

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:

- اخر موعد للتسليم هو يوم السبت 08-05-2021 في تمام الساعة 9 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 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 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 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..

1. Introduction

Risk management is one of the important project management processes. We present the results of a study designed to identify the most widely used tools and those relevant to effective project management in general and effective project risk management. in particular. Feedback data is analyzed to identify which tools are more likely to be used in organizations that report better project management performance, and those that appreciate the contribution of processes. risk management. # 2000 Elsevier Science Ltd and IPMA. (Peace, 2017)

2. Literature Review

Project scope management is a project manager's most important function. Projects can be in any sector of industrial or non-industrial activity, production or service environment, private or public enterprise, government or non-government commitment. Effective scope management of a project also ensures successful management of other key project management areas, including timing, cost, and quality. Project scope management can be further subdivided into its components including the following. • Original project; • scope planning; • scope definition; • scope verification; and • change control of scope. The focus of all project scope components is the work division structure. All components of the scope management interact with each other through WBS. A WBS, as the name suggests, is the hierarchical division of the project into its constituent elements. Having a detailed WBS means having a large number of levels. This allows for more precise project management. (Khan, 2006) However, the detailed WBS also requires more resources to be collected and compiled for reporting purposes. A reasonable balance should be achieved between the project reporting requirements and the desired level of control. Some examples of WBS are given in this article. The detailed WBS also requires dedicating more resources to gathering and aggregating information for reporting purposes. A reasonable balance should be achieved between the project reporting requirements and the desired level of control. Some examples of WBS are given in this article. The detailed WBS also requires dedicating more resources to gathering and aggregating information for reporting purposes. A reasonable balance should be achieved between the project reporting requirements and the desired level of control. Some examples of WBS are given in this article

3. Methodology

In this research I used the brainstorming to identify the Scope of Work Risks with the assets of experts, Moreover, 8R and 4T's are used to measure the probability and impact of risk.

Sr.	Risk description	Probability	Impact	Severity (rating based on impact & likelihood)	Response Plan	Mitigating action
1	Project purpose and need isn't well defined	0.7	0.8	High	Complete a business case provided and ensure purpose is well defined.	Escalate to the project board with an assessment of the risk of runway costs
2	Project design and deliverable definition is incomplete	0.9	0.8	High	Define the scope in details via design workshops with input from subject matter experts	Document assumption made and associated risk items that are ill-defined are removed from scope
3	Project schedule isn't clearly defined	0.5	0.2	Medium	Hold scheduling workshops with the project team so, they understand the plan and likelihood of missed tasks is reduced	revisit the schedule with the project team
4	No control over staff priorities	0.7	0.1	Medium	the project sponsor will brief team managers on the importance of the project. Soft book resources as early as possible and then communicate final booking dates ASAP after the scheduling workshops.	escalate to protect sponsor and bring in back up resource
5	Consultant/contractor delay	0.7	0.4	High	include late penalties in contract. Build in and protect lead time in the schedule.	escalate to project sponsor and contracts manager, Implement late causes.

6	estimating or scheduling mistake	0.3	0.8	High	break this two risks "cost estimating" and "scheduling mistake" use two methods of cost estimation and carefully track costs and forecast cost.	escalate to project sponsor and project board. Raise change request for change to budget or schedule.
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Risk NO.	Risk			How to prevent
	P	S	P*S	
1	5	4	20	Complete a business case provided and ensure purpose is well defined.
2	4	4	16	Define the scope in details via design workshops with input from subject matter experts
3	4	2	8	Hold scheduling workshops with the project team so, they understand the plan and likelihood of missed tasks is reduced
4	3	4	12	the project sponsor will brief team managers on the importance of the project. Soft book resources as early as possible and then communicate final booking dates ASAP after the scheduling workshops
5	5	5	25	include late penalties in contract. Build in and protect lead time in the schedule
6	4	4	16	break this two risks "cost estimating" and "scheduling mistake" use two methods of cost estimation and carefully track costs and forecast cost.

Risk Rating = Likelihood x Severity

S e v e r i t y	Catastrophic	5	5	10	15	20	25
	Significant	4	4	8	12	16	20
	Moderate	3	3	6	9	12	15
	Low	2	2	4	6	8	10
	Negligible	1	1	2	3	4	5
			1	2	3	4	5
			Improbable	Remote	Occasional	Probable	Frequent
			Likelihood				

Catastrophic	STOP
Unacceptable	URGENT ACTION
Undesirable	ACTION
Acceptable	MONITOR
Desirable	NO ACTION

Sr.	Risk description	Probability	Impact cost	Risk Contingency
1	Project purpose and need isn't well defined	0.7	11000	7700
2	Project design and deliverable definition is incomplete	0.9	34600	31140
3	Project schedule isn't clearly defined	0.5	18400	9200
4	No control over staff priorities	0.7	13000	9100
5	Consultant/ contractor delay	0.7	44600	31220
6	estimating or scheduling mistake	0.3	56000	16800
Total			177600	105160

4. Result and Discussion

Calculating the EMV cost of Scope of Work Risk's. The potential impact cost of the project was 177600 SR and the contingency cost was 105160 SR. Scope risk is a particular issue in the early stages of the project lifecycle. we have to Study carefully the requirements and associated scope to avoid the impossible, and minimize scope gaps. Also make sure all stakeholders are included in scope development. New insights come as the project takes shape. But not all improvements contribute to the ultimate success of the project.

5. References

Khan, A. (2006). Retrieved from <https://brainmass.com/business/human-resources-management/business-management-271591>

Fundamentals of risk management 5th edition

Peace, C. (2017, JULY 12). Retrieved from https://www.researchgate.net/profile/Christopher-Peace-4/publication/318382514_The_risk_matrix_Uncertain_results/links/5a1cf138aca2726120b267f2/The-risk-matrix-Uncertain-results.pdf