



جامعة الجميع الذكية
EVERYONE'S SMART UNIVERSITY

Everyone's Smart University

Project (Spring 2021)

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Section

Date

Course Code

Master

Thursday

18 / 03 / 2021.

(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 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 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 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 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..

Hypothetically Project: Establishing an isolation rooms with negative pressure in Emergency Department at KFSH-B

Introduction:

If an organization failed to evaluate, recognize, and analysis the risk adequately will lead to mismanagement of risk which will impact project life cycle or an organization or project desired outcomes. Identifying risk and mitigating project risks are definitive actions in managing successful projects. as it is known Project's environment is always affected by uncertainty which has various origins that may be technical, management, commercial and internal, external issues related to the project plan.

Since Risk management is considered as one of most important project management processes in relevant to goals of each project that is: cost, time, and specifications. Project risk management known as formal approach to identify, analyze and response toward project risk. Its main objectives are to increase likelihood and consequences of positive occurrences and reduce likelihood and consequences of negative occurrences in regard with project's goals.

As project manager in **Establishing an Isolation Rooms with Negative Pressure In Emergency Department at KFSH-B**. risk management has to adopted and modified to align with project goals.

Literature Review:

1-Risk Management is making a decision that contribute to the accomplishment of any organization's or facility goals by applying it at the individual activity level and in functional areas furthermore Risk Management is a beneficial tool in making decisions regarding ending disagreement between science- based evidence and other factor (, Berg 2010).

2-Every construction project is unique, with unique data, environment and included a high degree of information's uncertainty. All construction projects experience the unexpected situations and uncertainties during their implementation for which project managers must be ready.



Figure 1: Risk Management Process Berg 2010

METHODOLOGY:

Risk Identification:

There are different approaches to identifying risks and the most used technique:

Brainstorming with stakeholders to list as many risks associated with the project as possible.

Documentation review: of previous similar projects they can help to ensure that the most common key areas of project are considered.

NOTE: all Numbers are Hypothetical Numbers not accurate.

Table.1

No.	Risk List
1	Compliance risks
2	Reputation Risks
3	Scope Risks
4	Financial Risks.
5	Time Risks
6	Communication Risks.

Risks Matrix:

After Identifying most common risks associated with initiation phase of project lifecycle, probability and impact will be determined in a risk matrix and will be expressed by the range. **(low risk = 0 to .03) (Medium Risk = 0.4 to 0.7) (High risk = 0.8 to 1).**

Table 2

Risks ID	Risks Description.	Probability	Impact
2.1	Failure to comply with policy, laws, and regulations.	0.3	0.8
2.2	Situations, actions, or factors that could impact projects or organization's reputation either negatively or positively.	0.5	0.9
2.3	Tasks that put at risk project deliverables not well-defined.	0.5	1
2.4	Most common and biggest threat to any project staying within budget it is crucial for project sponsor.	0.8	0.4
2.5	Project exceed the set scheduled of time.	0.3	0.9
2.6	Due to stakeholders, project managers, and everyone's position work level, communication may fail leading to a tangible consequence (lack of clarity & confusion).	0.6	1

Risk Register: is defined as document used for recording risk management process for identified risks. Which will facilitate ownership and management of each risk and will cover the significant risks facing the organization or the project.

Monitor work with high uncertainty throughout lifespan of the project.
(High) (Medium) (Low).

Table 3.

Risk ID	Risks	Risk Description	Probability P	Impact I	Severity P(X) I	Response Strategy	Mitigation action
3.1	Compliance risks	Failure to comply with policy, laws, and regulations.	0.3	0.8	high	Avoid by eliminating the cause	therefore, it must be managed through a set of compliance program (identification, evaluation, monitoring, reporting) which will reduce the probability of happening
3.2	Reputation Risks	Situations, actions, or factors that could impact the project's or organization's reputation either negatively or positively.	0.5	0.9	high	Risk can be Mitigated by reducing the impact.	by Knowing the source of reputation risks and determining whether it is a threat or an opportunity and designed the action to cross over the gaps between the reality and perceptions.
3.3	Scope Risks	Tasks that put at risk project deliverables not well-defined.	0.5	1	high	Avoid by eliminating the cause.	Well Defined Scope in details to ensure the desired deliverables
3.4	Financial Risks.	Most common and biggest threat to any project staying within budget it is crucial for project sponsor.	0.8	0.4	Medium	Mitigate to reduce the impact we will adhere to the set budget	Project Cost Management includes the processes involved in planning, estimating, budgeting, and

							controlling costs so that the project can be completed within the approved budget, the project sponsor, manager, team must prioritize the tasks accordingly to suit the project focus and stay in touch with project expenses by tracking them on finances spreadsheet.
3.5	Time Risks	Project exceed the set scheduled of time.	0.3	0.9	high	Mitigate monitoring the work is a vital role must be followed to make sure the work is progressing as approved time.	Project manager and team should wrap up projects sooner rather than later.so if something went wrong with project progress timeline, we are allocated enough time to take control and get on track.
3.6	Communication Risks.	Due to stakeholders, project managers, and everyone's position work level,	0.6	1	high	Mitigate Reduce the impact by maintain contact address and a written statement of the	Project managers are predominatingly responsible for communicating with stakeholders,

		communication may fail leading to a tangible consequence (lack of clarity & confusion).				importance of communication.	and they should not be the only line of communication. Risk management requires the involvement of all your project team members, especially if individuals hold expertise in certain risk areas, or are leaders of a specific aspect .of the project
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EMV Calculation:

is a mathematical technique in risk management used to quantify risks and calculate the contingency reserve.

Therefore, we will calculate the EMV cost. Multiplying Probability x Impact cost =Risk Contingency

Table 4

No	Risks	Probability	Impact Cost	Risk Contingency
4.1	Compliance risks	0.3	8,000 SR	2,400 SR
4.2	Reputation Risks	0.5	6,000 SR	3,000 SR
4.3	Scope Risks	0.5	4,000 SR	2,000 SR
4.4	Financial Risks.	0.8	4,000 SR	3,200 SR
4.5	Time Risks	0.3	3,000 SR	9,00 SR
4.6	Communication Risks.	0.6	2,000 SR	1,200 SR
Total:			27,000 SR	12,700 SR

RESULT:

After Identifying the possible or common risk that may be associated with Project initiation phase are listed in table 1.

Table 2. shows each and its risk description and the P & I and all determined in risk matrix which range from (low risk = 0 to .03) (Medium Risk = 0.4 to 0.7) (High risk = 0.8 to 1).

Lastly, we calculated **EMV** and Impact Coast= **27,000 SR** & Risk Contingency=**12,7000 SR**).

Conclusion and Discussion

Risk management is an established in advance and organized approach for identifying and analyzing possible risks associated with a project so that effective risk management plan can be done at the lowest cost. It is not impossible to reduce or mitigate all risk and costly to overdo risk management, but we should take into consideration some risks have positive impact, positive risks those will lead to profit if properly analyzed and identified.

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