



جامعة الجميع الذكية
EVERYONE'S SMART UNIVERSITY

Everyone's Smart University

Project (Spring 2021)

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Section

Master

Date

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Project Risk Management

Instructions:

- اخر موعد للتسليم هو يوم السبت 08-05-2021 في تمام الساعة 9 مساءً.
- الإجابة متاحة باللغة الإنجليزية أو اللغة العربية مع مراعاة أن تكون المصطلحات العلمية باللغة الانجليزية.
- يتم تسليم المشروع في صيغة ملف pdf مع الالتزام نموذج الجامعة ولن تقبل أي مستندات أخرى.
- يجب مراعاة أقسام البحث الرئيسية (مقدمة Introduction، دراسات علمية سابقة Literature Review، طريقة البحث Methodology، النتائج والمناقشة Results and Discussion، وأخيراً المراجع References. وان كان هناك ملحقات Appendices يتم إضافتها)
- يجب الالتزام بـ Theme موحد كما يلي:
- حجم الخط 12.
- نوع الخط Arial.
- لون الخط أسود.
- المسافة بين الأسطر line spacing 1.5
- عدد صفحات البحث (لا يقل عن ثلاث صفحات ولا يزيد عن ست صفحات).

Instructor's Name: Eng. Mosaab M. Hamed

Introduction:

To Identify Risk in General, Risk is defined as an event that has a probability of occurring, and could have either a positive or negative impact to a project should that risk occur. A risk may have one or more causes and, if it occurs, one or more impacts. For example, a cause may be requiring an environmental permit to do work, or having limited personnel assigned to design the project. The risk event is that the permitting agency may take longer than planned to issue a permit, or the assigned personnel available and assigned may not be adequate for the activity. If either of these uncertain events occurs, there may be an impact on the project cost, schedule or performance.

Risk in itself is not bad; risk is essential to progress, and failure is often a key part of learning. But we must learn to balance the possible negative consequences of risk against the potential benefits of its associated opportunity. A risk is a potential future harm that may arise from some present action; such as, a schedule slip or a cost overrun. The loss is often considered in terms of direct financial loss, but also can be a loss in terms of credibility, future business, and loss of property or life. [1]

In our project ""Al Anwar Beverages". Dealing with risks and opportunities professionally is one of the key success factors in the project.

Literature review:

The thematic of risk management is not new, but it is recent and not very studied in logistic chain (or supply chain), the first work that explicitly addresses for the risk management in the supply chain dating from 2003 [27]. The risk is present in many activities including the logistic in which one consequence of the risk that it increasing and affect around all the logistic networks, therefore the managers need to make a great deal of effort to identify and manage risks. The meaning of risk can be differ from one person to another depending on their point of views, attitudes and experience what makes the study of risk more and more complex. Proposed a basic risk theory based on brief selected review that over the last 15-20 years and he presented the evolution of risk concept in Oxford English Dictionary since 1679, we think that definition followed the environment evolution.[2]

"Veland" and "Ave", proposed the same based classification of risk given by "Aven" and they used theses definition to discuss how the risk perspectives influence the risk communication between the decision-makers, the risk analysts, experts and lay people. Indeed, for "Karimiazari et al", engineers, designers and contactors view risk from the technological perspective, lenders and developers tend to view it from the economic and financial side.[3]

The risk is the probability that an event or action may adversely affect the organization. For "Mazouni", the risk is an intrinsic property of any decision, it is measured by a combination of several factors (severity, occurrence, exposure to, etc.), although it is generally limited to

Two factors: severity and frequency of occurrence of a potentially damaging accidents that incorporate some exposure factors. In the "BS OHSAS 18001" (British Standard Occupational Health and Safety Assessment Series), the risk is a combination of the likelihood of an occurrence of a hazardous event or exposures to danger and the severity that may be caused by the event or exposure. In this context (BS OHSAS 18001), the concept of risk asks two oriented question.

Methodology:

In this paper, risks in the project will be defined through the process of analyzing potential threats and weaknesses in the project of constructing and building a building "Anwar Beverages". To determine the loss that you may expect to incur if certain events occur. The goal here is to help avoid problems that may occur and produce high-quality results, as well as to ensure that the schedule and cost plan are not exposed to any obstacles that occur through these risks.

Results and Discussion

In the beginning, the stakeholders in the "Anwar Beverages" project will be clearly identified, This process is supposed to be separate and known as (Identify stakeholders), Later on, meet with them through known methods (meetings, questionnaires, emails, etc.) to identify and define risks. This process, known as "Identify risks", all possible risks are collected and quantified in the project.

