



جامعة الجميع الذكية
EVERYONE'S SMART UNIVERSITY

Everyone's Smart University

Project (Spring 2021)

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Section

Master

Date

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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 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 الآن أن الغرض العام لمرحلة التخطيط للمخاطر هي توقع أحداث المخاطر المحتملة والتجهز لاتخاذ ردة الفعل المناسبة عند وقوع الخطر – لمنع أو تقليل الآثار 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..

Executive summary

In every organization program, managers and project engineers have great responsibilities according to their duties and job. Every project from its start to end has to face lots of issue san problem during its execution but project engineers and managers have to manage according to the organization's requirements and manage all the issues most effectively. While managing these issues organization has to face lots of risks related to different matters and management of the organization with project team collectively solve the risk issue and mitigate their impact on the progress of the organization.

Table of content

Executive summary.....	1
Table of content	1
Introduction:	2
Risk identification:	3
Risk probability and impact matrix:	4
Risk response strategies:	5
Risk register:	6
Apprising stake holders in risk management activities:.....	9
Conclusion:	10
Reference:.....	10

Introduction:

for all organizations and stakeholders, the most desirable is to have successful IT project management. Over the past 20 years, a long been interest for the researchers is the failure and success of IT projects. Threatening the very existence of the company, without meeting the requirements, working behind schedules, and by completing the project after going beyond the budget are the main causes recorded for the failures of IT projects. The project's success is being effected by risk management factor which is very much important for the businesses. In order to increase the likelihood of the project the project manager should use the project management risk factor as a key tool with appropriate elaboration in the organization.

There may sometimes can occur financial issues in order to use the project management risk factor so that some managers avoid to utilize it in their management process. Throughout the life of the project, in order to meet the objectives of the project risk management helps in analyzing, identifying and responding to the science and art of the project. Understanding of potential problems of the project by understanding the impediment of project is analyzed by using risk management tool in business. The four main aspects of the Risk factor in IT processes are monitoring, response planning, risk identification and assessment of the project. Qualitative risk analysis, quantitative risk analysis, risk identification and planning are the main processes that are involved in Risk management process while implementing in the process to make it successful. (Boonjing, 2017)

Risk is a major element that is present in every organization. Organizations give more attention to managing the risk and also identify them until they affect the performance of the business. The ability to manage the risk in the organization provides support to take a better decision for the progress of the organization. It is very important to identify the risk within time to manage them before any major loss. In obtain the target of the organization, the organization has to face many factors and influences that create uncertain conditions for the organization and this will consider risk on the objectives of the organization (Pender, 2001).

The risk appears in the organization explain through internal and external resources. External risk cannot control by the management of the organization but the internal risk can be managed and control by the management. Management and project managers can manage the risk through a risk management approach. Risk involves in every area of the organization but it is the responsibility of the management and project managers to determine these risks and sort out according to time of occurrence. Research must be conducted to identify the risks of the organization and define the most suitable solution to manage all these risks without affecting the reputation of the organization in the market.

Risk identification:

In the Blue Spider project following risk are identified:

Risk number	Area affected	Risk
R1	Manufacturing	Risk of the material of high quality
R2	Production	Risk of plants according to a new temperature
R3	cost	Risk of over budget
R4	objective	Risk of poor communication
R5	objective	Risk of research and development

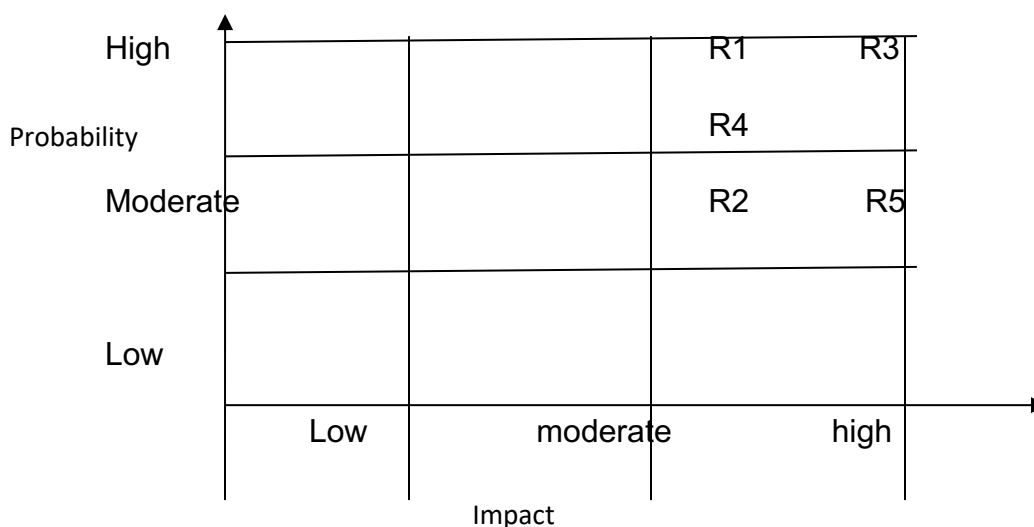
The above mention risks are all those that are observed in the Blue Spider project of the organization. The most important risk belongs to material that is required in the project and the organization has a lack of actually required material and this will cancel the project of the organization openly announced their material related problem. The next risk belongs to production which means that the company has not sufficient plants and equipment that can work at the highest temperature as the requirement of the project.

