

Everyone's Smart University

Project (Spring 2021)

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Section

Master

Date

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Course Code

(PMG510)

Project Risk Management

Instructions:

- اخر 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 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 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 الان أن الغرض العام لمرحلة التخطيط للمخاطر هي توقع أحداث المخاطر المحتملة والتجهز لاتخاذ الفعّال المناسبة عند وقوع الخطر – لمنع أو تقليل الآثار السلبية على المشروع.

قد تحبّذ بداية هذا البحث بعصف ذهني عن ماهية المخاطر التي قد تحيط بتلك المرحلة 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، سنقوم باختيار عدة مخاطر من تلك التي قمت بالتعرف عليها لتحليلها.

سنقوم 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..

Opening a Healthy Restaurant

Introduction

With the growing obesity epidemic in Saudi Arabia, more and more people are looking for healthier options when dining out. This has led to a rise of healthy restaurant concepts that offer everything from organic vegan fare to locally sourced meats and produce. Our project is to open a healthy restaurant with a delouse menu.

Project risk management is the process that project managers use to manage potential risks that may affect a project in any way, both positively and negatively. The goal is to minimize the impact of these risks.

We are in the first step in the planning phase, the purpose, scope, and objectives of the project have been described and identified but some risks could be happened in this phase so all the risks should be identified, evaluated, and analyzed and mitigated.

Literature Review

There are numerous ways to identify risks. Project managers may want to use a combination of these techniques. For example, the project team may review a checklist in one of their weekly meetings and review assumptions in a subsequent meeting. Here are seven of my favorite risk identification techniques:

1- Interviews. Select key stakeholders. Plan the interviews. Define specific questions. Document the results of the interview.

2- Brainstorming. I will not go through the rules of brainstorming here. However, I would offer this suggestion. Plan your brainstorming questions in advance. Here are questions I like to use:

- Project objectives. What are the most significant risks related to [project objective where the objective may be schedule, budget, quality, or scope]?

- Project tasks. What are the most significant risks related to [tasks such as requirements, coding, testing, training, implementation]?

3- Checklists. See if your company has a list of the most common risks. If not, you may want to create such a list. After each project, conduct a post review where you capture the most significant risks. This list may be used for subsequent projects. Warning – checklists are great, but no checklist contains all the risks.

4- Assumption Analysis. The Project Management Body of Knowledge (PMBOK) defines an assumption as “factors that are considered to be true, real, or certain without proof or demonstration.” Assumptions are sources of risks. Project managers should ask stakeholders, “What assumptions do you have concerning this project?” Furthermore, document these assumptions and associated risks.

5- Cause and Effect Diagrams. Cause and Effect diagrams are powerful. Project managers can use this simple method to help identify causes--facts that give rise to risks. And if we address the causes, we can reduce or eliminate the risks.

6- Nominal Group Technique (NGT). Many project managers are not familiar with the NGT technique. It is brainstorming on steroids. Input is collected and prioritized. The output of NGT is a prioritized list of risks.

7- Affinity Diagram. This technique is a fun, creative, and beneficial exercise. Participants are asked to brainstorm risks. I ask participants to write each risk on a sticky note. Then participants sort the risks into groups or categories. Lastly, each group is given a title.

Variety is the spice of life. One sure way to have an unengaged team is to use the same risk identification technique repeatedly. Additionally, mixing it up occasionally will help your team think in new ways and improve the identification process.

Methodology

The risks have been identified from the process 8Rs and 4Ts and through this process the likelihood and the impact are determined.

No	The risks
1.	Deviation of the scope
2.	Unclear objective
3.	Fail when identifying all the activities required to create the deliverables
4.	Requirements may not be properly understood and analyzed

The risks have been identified and we'll use the risk matrix to determine the probability and the impact of each risk (High, Medium, Low)

The probability will be classified according the below table:

Ratio %	description	Category
71-100	The probability of occurring is high	high
31-70	The probability of occurring is medium	medium
0-30	The probability of occurring is low	low

The impact will be classified according the below table:

Ratio %	description	Category
71-100	High impact	high
31-70	Its impact is moderate	medium
0-30	Low impact	low

We will use several criteria to measure the severity of the impact

Criteria	Category		
	High	Medium	Low
A. Impact on the scope	3	2	1
B. Impact on the budget	3	2	1
C. Impact on the time	3	2	1

After that, the equation will be applied to take the arithmetic mean of each risk in order to classify the severity of its impact on the project.

$$(A+B+C)/3 = I$$

(if the result is a decimal number, round it to the nearest whole number)

No	The risks	Probability	Impact
1	Deviation of the scope	Medium – 0.5	High – 0.9
2	Unclear objective	Low – 0.2	High – 0.8
3	Fail when identifying all the activities required to create the deliverables	Low – 0.1	Medium – 0.4
4	Requirements may not be properly understood and analyzed	Low – 0.2	High – 0.8

Now the severity will be evaluated to choose the appropriate response plan and mitigate the impact. We have used risk matrix to calculate the severity.

Probability	Medium	High	High
	Low	Medium	High
	Low	Low	Medium
Impact			

The purpose of the risk register is to form an agreed record of the significant risks that have been identified and will serve as a record of the control activities that are currently undertaken.

No	Risk description	Likelihood of the risk occurring	Impact if the risk occurs	Severity (rating based on the impact and likelihood)	Owner (person who will manage the risk)	Mitigate action (reduce the likelihood)
1	Deviation of the scope	0.5	0.9	High	Project manager	Define the scope before the project start and agreed on it with the stakeholders, log the changes and re-baseline.
2	Unclear purpose/objectives	0.2	0.8	High	Project Owner	Make sure that the business case is completed and the purpose is well defined on the project charter.

3	Fail when identifying all the activities required to create the deliverables	0.1	0.4	Medium	Project manager	Define the scope very well through workshops with inputs from subject matter.
4	Requirements may not be properly understood and analyzed	0.2	0.8	High	Project manager	Hold a meeting with each stakeholder to understand and analyze each request.

Results

When EMV technique is used for risks, a contingency budget can then be estimated to cover the impact on the project. The potential impact on the project is 53,000 SR, while the contingency cost is 19,300 SR.

No.	Risk	Probability	Impact cost SR	Risk contingency
1	Deviation of the scope	0.5	30,000	15,000
2	Unclear objective	0.2	12,000	2,400
3	Fail when identifying all the activities required to create the deliverables	0.1	3,000	300
4	Requirements may not be properly understood and analyzed	0.2	8,000	1,600
Total			53,000	19,300

Discussion

The objective of risk management is to minimize the impact of risks in the project. So you will need all the contingency money only if all the risks occurred.

References

Fundamentals of Risk Management (5th ed.) Understanding, Evaluating and Implementing Effective Risk Management

[7 Ways to Identify Risks \(projectriskcoach.com\)](http://projectriskcoach.com)