



جامعة الجميع الذكية
EVERYONE'S SMART UNIVERSITY

Everyone's Smart University

Project (Spring 2021)

Student Name	Abdullah Ghormallah Alghamdi	اسم الطالب
Students I.D	2021201009	الرقم الجامعي

Section

Master

Date

Thursday

18 / 03 / 2021.

Course Code

(PMG510)

Project Risk Management

Instructions:

- اخر موعد للتسليم هو يوم الخميس 2021-05-20 في تمام الساعة ٩ 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

Project:

Risk Identification and Analysis (Based on the project you chose in APM)

The objective of this report is to identify project risks, prepare a risk probability matrix, and carry out an analysis of selected risks. Referring to the project you select in **Advanced projects management APM course**, your task is to prepare a risk management plan that identifies potential risks in **each stage of the project** and identify risk management strategies.

From the course content and readings, you know that the overall purpose of risk planning is to anticipate possible risk events and be ready to take appropriate action when risk events occur—to eliminate or reduce negative impacts on the project.

You may wish to begin this exercise with a brainstorming about potential risks to get candidate risks “on the table” for consideration. And then identify and refine that wording for risks that have some realistic chance of occurring in this project. For example, potential weather problems present a real obstacle to completing field data collection by the planned completion date. It is also an issue that the project manager will ultimately have to plan for, as opposed to other issues such as a major disaster (e.g., your office burning down), is not a high-enough probability event that requires much time in planning. As described below, you will select several of the identified risks and carry out a risk analysis.

You will use the distilled list of risks to make a risk probability/impact matrix. The matrix will have at least three categories (high/medium/low) for probability and impact.

Remember that it is important to name risks effectively—use words that describe the risk event and point to the impact on the project (e.g., “injury of field technician disrupts data installation work”).

After completion of the risk matrix, document a risk analysis for the selected risks. This detailed documentation for that selected risk will include:

- a description of the risk and potential impacts (schedule, quality of work, cost, etc.) on the project.
- indicators or triggers that would be monitored to help identify the risk as early as possible.
- specific risk response strategies to take.

Using probability and impact matrix calculate the Expected Monetary Value (EMV) for all risks that have the impact in terms of cost \$\$.

Best of luck...

المشروع:

التعرف على المخاطر وتحليلها (بحث مبني على مشروعك الذي اخترته في مادة ادارة المشاريع المتقدمة)

الغرض من هذا التقرير هو التعرف على المخاطر المحيطة بكل مرحلة من مراحل المشروع, تحضير مصفوفة احتمالية المخاطر ومن ثم القيام بالتحليل لهذه المخاطر المختارة. مهمتك هي تحضير خطة متكاملة لإدارة المخاطر تشمل التعريف بالمخاطر المحتملة التي تحيط بكل مرحلة من مراحل مشروعك (نفس المشروع الذي اخترته في مادة إدارة المشاريع المتقدمة Advanced project management). ومن ثم القيام بتحديد استراتيجيات إدارة المخاطر المناسبة لكل خطر على حدة.

من محتويات المقرر والمصادر الأخرى المتاحة أصبحت تعلم الآن أن الغرض العام لمرحلة التخطيط للمخاطر هي توقع أحداث المخاطر المحتملة والتجهز لاتخاذ ردّة الفعل المناسبة عند وقوع الخطر – لمنع أو تقليل الآثار السلبية على المشروع.

قد تحبذ بداية هذا البحث بعصف ذهني عن ماهية المخاطر التي قد تحيط بكل مرحلة من مراحل مشروعك, وذلك للحصول على قائمة بتلك المخاطر. ومن ثمّ تحديد وتصفية هذه القائمة للوصول إلى قائمة مختصرة بالمخاطر التي لها فرصة واقعية أكبر في الحدوث. على سبيل المثال: المشاكل الجوية المتوقعة والتي تمثل عقبة حقيقية أمام اكتمال جمع البيانات من المواقع في أو قبل الوقت المحدد، هذه تعتبر مشكلة على مدير المشاريع أن يضعها في الحسبان. من ناحية أخرى، فإن المخاطر غير الواقعية مثل الكوارث الطبيعية والأعاصير (تلك التي تسبب حريقاً بمكتبك وفقدان الأوراق المهمة) ليست لها احتمالية وقوع عالية وبالتالي لاتستدعي تضيق الكثير من الوقت في التخطيط لها. كما سيتبين لك، ستقوم باختيار عدة مخاطر من تلك التي قمت بالتعرف عليها لتحليلها.

ستقوم باستخدام هذه القائمة المختصرة لعمل مصفوفة المخاطر (الاحتمالية/الأثر). المصفوفة ستحتوي على الأقل على ثلاث تصنيفات (عالي/متوسط/منخفض) للإحتمالية والأثر.

