



جامعة الجميع الذكية
EVERYONE'S SMART UNIVERSITY

Everyone's Smart University

Project (Spring 2021)

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Section

Master

Date

Thursday

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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 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 **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 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..

Risk Identification and Analysis

Introduction:

The idea of the “Books and Beyond” project was made specifically for those students who cannot afford new books or stationery items at full prices. By using the application, they can order or purchase secondhand books at low prices. Moreover, the project helps suppliers, photocopiers, and printing press companies to offer their services and earn using our app. In this report, I will discuss risks that we may face during project development. I will also talk about ways to analyze possible risks and ways to handle them.

Literature Review:

Risk is regarded as an indistinguishable component in any project since all successful variables are unpredictable in projects then risk control is unavoidable. Major and the serious problem of internal projects is negligence of risk control value by project managers that results in project delays increasing overall project costs (Asadi, 2015). Risk identification and assessment is a difficult method in project risk management. Often project managers expend less time finding threats and more time mitigating them, ignorant of the possibility that unexplained risks cannot be mitigated (George, 2020).

Risk management is an approach to recognize, evaluate, and manage possible risks to profits and resources of any organization. Risk, hazards, and challenges may arise due to various reason including legal obligations, financial volatility, incidents, natural disasters, and strategic management mistakes (Ssempebwa, 2013). The primary risk management strategy is avoidance. This technique has proved to be most efficient and best benefited to handle risks. To eliminate the possibility and its severe incurring damages, stop the operations that are causing future complications (Blackman, 2015).

Another effective technique is reduction of risk (risk reduction). Project managers should take significant measures to reduce the likelihood of a negative outcomes

occurring or to lessen the effect of a negative outcomes occurring (Schenkelberg, 2019). Risk transfer aims to hand over the risk effect responsibility to another group. This will imply relinquishing any authority, but if anything goes wrong, the company is not liable. The procurement of insurance is a traditional method of transferring liability to another company. This could necessitate a close examination of the threats and probabilities presented, but it is a realistic choice in certain cases. Risk transfer does not minimize risk, but it does reduce the risk's direct effect on the project. The burden of failure or benefit is redistributed among several parties as risk is shared or transferred. This method is most appropriate for mitigating financial risk exposure (Simplilearn, 2021).

Methodology:

We have used a descriptive approach to identify possible risks during our project. We have reviewed past literature and studies for data collection about risk management. Moreover, we have applied a brainstorming technique to identify risk. We will give further application risk management applied on a project in the discussion. Have made the list of possible risks that we may face during project development and they are:

Table 1.

No.	List of Possible Risks
1.	Team members may face stress of meeting project requirements and deadline.
2.	Risk of resource management.
3.	Communication challenges (due to social distancing in this COVID-19 situation).
4.	Misunderstanding the project requirements.
5.	Lockdowns due to new viruses.
6.	Delay in delivering ordered services due to unavailability of delivery staff.
7.	Insufficient material.

8.	Lack of motivation in group members to do work.
9.	Lack of performance.
10.	Scope creep (changing requirements)

Now, we have a list of all possible risks, the next step is to make a risk probability matrix to determine the probability and impact of each risk, which will go after that to the risk register.

Abbreviations: L: low = 0 to 0.5, M: medium = 0.5 to 0.75, H: high = 0.75 to 1.

Table 2.

No.	List of Possible Risks	Probability	Impact
1.	Team members may face stress of meeting project requirements and deadline.	0.75	M
2.	Risk of resource management.	0.5	L
3.	Communication challenges (due to social distancing in this COVID-19 situation).	0.75	M
4.	Misunderstanding the project requirements.	0.65	M
5.	Lockdowns due to new viruses.	0.2	L
6.	Delay in delivering ordered services due to unavailability of delivery staff.	0.4	L
7.	Insufficient material.	0.1	L
8.	Lack of motivation in group members to do work.	0.3	L
9.	Lack of performance.	0.4	L
10.	Scope creep (changing requirements)	1	H

After gathering and reviewing the risks, it is time to assess their severity to begin planning mitigation strategies for each risk and attempting to reduce their effects. To determine the severity, we used the risks matrix method.

