



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 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 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 لاستدعي 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..

Project Risk Management

Our project in **APM course** was about Ship companies' transports between regions are designated deep-sea shipping, which, financially, is the most effective means of transport. The management of shipping companies aims to help the shipping industry learn and understand the fascinating world. It appears at how ocean corporations are organized and run.

The shipping companies aims to help the shipping industry learn and understand the fascinating world. It looks at the organization and management of ocean-going companies.

Our project is now in the planning step of the project steps.

Introduction:

Risk is not bad in itself; risk is crucial for progress, and failure is often a critical part of learning. But we need to learn how to balance the potential negative impact of the risk with its potential benefits.

Organizations face a variety of risks that can affect the results of their activities. The desired main purpose can be defined as a mission or a set of business goals. An organization's impact can inhibit what it wants to achieve (hazard risks), enhance that objective (opportunity risks), or create uncertainty about results (control risks). A fourth category of risk is associated with obligatory responsibilities on institutions and these risks are referred to as risk of conformance.

The process of risk management is well known, but in a variety of ways it is often placed in different terminologies. This book examines the various terminologies used by various practitioners of risk management and in different business sectors. A simplified risk management description that outlines the key stages of the risk management process is also presented as an aid for understanding, as well as a description of the established risk management standards. (Chapman, C., 2003)

There can be no isolation of the risk management process. A framework within the organization, it needs to be supported. Again, in the range of standards, guides and other publications available, the risk management framework is presented and outlined in various ways. In all cases, the communications and reporting structure (architecture), the overall strategy for risk management that is defined by the organization (strategy) and the set of regulations are key components of a successful risk management framework.

Risks management is of great importance in confronting and addressing them. It is natural that people always strive to use modern scientific methods to confront those risks, and research and studies are permanent and continuous in order to search for ways and means to confront the new risks that humans may face due to scientific and technological progress. Many risks that did not exist before due to the use of modern machinery and equipment. (Cervone, H. F., 2006)

Terminology of study:

1. **Risk**: In financial terms, risk is defined as the chance that the outcome or actual gains of an investment will vary from the expected result or return. Risk includes the opportunity to lose an original investment in part or all. (Galtier, F., 2010)
2. **Project**: A project is a project to achieve the creation of a special product or service and therefore no project can be considered for activities which are carried out for routine purposes. (Cho, C. S., 2001)
3. **Project management**: Project management is the application of processes, methods, competences, knowledge and experience in order to achieve specific project objectives within agreed parameters according to criteria for project acceptance. The final results of project management are restricted to a limited time and budget. (Marcelino-Sádaba, S.2015)
4. **Risk management**: Risk identification, assessment, and prioritization (ISO 31000 defined as the effect of uncertainty on the goals). The coordinated and cost-effective use of resources to minimize, monitor, and control the likelihood or impact of an unfortunate event and maximize the achievement of opportunities. (Aven, T., 2010)

5. **Environment risk management:** Environmental risk management (ERM) contributes to ensuring an acceptable level of environmental risk, and should ideally be applied in a structured process on all aspects of mining in order to deal with all relevant issues. Risk assessment criteria and targets during the planning phase should be established. (Bollig, M., 2010).

Literature review:

1. Methods for the management of project risk:

Project risks management is the process by which any risk arising throughout the life cycle of a project is identified, analyzed and addressed to help ensure the project is on track and achieves its objective. Risk management is not only reactive. In the planning process, it should identify and control the risk that could occur in the project.

Risk management on various types of projects can mean different things. Risk management strategies can include comprehensive detailed risk management planning for large-scale projects, to ensure that mitigation strategies are in place when problems arise. Risk management could be a straightforward, prioritized list of high, medium and low priority risks for smaller projects.

In order to begin risk management, it is vital that the task of your project is defined with a clear and precise definition. In other words, write your project charter in very detail with your project vision, goals, scope and results. In each stage of the project, risks can be identified. You will then want to get your team involved to identify all risks at an early stage.

