



جامعة الجميع الذكية
EVERYONE'S SMART UNIVERSITY

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:

- آخر 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 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..

Introduction

Project risk management is an important process that involves identifying, assessing, and managing project risks. Every project has specific risks that should be cared for effective completion. The entire course of project risk management is aimed at enhancing the efficiency of project management. The importance of project risk management is contextualized under Expected Monetary Value (EMV). When risks are identified, assessed, and managed properly, the project EMV is higher. Therefore, project risk management is vital in enhancing the effectiveness of project management in terms of attaining positive outcomes.

Literature Review

The project risk management process refers to a series of reasonable practices used by decision agents to plan and implement operations and control outcomes to ensure that the implantation fulfills specific conditions like quality, time, and cost (Rodrigues-da-Silva & Crispim, 2014). Therefore, the risk management process ensures that projects are developed and implemented to fulfill pre-established conditions. As a result, project management processes are scheduled and controlled to ensure they fall within the preset project guidelines. The best project risk management approach involves creating a theoretical framework that connects and classifies practices in each stage of the project lifecycle and each risk management process. Such a process offers enhanced rests regarding the effectiveness of project risk management.

The low application of formal project management practices is the main reason why projects fail to deliver desired outcomes. Poor project performance is an offshoot of formal risk management processes (Kululanga & Kuotcha, 2010). Firms should espouse formal project risk management processes since they offer an enhanced performance of projects. The efficiency of project management practices underpins the success of projects.

Project risk management processes have been effective in minimizing the negative impact of risks of project processes. However, there is a need for a paradigm shift regarding project risk management. The change involves perceiving risks as

positive developments rather than negative occurrences (Olsson, 2007). Risks are viewed negatively due to the adverse effects on the project, but they can also be viewed positively as opportunities. It is essential to develop processes and practices that consider risks as opportunities hence guiding project managers on exploiting risks for the success of projects. The paradigm shift will enhance the attainment of positive outcomes in projects through using a latent opportunity in risks.

Risk management is a vital component of project management since it identifies, evaluates, and administers risks (Raz & Michael, 2001). Various tools have been identified to help in risk management, and their efficiency is based on effective identification and administration of risks. In selecting risk management processes, efforts must revolve around understanding the nature of the project since each risk is associated with specific projects. The proper application of risk management tools enhances the efficiency of projects.

Methodology

The methods used to satisfy research requirements include brainstorming and a risk matrix. Each of these methods serves a different and specific purpose in the project risk management process. For instance, brainstorming underpins evaluating potential risks and enhancing awareness of their effect on project management. This process helps develop mechanisms to address potential risks in project management. Brainstorming is used to strengthen the understanding of project stakeholders of risks involved in project management. Moreover, it helps share ideas on the best ways to identify and address risks involved in project management. A risk matrix lists all potential risks affecting the project and examines their effect or severity. Risks are ranked based on the degree of impact on project management. It helps prepare mechanisms to deal with threats in project management.

			Impact			
			0 Acceptable	1 Tolerable	2 Unacceptable	3 Intolerable
			Little or No Effect	Effects are Felt but Not Critical	Serious Impact to Course of Action and Outcome	Could Result in Disasters
Likelihood	Improbable	Risk Unlikely to Occur				
	Possible	Risk Will Likely Occur				
	Probable	Risk Will Occur				

Figure 1: Risk Matrix

Results and Discussion

Risk matrix and brainstorming are effective in project risk management because they contribute to enhanced performance. A risk matrix offers the best rationale for project risk management since it involves identifying and assessing all potential risks for the project. This method facilitated listing all risks, which were rated in terms of frequency, severity, and effect on the project. This information is used to mitigate the impact of the risk on the project. Therefore, a risk matrix informs the development of mitigation mechanisms that help address hazards in project management. Once risks

have been anticipated, it is easier to develop strategies for managing them to ensure enhanced project management.

Brainstorming is an effective method of project risk management since it offers an opportunity for shared deliberations on project risks. Through this method, various stakeholders examined the potential risks for the project and evaluated these risks regarding effects on the project. During the same session, mechanisms of addressing potential risks are developed and an execution plan. Therefore, brainstorming offers an effective model for managing risk through shared deliberations on risk identification, assessment, and management. It was possible to attain an enhanced Expected Monetary Value (EMV) through risk matrix and brainstorming. This was made possible by a proper identification, assessment, and management of risks, which led to the project's high performance. The success of project risk management is reflected in the project performance, which indicates the efficient administration of risks.

References

- Kululanga, G. & Kuotcha, W. (2010). "Measuring project risk management process for construction contractors with statement indicators linked to numerical scores", *Engineering, Construction and Architectural Management*, 17(4), 336-351.
<https://doi.org/10.1108/09699981011056556>
- Olsson, R. (2007). In search of opportunity management: Is the risk management process enough? *International Journal of Project Management*, 25(8), 745-752
<https://doi.org/10.1016/j.ijproman.2007.03.005>
- Raz, T. & Michael, E. (2001). Use and benefits of tools for project risk management. *International Journal of Project Management*, 19(1), 9-17
[https://doi.org/10.1016/S0263-7863\(99\)00036-8](https://doi.org/10.1016/S0263-7863(99)00036-8)
- Rodrigues-da-Silva, L. H. & Crispim, J. A. (2014). The Project Risk Management Process, a Preliminary Study. *Procedia Technology*, 16, 943-949
<https://doi.org/10.1016/j.protcy.2014.10.047>
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