لاتنس استخدام أسماء تصف طبيعة المخاطر بصورة فعالة – قم باستخدام كلمات تصف الحادثة الخطرة وتشير الى أثرها على المشروع (مثل: إصابة أحد الفنيين في الموقع مما يؤثر على أعمال التركيب).

بعد انتهاءك من مصفوفة المخاطر، قم بتوثيق تحليلك للمخاطر المختارة. هذا التسجيل المفصل للمخاطر يجب أن يتضمن:

- وصف للخطر واثاره المحتملة (الجدولة، جودة العمل، التكلفة، الخ)
- المؤشرات والمحفزات التي يجب مراقبتها للمساعدة في التعرف على هذا الخطر قبل وقوعه
- تفصيل للاستجابة المقترحة للتصدي لهذا الخطر

باستخدام مصفوفة الاحتمالات والتأثير ، احسب القيمة النقدية المتوقعة (EMV) لجميع المخاطر التي لها تأثير من حيث التكلفة \$\$.

مع تمنياتي بالتوفيق..

Introduction

we are a global company working in logistics field start operation 2018 in Saudi Arabia and providing transportation and customs clearance for containers and projects cargo . we decide to establish our depot to provied empty containers storage services and rent a land for 10 years between King Abdullah port and Rabigh industrial area . our depot capacity is 33.000 Sqm . this first time to manage same this project in Saudi Arabia . In this research I'm going to write about risks management :

Literature Review

Several authors have studied logistics problems related to handling operations at multimodal container terminals, mainly focusing at seaport operations (Steenken et al., 2004; Stahlbock and Voß, 2008; Bierwirth and Meissel, 2010; 2015).

Particularly, Carlo et al., (2014) provide an overview and research directions for port storage yard operations. They distinguish between the following main decision problems that arise in the storage yard operations:

- (1) yard design,
- (2) storage space assignment for containers,
- (3) dispatching and routing of material handling equipment to serve container storage and retrieval processes,
- (4) optimizing the remarshalling of containers.

At the tactical and operational level, container stacking policies and the storage space allocation problem (including the pre-marshaling problem and the blocks-relocation problem) have been extensively addressed in the literature (Kim and Kim, 1999; Kang et al., 2006; Lee and Hsu 2007; Park et al., 2011; Chen and Lu, 2012). At the strategic level, yard design problems have been also addressed in the literature but not as extensively as container stacking strategies and policies. Yard design is an influential factor in the productivity of container handling operations (Kim et al., 2008), thus requiring strategic decisions in yard layout and outline, and in the number and placement of aisles (surrounding container

blocks). Several authors have focused on the analysis of layout design and strategic decisions related to equipment acquisition at port terminals (Wiese et al., 2011; Ranau, 2011; Lee and Kim, 2013; Kemme, 2012; Wiese et al., 2013; Taner et al., 2014)

Methodology

We will use Checklists as a Valid Risk Identification Technique .

Risk Identification lists :

Table 1

No.	List of Risks
1	Delay of licenses issue
2	Increase the cost of Constrictions
3	Delay of electricity run
4	Foundation work halted due to COVID-19 Increase the cost of Constrictions
5	Import Equipment's from outside Saudi Arabia
6	Resignment project manager
7	Economy problems
8	Political reasons

Now we have a list of risks, we will make a risks matrix (determine the probability and impact of each risk), which will go after that to risk register. (low = 0 to 0.29, medium =0.3 to 0.69, high = 0.7 to 1).

Table 2

No.	List of Risks	Probability	impact
1	Delay of licenses issue	0.1	0.9
2	Increase the cost of Constrictions	0.4	0.7
3	Delay of electricity run	0.7	0.1
4	Foundation work halted due to COVID-19 Increase the cost of Constrictions	0.25	0.8
5	Import Equipment's from outside Saudi Arabia	0.2	0.3
6	Resignment project manager	0.1	0.8
7	Economy problems	0.05	0.8
8	Political reasons	0.1	0.8

After collecting and evaluating the risks, it time to evaluate the severity to start thinking about the response plans for each risk and try to mitigate the impact. For calculating theseverity, we used Risks Matrix and Bow-Tie to find the response plan.

Figure1

Probability	0.7-1	high	high	medium
	0.3-0.69	high	medium	low
	0-0.29	medium	low	low
		0.7-1	0.3-0.69	0-0.29
		Impact		

