



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 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

Risk management is defined as the step-by-step follow up assessment of project's individual risk areas. Target of risk management can be abbreviated into 4 keywords as following :

1-Avoid

It's because the aim is to avoid risk resource and by this way risk factor or risk probability is eliminated. It depends on stopping risk source. For example, giving priority to installing natural gas in the office instead of relying on butane pipes, because in the case of natural gas, the parent company can shut down the supply line for the entire area if it is exposed to an electrical short. As for the use of butane pipes, the losses will be heavy in both property and lives.

2-Accept

The risk management here takes care of the necessity of expending several costs at the present time in order to avoid further losses in the event of a problem. For example, it is necessary to participate in the health insurance program for employees, as well as to sign work contracts with all employees, because in the event of a specific problem such as the collapse of the building, then what was previously spent by the company in insurance and contract registration will benefit by treating the patient at the expense of health insurance.

3-Transfer

Risk management here takes care of assigning the matter to parents. In the sense that it is necessary to transfer responsibility for certain risks to concerned persons. For example, when the owner of a particular company fears theft, he must install a surveillance camera system. Here, the company's manager has transferred the responsibility for this risk to another party, which is the company responsible for installing surveillance cameras, in agreement with the employee concerned with reviewing the surveillance camera records. As well as building and property insurance with an insurance company.

4-Reduce

Risk management here seeks to reduce the cost borne by the company in the event of a specific risk. For example, companies are forced to contract with IT companies to hold training courses for employees to teach them how to deal with different programs and that costs the company a lot. But in the long run, the company avoids the risk of wiping the data or making a certain error, as the program is a result of the employee's ignorance, so it costs the company more. If the company pays 10,000 dollars to hold training courses for employees, it will pay 100,000 dollars in the event of a problem with the data recorded on the system. Here in this case, the company chooses to pay \$10,000 now instead of putting itself in the position of fear of paying \$100,000.

Figure (1) shows list of risks in the project with its description

1. Financing	4. Information Technology	6. Services
The lack of clarity of the financial transfers made by the office, whether in the case of sending them or resigning them	Failure to build a good internal network between computers	Failure to provide satisfactory services to clients
The office accepts cash or bank donations	Subscribe to an internet package that is not suitable for the office's needs	Failure to observe the followed publishing rules and advise clients of them
Uncertainty about the parties receiving services through intermediaries	Not to contract on licensed products such as Antivirus and Windows programs	Failure to take into account reliable references while working with the client
2. Geographical Location	Failure to set multiple security levels for information	Ignore the customer's reaction to the services provided to him
Test a small town to set up an office	Ignore backup methods to avoid data loss	7. Accidents
An unfortunate choice of the site as its residents have no interest in the office field	Ignore the use of modern advertising methods such as Facebook	Not choosing a good location for the office
3. Legality	5. Employees	Lack of interest in setting up an alarm system in cases of theft
Failure to observe ministerial directives, such as not observing the ministry's policy in providing students with the skill of scientific research	Not making legal contracts for office workers	Lack of interest in setting up a fire extinguishing system
Incomplete work permits and licenses from regulatory authorities	Ignoring means of safety and welfare for workers, such as social insurance, health insurance, and others	Lack of interest in setting up a surveillance system for cameras
Lack of interest in joining the regulatory authorities	Not preparing training courses for workers to improve their employee level	Lack of interest in placing a first aid box

Figure (1): List of Risks

Figure (2) shows qualitative evaluation criteria

Qualitative Evaluation Criteria			
Level	Probability of Occurrence	Description	Possibility
5	Frequent	Frequent occurrence at intervals	>50
4	Probable	It is known or used to happen every once in a while	>40≥50
3	Occasional	It is known to occur on certain occasions	>25≥40
2	Remote	It is very unlikely to happen during this period	≥10≥25
1	Improbable	Rare or unlikely	<10

Level	Impact	Extent of Impact
5	Catastrophic	Seriously low reputation
		A deterioration in operational matters
		Events and problems will require the enhanced attention of the organization's executive management and board of directors
4	Critical	Business performance will be affected in the short term
		The reputation is affected in the short term
		Events and problems will require the attention of the executive management and the board
3	Moderate	There is some reputational impact
		Business performance and the confidence of the public and stakeholders will be affected
2	Minor	The consequences can be absorbed under normal operating conditions
		Potential impact on business performance
		Potential impact on reputation
1	Negligible	There is no impact on business performance
		There is no effect on reputation

Figure (2): Qualitative Evaluation Criteria

Figure (3) shows quantitative evaluation criteria

Quantitive Evaluation Criteria						
Risk Categories		Impact				
		Very Dangerous	Major	Medium	Secondary	Slim
		5	4	3	2	1
Strategy	Office goals, reputation	The strategic objectives were not achieved	Great influence on the ability to meet strategic goals	Moderate impact on ability to meet strategic objectives	Little impact on ability to meet strategic goals	It does not affect the possibility of achieving the strategic and institutional goals
		Widespread negative media coverage and long-term disruption of customer confidence	The prominent international and negative press reports over the course of several days	Regional press reports over several days	Local press reports over several days	Local press reports, however, have no effect on the image or reputation
		Long condemnation	Not publicly reprimanded by the authorities	The government warned	The manager may be asked to leave	Likely disciplinary action
		Public reprimand from the government	Executives are restructured within the organization	Pressure on executives to leave	The government may be following the situation	
		Restructure the institution	Licenses are threatened with suspension	The implications of approved licenses		
		Loss of licenses for an extended period	Negative media coverage			
Operational	Management and information technology	An occurrence with the potential to lead to a catastrophic breach of stakeholders and the mandate of the board of directors	An event that can have negative effects or broad consequences can be tolerated	These events can be managed but require additional resources and efforts	The event can be managed under normal operating conditions	The results can be contained
	Work interruption	Interruptions hinder the indefinite execution of work	Interruptions result from losses estimated in days	Interruptions result from losses of at least one day	Resolve interruptions during the day	There are no interruptions
	Environment, health and safety	Several deaths / major environmental damage	Person death / major environmental damage	Multiple casualties / environmental damage	Serious injury / environmental damage	Minor injury / environmental damage
	Protection of assets and information	Transmission of highly sensitive and fraudulent information leading to the erasure of net worth	Transferring sensitive and fraudulent information leading to financial losses	Transmission of key information that may not be publicly available and fraudulent causing	Transfer of current information and data that may be available to the concerned authorities	Transfer of information and previous data available to the concerned authorities
	Office services	A disaster is likely to lead to the collapse of the business	An important event that can be undertaken with appropriate management	An important event that can be managed under normal circumstances	An event whose outcomes can be accommodated but which calls for an organization's effort to	An event that can be accommodated during a normal activity

Figure (3): Quantitative Evaluation Criteria

Figure (4) shows risk matrix for the project

Risk Matrix					
Probability	Catastrophic	High	Moderate	Minor	Negligible
Frequent	High	High	Large	Large	Average
Probable	High	High	Large	Average	Average
Occasional	High	Large	Large	Average	Average
Remote	Large	Large	Average	Average	Low
Improbable	Large	Large	Average	Low	Low

Figure (4): Risk Matrix

Figure (5) shows EMV for the project

Expected Monetary Value (EMV)			
Risk	Probability (%)	Impact (USD)	EMV (Probability*Impact)
1. Financing	30%	-4,000	-1200
2. Geographical Location	15%	-1,000	-150
3. Legality	20%	2,000	400
4. Information Technology	60%	-15,000	-9000
5. Employees	20%	-1,000	-200
6. Services	65%	-30,000	-19500
7. Accidents	15%	-250	-37.5
		-49,250	-29687.5

Figure (5): Expected Monetary Value

References

- (2021, March 10). *A Short Guide to Expected Monetary Value (EMV) – PM Study Circle*. Pmstudycircle. <https://pmstudycircle.com/2015/01/a-short-guide-to-expected-monetary-value-emv/>
- Wilson, F. (2021, February 11). *How to Use the Risk Assessment Matrix in Project Management?* NTask. <https://www.ntaskmanager.com/blog/risk-assessment-matrix/>

3. *Creating a Risk Matrix: 3 Examples.* (2020, August 4). ETQ.
<https://www.etq.com/blog/creating-a-risk-matrix-3-examples/>