



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...

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 لا تستدعي 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) للاحتمالية والأثر.

لا تنس 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..

In the (Advanced Project Management project) I discussed the best ways to maintain the communication between team members in the execution phase of a project established to create a new website for a company.

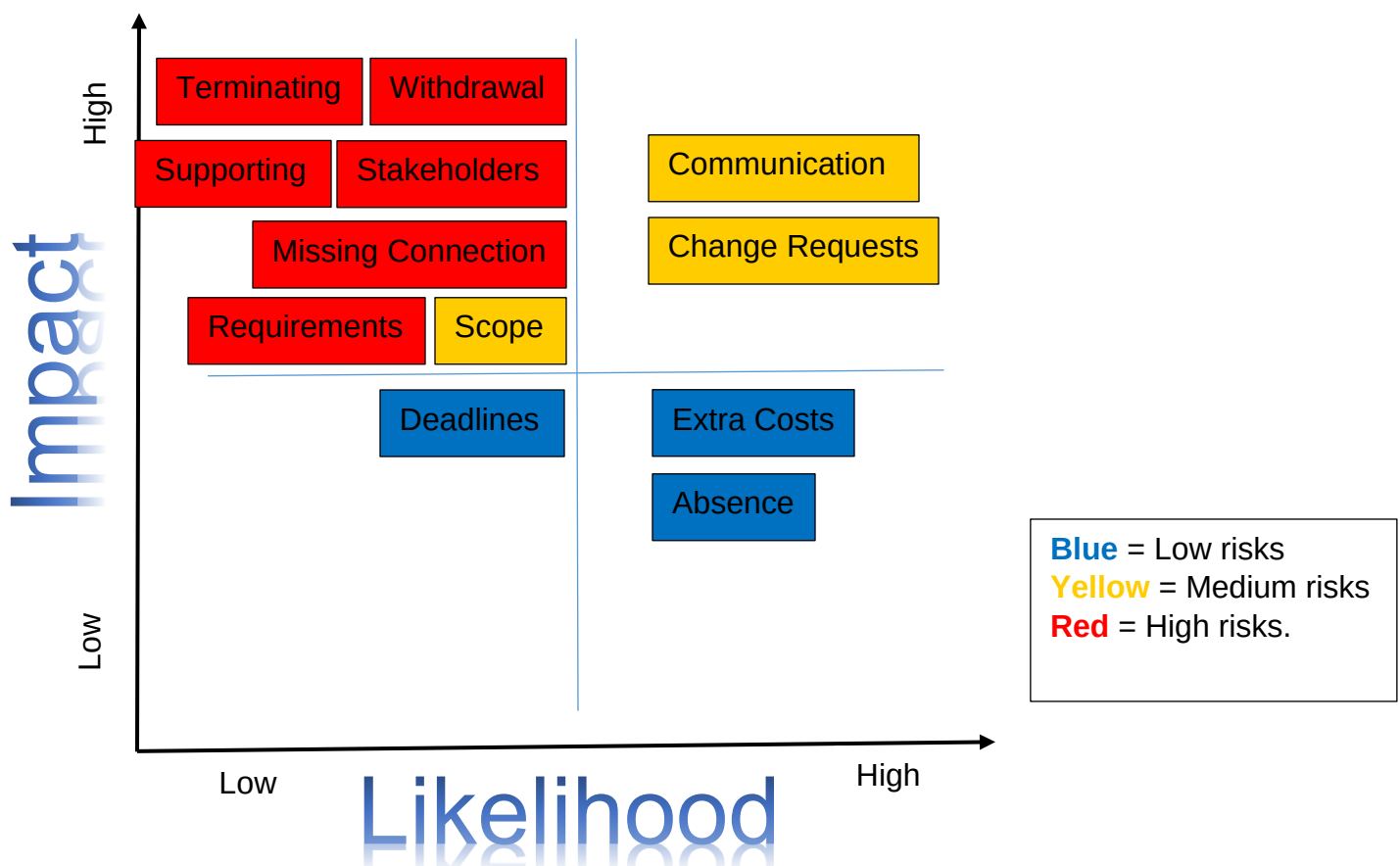
Let's start by listing some risks I faced during this project. Which can affect the reputation, resources or the success of this project:

- Lack of proper **Communication**
- Missing/Unknown **Stakeholders** (Un specified management and decision makers)
- Unspecified **Requirements**
- Undefined **Scope**
- Random & repetitive **Change Requests** (and added requirements)
- **Extra Costs** for added services to the website (Usually small)
- **Missed Deadlines**

There are other small/unrealistic risks could do same or even more effect to the project. Things like:

- Browsers stop **Supporting** the usually used programming languages (Unrealistic)
- Team members **Withdrawal** (Didn't happened)
- **Terminating** the project (Didn't happened)
- **Absence** of one of the decision makers (Small)
- **Missing Connection** to the Internet