Figure2

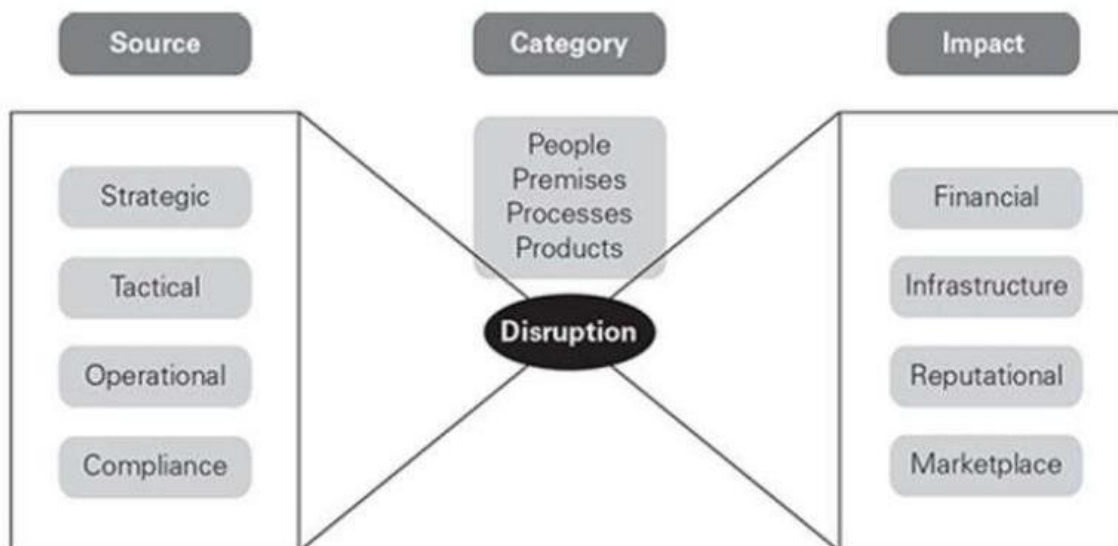


Table 3

No.	List of Risks	Probability	impact	Severity	Response plan	Mitigate Action
1	Delay of licenses issue	0.1	0.9	Medium	Appoint consultant office to issue the licenses	Issue temporary Licenses for one year
2	Increase the cost of Constrictions	0.4	0.7	high	Make a sample design	Change design and specifications
3	Delay of electricity run	0.7	0.1	Medium	Submit the request before 3 months issue operation start	Buy one generator to run the power in depot
4	Foundation work halted due to COVID-19 Increase the cost of Constrictions	0.3	0.8	Medium	Follow up the safety regulations	temporary Stop all contract to avoid pay any extra money without work
5	Import Equipment's from outside Saudi Arabia	0.2	0.3	Medium	Check the customs requirement before import	Rent sconed hand till import our machines
6	Resignment project manager	0.1	0.8	High	Ask consultant to manage the project	Amending the financial benefits of the project manager until the end of the project

7	Economy problems	0.05	0.8	Medium	Stop the project till the situation improvement	Check if our filed effect or not if not complete our work
8	Political reasons	0.1	0.1	Low	Respect the gov regulation and go back to head office	Set with our lawyer to check our situation

Results

Here we are going to calculate the EMV cost for our project . All the numbers you are going to see are not exact cost, but it was evaluated based on experience. The total potential impact on the plan is 350,000 USD, while the contingency cost is 150,000 SR.

Table 4

No.	Risk	Probability	Impact cost USD	Risk contingency
1	Delay of licenses issue	0.1	9000	3500
2	Increase the cost of Constrictions	0.4	100,000	20000
3	Delay of electricity run	0.7	4500	1500
4	Foundation work halted due to COVID-19 Increase the cost of Constrictions	0.3	25000	3500

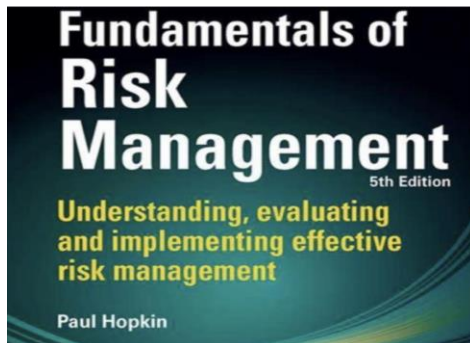
5	Import Equipment's from outside Saudi Arabia	0.2	50000	15000
6	Resignment project manager	0.8	8000	2000
7	Economy problems	0.8	0	0
8	Political reasons	0.1	0	3000
	TOTAL		196.500.00	48.500.00

Discussion

In **(Table 3)** we can see the result of reposing plan and how to mitigate the risk. It is important to note that we should be aware of all risks but shouldn't waste the time on risks with green color, it is better to focus on orange and red risks because they have higher probability and huge impact.

In **(Table 4)** we can see the result of the risks cost on the budget. The higher number was for Increase the cost of Constrictions, so it has the higher priority. There are some risks that we should be careful from them like Import Equipment's from outside Saudi Arabia, Foundation work halted due to COVID-19 and Resignment project manager .

References



[ASCE Library | Civil Engineering and its Practical Applications](#)

Design and Construction Risks for a Shipping Port and Container Terminal: Case Study

 [F. J. Joubert](#), Ph.D.; and [L. Pretorius](#), Ph.D.