

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 الخميس ٢٠-٠٥-٢٠٢١ 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 ١٢.
 - 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 **each 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 project. 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 بكل مرحلة من مراحل المشروع, تحضير مصفوفة احتمالية المخاطر ومن ثم القيام بالتحليل لهذه المخاطر المختارة. مهمتك هي تحضير خطة متكاملة لإدارة المخاطر تشمل التعريف بالمخاطر المحتملة التي تحيط بكل مرحلة من مراحل مشروعك (نفس المشروع الذي اخترته في مادة إدارة المشاريع المتقدمة Advanced project management). ومن ثم القيام بتحديد استراتيجيات إدارة 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 ردّة 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 بكل مرحلة 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 in GIS Project managed by IT PMO in Government Organization

1. Introduction

In this limited research project, I am covering the Risk Identification and Analysis based on the chosen project in Advance Project Management (APM) research. In APM report from the given options, I wrote about point # 8: Briefly describe how the progress will be monitored. So there, I demonstrated the process of monitoring and controlling the progress of an IT Project in government organization.

Therefore, in this limited research report I am writing specifically about identifying, analyzing, managing and monitoring risks in IT PMO Projects in Government Organization with taking Implementing Geographical Information System (GIS) Project as the example.

Risk Management Plan is the process / framework of identifying, analyzing, prioritizing, implementing, controlling, and monitoring all project risks.

2. Literature Review

It is important at the begging to understand that in government organization IT PMO informed and being in-charged about the project only after singing the contract. That means IT PMO is not part of building the scope, specifying the deliverables, bedding, and award processes. Therefore, IT PMO is getting signed contract with specific scope, deliverables, implementation period, and cost.

As a result, IT PMO holding the responsibility of managing the implementation, *monitoring*, controlling, handing over, administrating and closing the project. Therefore, in this limited research I covering the related risk shall be managed to ensure of delivering successful project with applying that on GIS Project.

3. Methodology

The first thing the project Manager shall start with in Risk Management is to schedule a meeting for all stakeholders in-order identify all possible Risks to be analyzed and evaluated. That review should cover Project Charter, Stakeholders Register, Scope

of Work, Planned Schedule, Quality Plan, and Budget / Cost Plan. That helps in:

1. Identifying which risks will be taken in consideration and which should not to save the cost and implementation time.
2. Which risks to be prevent not to be materialized by advance action.
3. Which to be accepted to be controlled if happened.
4. Which might be prevented by enhancing the work plan or related actions.

3.1 Identify Risks

Once IT PMO informed about new project, assigned IT PMO Project Manager contacts the assigned Technical/Functional Project Manager and contractor Project Manager to agree on the kick-off meeting. For the risk related part, they start by the template shown in Appendix # 7.1: Risks Identification List Template. For Implementing GIS Project the result will be as illustrated in Section 6.1: Table # 1.

3.2 Analyze and Prioritize the Risks

By using the listed risks in Table # 1, the risks are analyzed as following based on the calculated scope:

IMPACT	<u>HIGH</u>	Risk ID # 4	Risk ID # 2	Risk ID # 1
	<u>MEDIUM</u>		Risk ID # 4	Risk ID # 3
	<u>LOW</u>			Risk ID # 6
		<u>LOW</u>	<u>MEDIUM</u>	<u>HIGH</u>
		PROBABILITY		

3.3 Risk Mitigation Plan

After analyzing and prioritizing the risks, the project manager is responsible to implement all stated prevention actions. Also during the implantation

4. References

1. Fundamental of Risk Management – Understanding, evaluating and implementing effective risk management, 5th Edition, Paul Hopkin.
2. Project Team Leadership and Communication, Samuel Malachowsky, PMP.
3. Project Management – A Managerial Approach, Eight Edition, Jack R. Meredith & Samuel J. Mantel, JR.

5. Tables

5.1 Table # 1: Risk Identification List

Risk ID	Risk Event	Impact H/M/L	Probability H/M/L	EMV	Internal /External	Mitigation Action	Risk Owner	Action Type
1.	Having major changes on the signed contract scope after reviewing to get scope confirmation & acceptance.	H 8	Hs 9	72	Internal	1.Speed the meeting review. 2.Identify the changes needed to be considered.	PM	Compliance
2.	Delay in the schedule due to taking long time to review each deliverable. (Detailed Business Processes of Requirements Doc. + Work Plan + Design Document + Approving Change + Test Acceptance + Final Approval)	H 9	M 6	54	Internal	1.Singing agreement with User Acceptance Team (UAT) to be dedicated during that task for completing the review within the agreed time. 2.Involving the implementation team with UAT team to speed the actions. 3.Authorizing the development time to fix all simple comments with simpler change process.	PM	Control
3.	Business & Implementation team in Government vacation such as Eid & Hajj.	M 5	H 10	50	External	1.Specifying all Government vacations. 2.Ensuring of not having any schedule activities for whom will be in vacation.	PM	Control
4.	Delay in getting the Datacenter environment (servers + network + systems) ready for the installation.	H 7	L 3	21	External	1.Sending all related requirements to Datacenter manager once finishing the design.	PM	Control

						2.Requesting the requirements to be ready for the UAT phase and not to wait the final implementation acceptance. 3.Getting the DC manager committed date to ensure of not impacting any schooled tasks. 4.Following in weekly base the readiness.		
5.	Not having the mater expert onsite on time as scheduled (GIS specialist + DBA Expert + App Analyst + System Admin + EA Specialist).	M 7	M 4	28	External	1.Ensuring of processing their VISA by expert office in fast track option. 2.Prepare the online access & communication to cover any possible delay so the expert can work remotely until being onsite. 3.Reviewing their tickets date to ensure of not having any scheduling conflicts.	Contract Admin	Hazard
6.	One or more of the team infected by Covid so being locked for 14 days.	L 2	H 7	14	External	1.Ensure of the reediness for remotely access & communication to cover any possible delay so the expert can work remotely until being onsite.	PM	Hazard

6. Appendices

6.1 Risks Identification List Template

Project Name: _____

Last Update Date: __/__/__

Project Manager Name: _____

Issuing Date: __/__/__

Risk ID	Risk Event	Probability H/M/L	Impact H/M/L	EMV	Internal /External	Mitigation Action	Risk Owner	Action Type
7.								
8.								
9.								

6.2 Risks Matrix Template

Project Name: _____

Last Update Date: __/__/____

Project Manager Name: _____

Issuing Date: __/__/____

IMPACT	HIGH	Risk ID #	Risk ID #	Risk ID #
		Risk ID #	Risk ID #	Risk ID #
		Risk ID #	Risk ID #	Risk ID #
	MEDIUM	Risk ID #	Risk ID #	Risk ID #
		Risk ID #	Risk ID #	Risk ID #
		Risk ID #	Risk ID #	Risk ID #
	LOW	Risk ID #	Risk ID #	Risk ID #
		Risk ID #	Risk ID #	Risk ID #
		Risk ID #	Risk ID #	Risk ID #
		LOW	MEDIUM	HIGH
		PROBABILITY		

6.3 Risk Register Template

Project Name: _____

Last Update Date: __/__/__

Project Manager Name: _____

Issuing Date: __/__/__

Risk ID	Risk Event	Probability H/M/L	Impact H/M/L	Mitigation Action	Risk Owner	Date Raised	Status M/O/H/C	Actions Log	Closing Date

Note:

- (H/M/L): means High / Medium / Low.
- (M/O/H/C): means Under Monitoring / Open / on-Hold / Closed.