



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:

- 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...

Introduction:

Cost risk usually projects cost escalations due to poor estimated accuracy and shrinking reach. The risk of operations taking longer than planned would be the risk schedule. Usually, slips in time raise costs and often delay project gain reception, thus resulting in a potential loss of competitive advantage (Teller, Kock & Gemünden, 2014).

Risk to performance, risk of the project not producing project-compliant results. Many other forms of project threats are involved. These risks can lead to problems of cost, schedule, or performance and create other kinds of adverse impacts on the business. Examples include: Risk to governance concerns management and board success in terms of ethics, community stewardship, and the image of an organization (Wallace & Keil, 2004).

Strategic risks are the product of strategic mistakes, such as selecting a technology that cannot function. Operational risks include risks arising from inadequate execution and issues with processes such as procurement, manufacturing, and delivery. Market hazards include competition, international trade, product and interest rate threats, and liquidity and loan hazards (Schmidt, Lyytinen, Keil & Cule, 2001).

Legal risks stem from statutory and regulatory commitments, including contract risks and lawsuits against the company. External risks, such as a hurricane, flood, and earthquake; vandalism, sabotaging and terrorism; labor strikes; and civil unrest (Elkington & Smallman, 2002).

Literature Review:

In study by Carbone and Tippett (2004), which aimed to identifying and mitigating project risks, where the study proposed the extension of the Failure Mode and Effects Analysis (FMEA) format to quantify and analyze project risks.

Rodney, Ducq, Breyse and Ledoux (2015) carried out a study shown the need for an integrated project risk management strategy and outlines our approach to risk management, but also to project, components and the environment.

Hillson, Grimaldi and Rafele (2006) conducted a study to develop a method for understanding and managing risk on a project, using a combination of the Work Breakdown Structure (WBS) and Risk Breakdown Structure (RBS), resulting in the Risk Breakdown Matrix (RBM).

As these examples illustrate, project risks involve both internal risks linked to the successful completion of each project phase and risks beyond the project team's control. The latter types include external threats that exist outside the company and which influence the project's ultimate value. The severity of the danger depends in all cases on nature, the extent, and the probability of the potential end effects.

Besides project possibility, the risk of a delay in the project can be important. The risk of deferment relates to the risks of failure to carry out a project. Project deferment risk, like project risk, may result from any of the above-mentioned bulleted risk sources (the second list). Project deferment risks will also arise when there are only a few opportunities for the execution of a project – there may be a possibility that the project will never be successful after that if the project is not executed at present.

Safety Professionals use a risk matrix to assess the various risks of hazards (and incidents), often during a job hazard analysis. Understanding the components of a risk matrix to manage risk effectively. Check out the three components of the risk matrix; severity, probability, and risk assessment that we utilize in the Industry Safe software below.

A risk probability matrix:

Dumbravă and Iacob (2013) identified the contents of risk probability matrix as a following:

1. Severity:

Severity is the amount of damage or harm a hazard could create and it is often ranked on a four-point scale as follows:

- Catastrophic - 4 Operating conditions are such that human error, environment, design deficiencies, element, subsystem or component failure, or procedural

deficiencies may commonly cause major system loss, thereby requiring immediate cessation of the unsafe activity or operation.

- Critical - 3 Operating conditions are such that human error, environment, design deficiencies, element, subsystem or component failure or procedural deficiencies may commonly cause severe injury or illness or major system damage thereby requiring immediate corrective action.
- Marginal - 2 Operating conditions may commonly cause minor injury or illness or minor systems damage such that human error, environment, design deficiencies, subsystem or component failure, or procedural deficiencies can be counteracted or controlled without severe injury, illness, or major system damage.
- Negligible - 1 Operating conditions are such that personnel error, environment, design deficiencies, subsystem or component failure, or procedural deficiencies will result in no, or less than minor, illness, injury, or system damage.

2. Probability:

Probability is the likelihood of the hazard occurring and it is often ranked on a five-point scale:

- Frequent - 5 Likely to occur often in the life of an item
- Probable - 4 Will occur several times in the life of an item
- Occasional - 3 Likely to occur sometime in the life of an item.
- Remote - 2 Unlikely but possible to occur in the life of an item.
- Improbable - 1 So unlikely, it can be assumed occurrence may not be experienced.

Risk matrices come in many shapes and sizes. For more information on how to build a risk matrix that's right for your project, see our more detailed guide:

		Severity			
		Catastrophic 4	Critical 3	Marginal 2	Negligible 1
Probability	Frequent 5	High - 20	High - 15	High - 10	Medium -5
	Probable 4	High - 16	High - 12	Serious-8	Medium -4
	Occasional 3	High - 12	Serious-9	Medium -6	Low -3
	Remote 2	Serious-8	Medium -6	Medium -4	Low -2
	Improbable 1	Medium -4	Low -3	Low -2	Low -1

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