



جامعة الجميع الذكية
EVERYONE'S SMART UNIVERSITY

Everyone's Smart University

Project (Spring 2021)

Student Name	Enas Basnawi	اسم الطالب
Students I.D	2021203438	الرقم الجامعي

Section

Master

Date

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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..

Risk Management Plan for Website Development

1. Introduction:

E-Business has a growing impact on our world and has revolutionized many aspects of human activity. Understanding its wider context is essential. Especially during covid-19, with lockdowns all over the world many of us spend more time than ever on our computers, laptops, smartphones and tablets. Either on zoom doing a meeting call or doing an online shopping, our digital reliance is on high all the time. This means that as a business owner it's important to match this demand and ensure that you have a website that is relevant, up to date and offers a great user experience.

Through the pandemic, many businesses had to close their stores to keep their customers and employees safe. Most of the businesses now are offering digital storefront, so the website can have a wide geographic range. The company faced many difficult times during the lockdown, so we decided to develop an online store to increase the sales and be prepared for such incidents.

2. Project overview:

The major part of this project is to have the desired knowledge, experience and skills to build an online store. The main idea here is to know what are the user requirements and market needs and build a dedicated website that can serve their needs. In addition to that, we should keep in mind the technical challenges of designing and developing an e-Business web page that we can face. A risk management plan is to help the project's stakeholders aware of possible threats and to be assured that the project team has sufficient and efficient means of risk mitigation

3. Risk Identification:

The top three high probability and high impact risks to this project are:

3.1 Lack of stakeholders' involvement:

As the website is to provide specific functionalities and constructed with the latest web design trends, stakeholders' involvement is crucial to the project team's requirements analysis before the construction of the website. With the lack of stakeholders' involvement, the project will not be able to finish on time and may fall short of the required project scope. Potential response: The project sponsor is actively involved and a clear communications plan will enable project team to speak to the right stakeholder with the right communication medium. On top of that, a weekly team meeting will surface any major errors in the project

3.2 Miscommunication with external team resources

Our most critical external resource comes from the previous database developer for company's current inventory system because the new website has to provide an online shopping cart linked to company's current inventory and warehousing system. By miscommunicating with the database specialist, the project's programmers will misunderstand the current design of these two systems and therefore misalign integration and programming efforts to make the website work. Potential response: Arrange meeting times early with the database specialist and factor the meeting times into the project's schedule. Obtain documentations from the database specialist if available, if not, have senior programmer come out with an adequate documentation of information passed down from the database specialist.

3.3 Huge change requests late in the project

If stakeholders decide to add to the original functional and design requirements or make major changes to the way parts of the site is programmed/designed to function, it will result in delaying the project's expected delivery and may even require a major overhaul of the website. Potential response: Proper requirements analysis is to be done beforehand and scope statements must be signed and accepted by stakeholders and project sponsor. If huge changes are bound to happen, then setup prior mutual agreement with stakeholders that any major changes proposed 2-3 weeks before the

testing phase may be accepted but there might be a delay on delivery date and increase in budget. If major changes are proposed after testing, further negotiation of time and budget is needed.

Other possible risks

3.4 Overestimating project team's abilities

This will result in underestimating the project's timeline and thus affect the project's performance. Potential response: Buffer time had been factored into the project and time consuming or content heavy software development modules had been outsourced to open-source or commercial software such as forum and community page content management.

3.5 Unexpected software abnormalities ("bugs")

Project team unable to discover or resolve software abnormalities in time will cause these abnormalities to escalate as the website develops further. This will pose a threat to the website's completion being delayed or even cause the website to undergo over haul. These software abnormalities could be caused by human errors, hardware and software incompatibility or found in the development tools used by the project team. Potential response: The project team has two experienced programmers. Moreover, The IT Consultancy has two website projects near to completion (By 6th week of this project's commencement) and thus there will be at least two senior programmers freed up to be the project team's consultants or be roped in to assist team. Lastly, according to our budget forecast, the project team has ample amount of budget to seek external senior programmers if needed.

3.6 Key project team member sick/urgent leave/quits

One of our key project team members is the senior web programmer who doubles up as the Tech Lead. Without the key players, the project will suffer huge delays. Potential response: Adequate buffer time had been added into the project's schedule and fortunately by 6 weeks into the project, other senior programmers should be freed up to assist. If not, according to our budget forecast, the project team has ample amount of budget to seek external senior programmers if needed.

3.7 Over-emphasis on low priority details

Requirements for the website should be identified as being Low Priority and High Priority. Low Priority requirements are website details that can easily be changed, or "would be nice to have" if time and budget allows. High priority requirements are time consuming, difficult to change and is a "must have". A delay will happen if project team fixates on low priority requirements, for example spending too much time on the colors of a certain web page. Potential response: The project team adopts a feature-driven approach in developing the website and project requirements and analysis were discussed, signed by stakeholders early in the project phase. The project team does the designing of web graphics and developing of backend technologies in parallel in order to spend more time in integrating the design with backend technologies. On top of that, the project team allocated a buffer of 2 days to do testing. Our usual project's practice for testing is 7 days.