Don't be afraid to participate in identifying and prioritizing risks more than just your team. Many project managers just email their project team and ask them to send them things that they believe could go wrong with the project. But in order to better understand the risk of your project, you should put together the entire project team, your customer representatives and the sellers and hold a risk identification session.

You can log it somewhere with each risk you define—using a risk tracking template can help you prioritize the risk level. Then, develop a risk management plan to identify the negative and positive consequences for the project and what measures you are taking to

address it. You want to organize regular risk monitoring meetings during your ongoing project. Critical is transparency. (Walewski, J., & Gibson, G., 2003)

2. Techniques for risk management and classification:

Techniques for risk management — methods for risk treatment. Traditional risk management techniques involving risk retention, risk transfers of contract or non-insurance, risk management, risk prevention and the transfer of insurance include risk management techniques. Additional techniques used for other risk types (e.g. credit, operational, rate risks) include financial instruments such as hedges, swaps and derivatives.

Comprehensive corporate risk management is a multi-stage process that will vary with each company's needs and requirements. In order to assess the likely and potential impact of any incidents, the first stage is to determine exactly what your enterprise faces. Upon completion of this process, you can assess the technology that best matches your business and optimize the progress of your risk management. (Elzamly, A., 2015)

3. Dimensions to select the technology of project risk management:

Risk professionals begin, without much exception, with a risk assessment. The risks are derived either from a qualitative or quantitative analysis which helps organize threats to attain their objectives. The first dimension of risk is therefore data — or information from data generated on the risks facing an organization.

The second dimension of the risk is to decide which measures to be taken or avoided in the first phase based on the findings. This process is called risk mitigation by many risk professionals and several have developed extremely complex ways to minimize the impact of a risk event on their organization. Again, too many different examples of how this is achieved, but I am sure that you have success stories describing an operational or technical challenge.

The third dimension of risk demands the least investment and is capable of achieving a return on investment much more than the costs expended in the first and second

dimensions. I will be able to describe what it feels like to function in this level of risk management before I tell you what the third dimension of risk is. (Raz, T., 2002)

Methodology:

Risks and their impact:

Effect of risks	the potential risks
It results in much disturbance because of delivery delays, a difference in supply quality or problems in the quantity of raw materials.	The risk of raw materials not being available.
As the quality of the supplies and their non-conformity to the specifications differs, it causes much interference, and they are therefore rejected and the raw materials are again re-furnished to achieve the required specifications.	Risk associated with non-compliant material.
The failure to obtain these permits in a timely manner delays the project start-up time and negatively affects the project program and delays the whole of the project's time.	Permits
The possibility of non-conformity of the design made by the designer with the project output specifications.	Design risks

Matrix of potential risks:

Possibilities	SEVERITY					
	Nil	Low	Moderate	High	Very High	
The risk of raw materials not being available.	Risk acceptable	Review at appropriate time	High priority	Operation not permissible	Operation not permissible	Almost Certain
Risk associated with non-compliant material.	Risk acceptable	Review at appropriate time	High priority	Operation not permissible	Operation not permissible	Likely
permits	Risk acceptable	Risk acceptable	Review at appropriate time	High priority	High priority	Possible
Design risks	Risk acceptable	Risk acceptable	Risk acceptable	Risk acceptable	Risk acceptable	Rarely

Tasks table:

Risks	Score
High	16 - 25
warning	12 - 15
Medium	8 - 10
Low	1 - 6

EVM calculation:

Risk	Risk probability (p)	Cost impact (IC)	Risk contingency (p*IC)
A	0.3	\$3.000	\$900
B	0.5	\$4.000	\$2.000
C	0.8	\$7.000	\$5.600
D	0.9	\$10.000	\$9.000

Discussion:

There are a number of advantages to the implementation of the structure. From a statement point of view, it leads to enhanced project comprehension and improves resource control, encourages development and implementation of outer circumference and encourages better exploitation of ways of identifying and evaluating risks which have an inherently beneficial impact on the assessment of eventualities.

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