



جامعة الجميع الذكية
EVERYONE'S SMART UNIVERSITY

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 ٢٠٢١-٠٥-٠٨ 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 ١٢.
- نوع الخط Arial.
- لون الخط أسود.
- المسافة بين الأسطر line spacing ١,٥
- 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 ردة الفعل المناسبة عند وقوع الخطر – لمنع أو تقليل الاثار 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 حريقا 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 Management of Software Company

1. Introduction:

Technology has been an indispensable part of our everyday lives, and it is one of the only aspects that our countries cannot grow or develop without it. Before several discoveries that created a sensation in the world of renaissance annals, works were completed in rudimentary forms and entirely reliant on human hands, making it impossible to progress and advance states.

My dream is to build a special programming company in building systems, websites, programs and smart applications that will have a great positive impact on my society and will contribute to the building and development of my dear country for all of us.

The ability to forecast a specific result has been critical to project performance. Since threats are the most complex aspect of a project, it is important for the project management to be able to monitor and forecast them as best as possible. Risk management, as described in [1] is a comprehensive approach to applying management strategies, procedures, and activities to processes relevant to risk context, detection, review, measurement, quantification, evaluation, control, and communication in order for enterprises to reduce losses and optimize opportunities effectively.

In the phase of planning for this project of building software company, we struggled a lot about what is the first thing we have to do, where is the suitable place for my company? When? And how to start and manage this company and a lot of questions that I will answer them later.

2. Literature Review:

The objective of project risk management[2] is to have a better understanding of project and program uncertainties, reduce the probability of negative events, and increase the likelihood of positive events on project and program outcomes Project risk assessment is an ongoing procedure that starts during the planning phase and concludes until the project is effectively commissioned and handed over to operations. The following elements should be used in a robust project risk management strategy, which should be flexible to the project's scale and type [2]:

1. Strategy and planning.
2. Risk identification.
3. Analysis (quantitative and qualitative).
4. Response planning.
5. Monitoring and control.

We notice from the previous studies a lot of software companies have built a successful software company, just only they need to study the risk management carefully and they have to be aware for future and analysis their steps for example of this successful company is Microsoft.

3. Methodology:

We'll use a special method to assist us in determining the risk's probabilities and consequences. The first move in identifying all potential threats is to brainstorm. We'll make a note of all of them.

Table 1:

NO	List of Risk's Probabilities
1	Unsuitable place for company.
2	Custom budget deficit (budget not enough).
3	Attended roaming because of COIVD19(prevent to open the company).
4	Unqualified team workers.
5	Choose undetailed or not clear plan for a company.
6	Security risks.
7	Hacking in company's systems.

Then we'll build a risk matrix (determine the probability and impact of each risk), which will be added to the risk registry. (low = 0 to 0.3, medium = 0.4 to 0.6, high = 0.7 to 1).

Risk Matrix:

Table 2:

NO	List of Risk's Probabilities	<i>Probability</i>	<i>impact</i>
1	Unsuitable place for company	0.3	0.5
2	Custom budget deficit (budget not enough).	0.2	0.8
3	Attended roaming because of COIVD19(prevent to open the company).	0.4	0.5
4	Unqualified team workers	0.4	0.9
5	Choose undetailed or not clear plan for a company	0.7	0.8
6	Security risks	0.3	0.6
7	Hacking in company's systems	0.7	0.9

After collecting and reviewing the risks, it's time to assess their seriousness and begin planning coping strategies for each one. We used the Risks Matrix and Bow-Tie to determine the magnitude and develop a response strategy.

Probability	0.7 - 1	high	high	medium
	0.4 - 0.6	high	medium	low
	0 - 0.3	medium	low	low
		0.7- 1	0.4 - 0.6	0 – 0.3
<i>Impact</i>				

EMV:

Table 3:

No	List of Risks	Probability	impact	Severity	Response plan	Prevent/Mitigate Action
1	Unsuitable place for company	0.3	0.5	low	Study the place carefully before take it	Making a large-scale marketing of the company and the company's services that can provide the customers
2	Custom budget deficit (budget not enough).	0.2	0.8	medium	A study of feasibility for everything the project needs	Provide the budget we need in the project and if there is a financial deficit asking for financial support from institutions that provide financial support to projects.
3	Attended roaming because of COIVD19(prevent to open the company).	0.4	0.5	medium	Commitment to preventive measures of this disease such as sterilizers and social spacing	Dealing and communicate with customers remote to provide services to them.
4	Unqualified team workers	0.4	0.9	high	choose a qualified programmers team	Developing the team work through of studying courses which will help them more in the field of work.
5	Choose undetailed or not clear plan for a company	0.7	0.8	high	Make a clear plan for all the stages you will go through in building the company for now and future.	Focus on each step and make a clear and detailed plan for the things that the company is doing now or in the future.

6	Security risks	0.3	0.6	medium	Make a plan for emergency security in the company	Take all necessary security measures for any emergency security may happen by increase the of police men in a company and CCTV and Alarm systems ...etc.
7	Hacking in company's systems	0.7	0.9	high	Using systems which a high security sense in order to quickly discover programing security risks.	Using protection and security programs from hacking and qualifying programmers in the field of protection and network security.

4.

Results:

We'll now figure out how much EMV would cost a tech firm. Many of the figures you'll see are estimates based on expectation, not absolute costs. The plan's overall possible effect is 19500 SR, with a 7050 SR contingency fee.

Table 4:

No	List of Risks	Probability	Impact cost SR	Risk contingency
1	Unsuitable place for company	0.3	4000	1200
2	Custom budget deficit (budget not enough).	0.2	5000	1000
3	Attended roaming because of COVID 19 (prevent to open the company).	0.4	2000	800
4	Unqualified team workers	0.4	3000	1200

5	Choose undetailed or not clear plan for a company	0.7	0	0
6	Security risks	0.3	2500	750
7	Hacking in company's systems	0.7	3000	2100
	Total		19500	7050

5. Discussion:

The result of the reposing plan and how to mitigate the risk are shown in (Table 3). It's important to remember that we should be aware of all risks, but we shouldn't waste time on risks that are brown in color; instead, we should concentrate on risks that are blue or red in color because they have a higher probability and have a greater impact.

The impact of risk on the budget can be seen in (Table 4). Since the number for hacking into a company's databases was higher, it was given higher attention. There are certain threats you should be aware of, such as unqualified team members. Custom budget shortfall, unsuitable location for business, and unsuitable location for business because of it are all critical factors in the performance of your project and the budget.

6. CONCLUSION:

Project risk management [3]identification and assessment is a continuous mechanism that can start at any point in the project cycle and last until the risks of using it outweigh the possible benefit, so at a minimum, organizations should clearly define their procedures and expectations for risk management, communicate its importance, adequately train its personnel, and monitor high risk projects for compliance with risk management procedures because without them the project will be failure.

References:

- [1] SR CEI 62198. (2002). Project risk management – Application guide
- [2] Gina Barlow, Chris Dew,..., Harriet Dempsey.(2014)." Project risk management"
- [3] Chapman, R. J., and Ward, S. (1997). "Project Risk Management Processes, Techniques and Insights" John Wiley & Sons, Chichester, UK.