The next risk is over budget which means that the organization planning for the budget of the project is not accurate and at the time of final adjustment lots of issues arise belong to budget and its poor planning (Martins, 2013).

The next risk belongs to poor communication between all the members of the project and everyone has not aware of the issue which the company is going to face during the execution of this project. the next risk belongs to research and development because when the project management never conducts complete research about the project and making wrong assumptions then the problem can be faced by the organization in obtaining its target and its project performance.

Risk probability and impact matrix:

Normally risk probability and impact matrix are going to use in the organization to determine how much the risk is the effect the organization and its impact on the progress of the organization. It is the most effective tool utilized by the project manager to prioritize the risks according to its impact on the project. For the easy handle, the risk, probability, and impact matrix uses the combination of probability and impact scores according to every risk and prioritized for getting better results. By using this matrix, the project manager understands which risk has a high effect and which show low and which risk sort out first and which one sort out at last (Fitsilis, 2019).



This probability and impact matrix explains which risk has greater impact and which risk is less impact the progress and performance of the organization and which risk is settle out by setting the priority of their impact. Project managers normally use this matrix to determine the effect of risk in the organization and then identify the best possible solutions to manage the risk without affecting the objectives of the organization. The low, high, and moderate ratings are used to determine the impact of risk according to its nature and effect on the organization. So the probability and impact matrix is very helpful to manage all the risks and manage according to the organization's requirements (Varajão, 2017).

Risk response strategies:

Manage the risk according to the organization's requirements and for achieving its target is very important. Risk is normally having tow kind of effects on the organization the positive and negative. So different strategies are utilizing according to the nature of the risk and its impact. Positive risk response strategies; these include Escalate, enhance, accept, and share. Escalate means that tap management is completely responsible for the risk and manages its according to the performance of the organization. Enhance means the chance of risk should be increase and this risk create some opportunity for the organization. Accept means that through this strategy the risk is accepted by the organization to consider as an opportunity. Share means that the risk effects can be shared with other parties and get the maximum benefit from the occurrence of the risk.

Negative risk response strategies are: accept, mitigate, avoid, and transfer. Accept means that the company using such strategies that can accept the risk and face the loss. Mitigate means the strategies utilize that minimize the impact of risk in the organization. Avoid means that strategies used in the organization that never consider the impact of risk. Transfer means the use of such strategies that shift the risk to another area that can manage easily (Muriana, 2017).

Risk register:

ID number	Risk name	causes	Impact description	category	Risk level	Response strategy	Course of action	Risk owner	Communication method
1	material	Lack of material of high-quality need for the project	Required level of material can be arranged in the future	Inventory/production	High	accept	Arrange material for high quality required for the project	Production manager	Meeting with production manager
2	Require plant	Plants and equipment require that can operate on require temperature	Plants want to upgrade according to new requirements	asset	moderate	mitigate	the plant must be held for the production	Production manager	Meeting with production manager

3	Over budget	Wrong estimation in setting the cost and all expenses	Over budget but can be managed to bring changes	financial	high	accept	Budget prepare according to new requirements	Project engineer	Meeting with the project engineer and bring changes
4	Poor communication	All the team member of the project have no information about any issue of project	The project manager has to inform all the member about the issue of project	Communication risk	moderate	avoid	Develop proper communication through meetings	Project manager	Meet project manager with all team members.

5	Research and development	No proper research and development occur for the project specifications	Determine all the areas of the project with proper research	Research and development	moderate	accept	Must research properly execution	Project engineer	Conduct research about all the required areas.
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Apprising stakeholders in risk management activities:

Stakeholders are a major part of the organization as they involve in all the activities of the organization and manage all the tasks according to project requirements. so it is very important to keep informed about all kinds of risks that the project is going to face and its impact appears on the overall progress of the organization. First of all, develop a communication plan through which inform all the information to stakeholders. The present different reports related to the project and its different areas that explain the project and its specifications in the most effective way. Also, show the project status report to all the stakeholders so they are completely aware of the performance and status of the project with details. Consider the expectation of the stakeholders related to the project and held meetings to discuss the project and its requirements and its progress.

Do risk management activities must become in the knowledge of stakeholders and they take a better decision about the project and its performance. (Loosemore, 2017)

Conclusion:

After analyzing all the areas of the project, we can conclude that risk is the major element of every organization and in performing any project. risk having different nature and different type that affect the organization and its progress and risk management is the major part of every organization that can handle all the risks belong to the organization and implement effective strategies that minimize the risk in such a way that gives maximum benefit to the organization and manage all the risk related problems according to targets of the organization. Risk management is a compulsory part of every organization so that the organization can face all risks and compete in every kind of environment.

Reference:

- Fitsilis, P., 2019. Comparing PMBOK and Agile Project Management software development processes. 1(2), pp. 378-383.
- Loosemore, M., 2017. Stakeholder Engagement in Managing Risk. pp. 171-181.
- Martins, C., 2013. ISO, CMMI and PMBOK Risk Management: a Comparative Analysis. 1(2), pp. 72-101.
- Muriana, C., 2017. Project risk management: A deterministic quantitative technique for assessment and mitigation. 35(3), pp. 320-340.
- Pender, S., 2001. Managing incomplete knowledge: Why risk management is not sufficient. 19(2), pp. 79-87.
- Varajão, J., 2017. ISO 21500:2012 and PMBoK 5 processes in information systems project management. 50(11), pp. 216-222.