Identifying risks:

We, in "Anwar Beverages" project, have met with stakeholders, to determine the primary and secondary risks and limit them to work on managing them. As a project manager, in

the planning stage, all risks must be counted and then unreasonable risks excluded, and risks must be separated from problems, and therefore after the meeting A lengthy brainstorming between us, members of the project team, identified a number of major risks, as follows:

Risk Type		Probability	Impact	Prob X Imp	Risk response
A	Availability of materials	possible 50% = 0.05	moderate 60%= 0.60	0.30	The supply of materials in the project must be done according to the agreed procurement plan, to avoid an imbalance in the supply of materials, an early supply plan is put in place, or an alternative is put in place, such as the presence of another supplier ready for supply in the event of failure of the main supplier
B	Damage or theft to equipment and tools	Unlikely 75%=0.75	high 90%=0.90	0.675	There are some bags of cement and dirt in the work area, there is a risk that some thefts will occur, this risk is avoided by making a fence for the work area or having a guard always present
C	Shortage of labors	likely 35%=0.35	moderate 60%= 0.60	0.21	There is always a possibility of a shortage of workers due to resignations or vacations, immediate alternatives are provided or contracting with contractors to support the works on the project.
D	Incomplete drawings and poorly defined scope	Certain 0.15=15%	modrate 60%= 0.60	0.09	There may be some deficiency in the plans and information due to the incomplete vision of the stakeholders of the project, which is addressed by asking the stakeholders and discussing them all the time.
E	Issues with subcontractors and suppliers	likely 35%=0.35	modrate 60%= 0.60	0.21	Usually, there is a problem in contracts with contractors, you must ensure the integrity of the contracts and the existence of alternatives in the event that one of the contractors fails

Risk Type		Probability	Impact	Prob X Imp	Risk response
F	Unexpected increases in material costs	Unlikely 75%=0.75	low 30%=0.03	0.225	This risk may be remedied by changing the type of contract with the customer to cover damages resulting from the possibility of increasing costs, or by anticipating the increase and placing it at the beginning of the pricing of the main contract.
G	Safety hazards that lead to worker accidents and injuries	likely 35%=0.35	high 90%=0.90	0.315	Commitment to the safety plan, emphasis on it, and continuous follow-up

The Risk Matrix:

Probability		Impact		
		Low = 30%	Moderate = 60%	High = 90%
Certain	15%		D	
likely	35%		C,E	G
possible	50%		A	
Unlikely	75%	F		B
Rare	95%			

EMV:

Risk Type	Probability	Impact	EMV
A	50%	3000	1500
B	75%	5000	3750
C	35%	3000	1050
D	15%	3000	450
E	35%	3000	1050
F	75%	1500	1125
G	35%	5000	1750
Total EMV=			10675

Risk and triggers:

Risk	Source	Prevention	Response	Impact
Availability of materials	Poor budget	Cost planning	Request an increase	Project delay
Damage equipment	Wrong use	Guarantee	Fault repair	Increased repair costs
Shortage of labors	Resignation or leave	HR shedule planning	Alternatives hiring	Lack of resources
Incomplete drawings	The scope of work is unclear	Site Survey	Continuous update	Incorrect scope of work
suppliers issues	Bad contracts	Strong contracts	Contract amendment	Supply problems
increases in costs	Price instability	Prices cover the deficit	Find the least	Budget imbalance
accidents and injuries	Poor safety measures	Strong procedures	Supervision of safety procedures	It could lead to injury or death

Risk contingency plan:

Risk Type		Mitigation Action	Grade
A	Availability of materials	When there is a shortage of materials, an additional amount must be requested to compensate for the unplanned quantities in the budget	B
B	Damage or theft to equipment and tools	Equipment malfunctions should be repaired and attempted to be replaced in the event of complete failure	B
C	Shortage of labors	Interviews are made to provide alternatives or to hire human resource suppliers	C

Risk Type		Mitigation Action	Grade
D	Incomplete drawings and poorly defined scope	An exploratory visit to the worksite is carried out and work with experts to address the lack of scope of work	C
E	Issues with subcontractors and suppliers	Searching for other contractors, or negotiations to amend contracts	C
F	Unexpected increases in material costs	Requesting an increase in the budget to cover the deficit in the additional funds	D
G	Safety hazards that lead to worker accidents and injuries	In the event of an accident, contact the concerned authorities and treat the injured as quickly as possible	B

A= to be identified and implemented as soon as the project commences as a priority.

B= to be identified and appropriate actions implemented during project execution.

C= to be identified and costed for possible action if funds permit.

D= to be noted - no action is needed unless grading increases over time.

References:

[1] Hall, E. M.(1998) Managing Risk: Methods for Systems Development, Addison Wesley

[2] Aven T., The risk concept-historical and recent development trends, Reliability Engineering and System Safety (99), 33–44, 2012

[3] Veland H., Aven T., Risk communication in the light of different risk perspectives, Reliability Engineering and System Safety 110 (2013) 34–40