Now I will show a risk probability matrix for those 12 risks:



Now let's discuss each of those chosen risks in the table below

Risk Description & Impact	Risk Indicator/ Trigger	Risk Response
Communication		
When this risk occurs, some of the important information will be missed or not delivered correctly which means any event or new issue happens during the execution of the project will not reach to the meant person or may reach in misunderstood way which could affect the project from all sides. For example, the management might decide to cancel one of the project features. Due to the wrong communication, team may get that it's not important but it's okay if we work on that feature. This will affect Schedule by being late, the quality of work for adding that cancelled feature and cost because of the cost used to finish that feature).	While still in early stages, we can see there are much of misunderstanding and some of the stakeholders in the management won't be satisfied about results of early deliverables. The lack of proper communication could be caused when there's no clear way for communication or a good communication plan.	During project planning phase there must be a part of that plan explaining communication method in detail. Including a way to communicate urgent events & store/share data. There must be also some one responsible to maintain good communication between team mates.
Stakeholders		
If Management stakeholders are unknown, that might cause different issues. Starting from making decisions, priorities and ending to the required standards and cost. Unknown decision makers mean there's no right or wrong there aren't priorities and the project may end up above budget and out of scope .	When there are no enough or clear shared information and no one to ask and verify from, that's a clear indicator the decision makers aren't specified correctly.	To prevent all that mess, the stakeholders and decision makers must be specified clearly with the responsibilities and permissions allowed for each of them and tell new entrants about all those.

Requirements		
Unspecified requirements will result in to a project totally out of expected . Some featured will be missed, some will be extra and already costed much on the budget. The cost will also be affected because there's no way to expect it the requirements here are out of control and can be unlimited.	Some requirements specifications could be postponed to later but when that happens that "later" could be never. That means the team will start working with uncomplete requirements.	Requirements must be specified and agreed on before starting the execution phase. Some little details can wait but if main parts are not specified yet, the project manager must communicate the decision makers to get those requirements.
Scope		
When should we stop? If this questions not answered properly, more requirements might be covered and taken as important which means higher cost and more delay . On the other hand, the same could happen but with missed features not covered.	That can happen when stakeholders don't know what they want and doesn't want in their project.	Scope must be clear to everyone in the project. The project manager can also verify that in each time he/she hand a deliverable to the stakeholders.
Change Requests		
Due to unspecified requirements and scope, there will be tons of change requests which will be random and for any reason. Things like changing the theme color or form will be very costly and time consuming specially when the work is almost done.	There will be much to do, much to change and nothing seems to be right. Main reason is the requirements are not specified.	So again, the good planning is a must to prevent any risk. But if that happens, the project manager should stop all the work and do planning again to prevent more cost and delay.

Extra Costs		
In my case this risk is small and have low impact although its probability is high. Adding a small plugin or a feature to the website will not cost much (Usually). But in some cases, subscriptions and linking services to the project might cost more than expected and may take more time to make sure the added feature works properly which can break later and affect the quality of the final result.	When everything is almost ready, maybe we'll find that we need just a little extra service or detail to add in our project. This can be clear to project manager as the requirements start being created.	If the cost, schedule and quality won't be very affected, there's no need to worry. But sometimes things happen and situations be out of control. To keep the cost and schedule close to what expected, it's important to take some reserved amount of the budget and time for such cases.
Missed Deadlines		
In my project, there was no specific deadlines and for that, I count it as low risk. In regular cases this risk can vary from ok to bad to catastrophic. Let's say a client condition to accept a project is it should be ready before a specific date and that will be for a big reward paid. Otherwise, the project will be cancelled and no fund will be given to the company. That obviously will affect the quality of the project and the reputation of the company.	In my project, although there were no specific deadlines, but I was doing some urgent works. In the previous example, the work will be done smoothly but in case a conflict risen between the company and one of the vendors, that will affect the main object of the project the schedule and this is an example of a thing can be our trigger here.	In my project, all I needed is good prioritizing skills. But in the example we had, the project manager must set a good plan with strict deadlines and give that project a higher priority (If the management decided to take that project "Opportunity risk"). The project manager also, must know the limits and abilities of the company and team. He/she also must know more than one vendor for immediate supplying.

Let's work on the Expected Monetary Value (EMV) based on the risks I had in my project.

Risk Name	Probability	Impact (SAR)	EMV
Communication	60%	-10000	-6000
Stakeholders	40%	-7500	-4000
Requirements	30%	-6000	-1800
Scope	35%	-3000	-1050

Change Requests	70%	-1000	-700
Extra Costs	65%	-2500	-1625
Missed Deadlines	10%	0	0
Total		-30,000	-15,175

Note: the costs in the table are based on estimations of previous project.