Figure 1: Risk Matrix

Probability	0-0.5	low	low	medium
	0.5-0.75	low	medium	High
	0.75-1	medium	high	high
		0-0.5	0.5-0.75	0.75-1
Impact				

Table 3.

No.	List of Risks	Probability	Impact	Severity	Response Plan	Mitigation Action
1.	Team members may face stress of meeting project requirements and deadline.	0.75	M	M	Motivate team members.	Encourage and appreciate team members for their work and follow deadlines to avoid delays in delivery.
2.	Risk of resource management.	0.5	L	L	Assign resources to avoid mismanagement.	Keep backup plan for handling risk of resource mismanagement.
3.	Communication challenges (due to social distancing in this COVID-19 situation).	0.75	M	M	Collaborate using video-conferencing tools in pandemic	Use different modes of communication to avoid interaction problems.

					situation for well-communication.	
4.	Misunderstanding the project requirements.	0.65	M	M	Make requirement clear to every member at initial stage of requirements gathering.	Write each requirement in requirements document and give it to every member working on project.
5.	Lockdowns due to new viruses.	0.2	L	L	Plan your activities for emergency situations.	Implement Work from Home strategy to complete project on time.
6.	Delay in delivering ordered services due to unavailability of delivery staff.	0.4	L	L	Inform timely to user about delay in service	Keep back up workforce for delivering orders.
7.	Insufficient material.	0.1	L	L	Buy or purchase extra material to avoid lack or shortage of supply (material).	Keep stock of material for unusual circumstances.
8.	Lack of motivation in group members to do work.	0.3	L	L	Encourage them to do work.	Appraise team members and give them rewards for their hard work to

						keep them motivated.
9.	Lack of performance.	0.4	L	L	Check progress of every member daily.	Use performance measurement system to evaluate performance and suggest for improvements to those who lacks it.
10.	Scope creep (changing requirements)	1	H	H	Have meeting with members so everyone agree to requirements.	Document all requirements and get them approved by project manager. Moreover, inform everyone about exact requirement to avoid scope creep.

Result:

In this section, we have calculated the EMV cost for our application. The numbers do not show the exact cost but it is based on analysis and prediction that how much damage each risk would have in terms of cost. The total potential impact on the plan is 5500 SR, while the contingency cost is 5300 SR.

Table 4.

No.	List of Risks	Probability	Impact Cost (in SAR)	Risk Contingency
1.	Team members may face stress of meeting project requirements and deadline.	0.75	200	300
2.	Risk of resource management.	0.5	1000	500
3.	Communication challenges (due to social distancing in this COVID-19 situation).	0.75	300	400
4.	Misunderstanding the project requirements.	0.65	1000	700
5.	Lockdowns due to new viruses.	0.2	800	600
6.	Delay in delivering ordered services due to unavailability of delivery staff.	0.4	500	700
7.	Insufficient material.	0.1	300	500
8.	Lack of motivation in group members to do work.	0.3	200	200
9.	Lack of performance.	0.4	400	500
10.	Scope creep (changing requirements)	1	800	900
	Total		5500	5300

Discussion

Table 3 shows the outcome of the reposing strategy and how to minimize the harm. We should be aware of all possible risks and we mustn't waste much time on green risks; instead, we should focus on orange and red risks because they have a higher probability of impact.

Table 4 shows the result of the overall cost of risks on the budget. We have seen that scope creep and resource management have greater cost impacts. Moreover, insufficient material has a higher probability of occurrence. There are other risks also that we should be careful like conflict among team members, problems in the testing of apps before deployment, etc.

Also, project risk identification and assessment is a continuous activity that can begin at any point of the project cycle and can extend and last until the costs of its usage exceed the expected profit. As the project continues, the risks decrease, and therefore the usefulness of using risk identification and management decreases, so it is best to do it early in the project life cycle. There is no such thing as a risk-free project because all projects have risks, and assessing these risks after finding them and then handling them is an essential aspect of project management; without it, the project would fail.

References

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