1 to 3.
d) Presentation of report	10%	Presentation means clearly and neatly presented material with good use of English, layout, clear and logical structure, visual presentation, and clarity of expression. Any written work should read well and be concise as well as logical. Spelling should be accurate and the overall appearance, including any graphical material, should be of good quality to a professional standard.
e) Additional reading demonstrated to show deep knowledge and understanding, with referencing and supporting published material	10%	Additional background and supplementary reading should be undertaken and incorporated into the work. The report should contain references to relevant published material which underpins the work. Correct use of the AUT APA referencing system when citing literature sources is rewarded.

Grade Boundaries:

A + = 90%, A = 85%, A- = 80%, B+ = 75%, B = 70%, B- = 65%, C+ = 60%, C = 55%, C- = 50%, D < 50%

Grade	Standard and Academic Rigour of work submitted				Presentation of material (Criteria e)	Additional reading demonstrated to show deep knowledge and understanding and use of correct references (Criteria f)
	Criteria (a)	Criteria (b)	Criteria (c)	Criteria (d)	(10 marks)	(10 marks)
	(20 marks)	(20 marks)	(20 marks)	(20 marks)		
A+, A, A-	Work is of an excellent standard and has academic rigour. Work will be distinctive. There will be an extensive use and application of key principles. There will be a very high degree of comprehensive examination of key issues, reflecting the intricacy of the strategic management process and the creativity to see imaginative solutions.				Material is presented in a professional manner, following an excellent clear and logical structure to permit understanding of the strategic analysis, options and choice.	Clear evidence that background and supplementary reading has been undertaken and incorporated. Contains references to relevant published material which underpins the work.
B+, B, B-	Generally of a good standard, confidently and clearly written, displaying an understanding of the issues in the strategic management process. The work demonstrates an understanding of the task, sound judgement and a grasp of investment decision making and choices. Arguments are sensible and realistic, however there is room for improvement.				Presentation of material could be improved as it is not to a high professional standard. Structure of the work demonstrated.	There is minimum evidence of background and supplementary reading being completed. Contains some references but they are not specifically related to the work submitted.
C+, C, C-	The work is graded at an above average standard. Generally demonstrates familiarity with the strategic management process. Arguments are sensible and realistic but could benefit from improved clarity, fewer ambiguities and enhanced structure. Despite such positive attributes, however, there will be room for improvement on the above issues including the sharpness of focus on the remit, and explanation of ideas. The report does not communicate a convincing argument to support strategy decision and choices, and does not support the recommendations.				The material is not presented to a high standard. Unclear structure. Limited logic in contents provided.	Little evidence of background and supplementary reading being completed. Reference material is limited and is not specifically detailed to relate it to the topic and/or the reason for inclusion is not explicit
D	Work is of a basic quality with substantial weaknesses. A weak answer which shows basic understanding but constitutes no danger to contract administration practice. The work is graded at a below average standard. Generally the report indicates a poor grasp of the subject matter. There is substantial improvement required to the demonstration of the strategic management process. Incoherent in most parts with little evidence of logic or deductive reasoning.				Work is presented to a poor standard. Little evidence of content structure considered or no logical structure provided.	No evidence of background or supplementary reading being completed. Superficial and descriptive text is provided with limited analysis and referencing.