Responses to project risks

Risk monitoring The most likely and greatest impact risks have been factored into the risk management plan to ensure that they are monitored during the time the project is exposed to each risk. During the weekly project team meeting, both the Project Manager and Tech Lead (Risk Managers) will discuss the status of each project risk relevant to the current phase of the project. Risk monitoring is part of the project's monitoring and controlling project phase. As risks approach on the project schedule the Project Manager will ensure necessary updates to the risk register.

Risk mitigation

As more project risks are identified throughout the project, they will be accessed by the Project Manager and Tech Lead, and together with the project team will develop avoidance and mitigation strategies. These risks will also be used to update the Risk Register and the risk management plan to ensure these risks are being monitored in timely fashion and are responded to accordingly. Both identified and future occurring project risks will be managed and controlled within the constraints of time, scope, and cost. The Project Manager, with the assistance of the Tech Lead will determine the best way to respond to each risk to ensure compliance with these constraints. In worst case

scenarios it may be necessary to allow flexibility to one of the project's constraints. If necessary, funding may be added to the project to allow for more resources in order to meet the project schedule and scope requirements. Time and scope are rigid project constraints and no flexibility. However, cost constraint will only be allowed to be flexible in extreme cases where no other risk avoidance or mitigation strategy will work.

Probability and impact of identified risks

Probability	High			R1
	Medium	R7	R6	R2, R3
	Low		R4	R5
		Low	Medium	High
		Impact		

The Expected Monetary Value

Risk	Probability	SR Impact	EMV
1	60%	- 4,000	-2400
2	50%	-3,500	-1,750
3	50%	-3,500	-1,750
4	20%	-2,000	-400
5	20%	-4,000	-800
6	50%	-2,000	-1,000
7	50%	-1,000	-500

No.	Rank	Risk	Description	Category	Root cause	Triggers	Potential responses	Risk owner	Probability	Impact	Status
R1	1	Lack of stakeholders' involvement	With the lack of stakeholders' involvement, the project will not be able to finish on time and may fall short of the required project scope.	People risk	Stakeholders too busy or fail to see the need for the project.	Unable to reach stakeholders or postponed meetings.	Get project sponsor to speak with OYB's management. Clear communications plan. Weekly team meeting to surface any major hinderances in the project.	Project Manager	High	High	
R2	2	Miscommunication with external team resources	By miscommunicating with the database specialist, the project's programmers will misunderstand the current design of these two systems and therefore misalign integration and programming efforts to make the web site work.	People risk	Miscommunication or database specialist not committed to the project.	Unable to reach stakeholders or postponed meetings.	Arrange meeting times early with the database specialist. Factor the meeting times into the project's schedule. Obtain documentations from him.	Tech Lead	Medium	High	
R3	3	Huge change requests late in the project	If stakeholders decide to add to the original functional and design requirements or make major changes to the way parts of the site is designed to function, it will result in delaying the project's expected delivery and may even require a major overhaul of the web site.	Scope risk	Poor communication of business functionalities and poor analysis of design requirements.	Requirements and scope statements not accepted and signed by stakeholders and project sponsor.	Proper requirements analysis is to be done beforehand and scope statements must be signed and accepted by stakeholders and project sponsor. Negotiate mutual agreement with stakeholders on scope, budget and time flexibilities.	Project Manager	Medium	High	
No.	Rank	Risk	Description	Category	Root cause	Triggers	Potential responses	Risk owner	Probability	Impact	Status
R4	6	Overestimating project team's abilities	Results in underestimating the project's timeline and thus impact the project's performance.	Estimation risk	Inexperienced Project Manager or complacency of web programmers.	Failure to meet small milestones. Attitudes of web programmers.	Buffer time into schedule and outsource time-consuming or content-heavy software modules.	Project Sponsor	Low	Medium	
R5	5	Unexpected software abnormalities ("bugs")	Project team unable to discover or resolve software abnormalities in time will cause these abnormalities to escalate as the web site develops further.	Operational risk	Hardware and software incompatibilities. Human errors. Development tools used.	Brought up during weekly meeting. Discovered during testing phase. Informed by developers community.	Seek other project's senior programmers. Hire external experts. Hire more experienced programmers.	Tech Lead	Low	High	
R6	4	Missing key team member(s)	One of our key members is the senior web programmer(also as Tech Lead). Without him, the project will suffer huge delays.	People risk	Overworking the team. Setting unrealistic deadlines.	Members late for work. Undesirable facial expressions and behaviors. Failure to meet small milestones. Negative change in team dynamics.	Adequate buffer time in schedule. Seek other project's tech leads to help. Hire more experienced programmers.	Project Manager	Medium	Medium	
R7	7	Over-emphasis on low priority details	A delay will happen if project team fixates on low priority requirements, for example spending too much time on the colours of a certain web page.	Operational risk	Inexperienced project team. Demanding or stubborn graphic designers.	Exceed weekly meeting time. Attitude of team members. Negative change in team dynamics.	Set small milestones. Team building activities. Buffer time into schedule. Reinstate stakeholders' and business requirements.	Project Manager	Medium	Low	

References:

