



جامعة الجميع الذكية
EVERYONE'S SMART UNIVERSITY

Everyone's Smart University

Project (Spring 2021)

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Section

Master

Date

Thursday

18 / 03 / 2021.

Course Code

(PMG510)

Project Risk Management

Instructions:

- آخر موعد للتسليم هو يوم السبت 2021-05-08 في تمام الساعة ٩ مساءً.
- الإجابة متاحة باللغة الإنجليزية أو اللغة العربية مع مراعاة أن تكون المصطلحات العلمية باللغة الإنجليزية.
- 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 1.5 line spacing
- 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 **the selected 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 stage. 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 بالمرحلة التي تختارها المرحلة من مراحل مشروعك (نفس المرحلة التي اخترت التطرق لها في مشروعك لمادة إدارة المشاريع المتقدمة **Advanced project management**) حيث أن مهمتك هي تحضير خطة متكاملة لإدارة المخاطر تشمل التعريف بالمخاطر المحتملة التي تحيط بتلك المرحلة وتحضير مصفوفة احتمالية المخاطر ومن ثم القيام بالتحليل لهذه المخاطر المختارة وتحديد استراتيجيات ادارة 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 ردة 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 بتلك المرحلة من مراحل مشروعك, وذلك للحصول على قائمة بتلك المخاطر. ومن ثم 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 لا تستدعي 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.

لا تنس استخدام أسماء تصف طبيعة المخاطر بصورة فعالة – قم باستخدام كلمات تصف الحادثة الخطرة وتشير إلى 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..

Risk Identification and Analysis - Supplying and Installing Office Furniture Project

1.Introduction:

As project manager for supplying and installing office furniture consists of equipping a floor in a medical building to be administrative offices. The building is within a hospital currently operating, so the project must be handled with utmost caution to avoid any harm that might affect patients or workers. We are now in the implementation phase, and we are facing the threat of the COVID-19 pandemic inside the hospital.

Effective risk management methods enable you to identify your project's strengths, weaknesses, opportunities, and threats. By thinking about unexpected events, you'll be able to respond if they arise. To confirm your project's success, outline however you may handle potential risks. Therefore, you'll be able to establish, mitigate or avoid issues after you have to be compelled to do. Successful project managers acknowledge that risk management is essential, as result of achieving a project's goals depends on planning, preparation, results, and analysis that contribute to achieving strategic goals.

2- Literature Review:

Risks are the threats of the project success. Risks that are both possible and probable must be identified and analyzed to fully understand what can happen, what is likely to happen, and if the worst should occur, what would be the result? This is the purpose and essence of project risk management (Dinu, Ana-Maria, 2015).

Most of the project risks identified have external and technical sources, and most of the risks are rated as medium and high level. In the future, it is expected that this methodology can be used for similar projects and that a gradual standardization on the use of the risk management methodology can be achieved in the organization (JoanaPeixotoa, AnabelaTeresoa, GabrielaFernandesa, RuiAlmeidab, 2014).

3- Methodology:

In this research, I applied a qualitative risk analysis, the probability impact matrix is usually recommended. Every risk is assessed with subjective chances for the probability of incidence and impact of the risk on the project objectives through the matrix, leading to the risk rating as low, medium, or high impact on the project. The risk level is a color code: green for low, yellow for moderate, and red for high impact risks. All tables by (JoanaPeixotoa, AnabelaTeresoa, GabrielaFernandes, RuiAlmeida, 2014).

Table 3-1: Probability scale used on the project.

Occurrence	Very low (VL)	Low (L)	Moderate (M)	High (H)	Very High (VH)
Probability	0,1	0,3	0,5	0,7	0,9

Table 3-2: Impact scale used on the project.

Project objectives	Very low (VL)	Low (L)	Moderate (M)	High (H)	Very High (VH)
	0,05	0,1	0,2	0,4	0,8
Cost	Insignificant increasing	<5% cost increasing	5-10% cost increasing	10-20% cost increasing	>20% cost increasing
Chronogram	Insignificant delay	<5% total delay on the chronogram	5-10% total delay on the chronogram	10-20% total delay on the chronogram	>20% total delay on the chronogram
Scope	Almost unnoticeable scope reduction	Minor scope areas are affected	Relevant scope areas are affected	Unacceptable scope reduction	Unsuitable final product
Quality	Almost imperceptible degradation	Only more demanding application affected	Quality reduction requires client authorization	Quality reduction unacceptable to the client	Useless final product

Table 3-3: Probability impact matrix.

Probability	Impact				
	0,05	0,1	0,2	0,4	0,8
0,9	0,05	0,09	0,18	0,36	0,72
0,7	0,04	0,07	0,14	0,28	0,56
0,5	0,03	0,05	0,10	0,20	0,40
0,3	0,02	0,03	0,06	0,12	0,24
0,1	0,01	0,01	0,02	0,04	0,08
Color code constraints	between	0,00	and	0,05	
	between	0,06	and	0,14	
	between	0,15	and	1	

According to what has been previously mentioned, risks will be responded to according to the following table.

Table 3-4: Relation between the project risk impact and the adequate risk response.

	Project impact	Monitoring	Response
	High	Urgent attention	Preventive: Avoid
	Moderate	Periodic risk revision	Contingency: Reduce/Mitigate
	Low	Control	Corrective: Mitigate/Accept

4- Results and Discussion:

Now, what we have learned will be applied to a table explaining the probability of occurrence and impact of each risk and determining the Probability impact matrix risk according to Table 3-3.

Table 4-1:

Risk Description	Probability	Impact	Score	Risk level
Deliverables that do not conform to the specification	0,5	0,4	0.2	High
The resignation of an important employee	0.1	0.2	0.02	Low
Project documents are incomplete	0.7	0.4	0.28	High
Failure to obtain final approval from the project sponsor and the end user	0.3	0.8	0.24	High
Inability to pay financial dues to terminate contracts	0.3	0.4	0.12	Moderate

Also, we will use probability and impact matrix to calculate the Expected Monetary Value (EMV) for all risks that have the impact in terms of cost.

Table	4-2:			
	Risk Description	Probability	Cost Impact	Risk Contingency
	Deliverables that do not conform to the specification	0,5	2000	1000
	The resignation of an important employee	0.1	3000	300
	Project documents are incomplete	0.7	3000	2100
	Failure to obtain final approval from the project sponsor and the end user	0.3	10000	3000
	Inability to pay financial dues to terminate contracts	0.3	2000	600
	Total			7000

And how we respond on risks.

Table 4-3:

Risk Description	Response plan
Deliverables that do not conform to the specification	Site supply and installation insurance
The resignation of an important employee	Create reward programs for employees
Project documents are incomplete	Activating the electronic archiving of the project
Failure to obtain final approval from the project sponsor and the end user	Set up a project kick-off meeting and take all approvals for deliveries
Inability to pay financial dues to terminate contracts	Adhere to the approved deliverables

Based on the previous tables and calculations that show us the risks in terms of the likelihood of occurrence and impact of the project in the closing phase. The project manager and the team members can monitor these risks according to priority and provide responding funds to cover the risks involved if they occur. In this way, success is achieved for the project and the team members at the lowest costs.

5- References:

- 1- *Project Risk Management Methodology: A Case Study of an Electric Energy Organization*. (2014, January 1). ScienceDirect.
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- 2- Duggan, T. (2019, February 19). *Why Is Risk Management Important to Project Success?* Small Business - Chron.Com.
<https://smallbusiness.chron.com/risk-management-important-project-success-56920.html>
- 3- Dinu, Ana-Maria. The Importance of Risk Management in Projects Access la Success; Bucharest Vol. 16, Iss. S3, (Jul 2015).