



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 الآن أن الغرض العام لمرحلة التخطيط للمخاطر هي توقع أحداث المخاطر المحتملة والتجهز لاتخاذ ردّة الفعل المناسبة عند وقوع الخطر – لمنع أو تقليل الاثار السلبية على المشروع.

قد تحبّذ بداية هذا البحث بعصف ذهني عن ماهية المخاطر التي قد تحيط بتلك المرحلة من مراحل مشروعك, وذلك للحصول على قائمة بتلك المخاطر. ومن ثمّ 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..

Medical Air & Non-medical Air Project Risk Assessment Forum

Risk is outlined as Associate in unsure prevalence or a condition that, once it happens, has positive or negative consequences for project goals. Hygienic risk management may be a key driver of a project's success as a result of the particular quality, times and cost performance square measure a lot of vital than expected as a result of increasing time and cost reduction pressure. the dearth of risk has been shown to be a significant reason for budget overrun, let down of your time and lack of performance objectives. This situation is exacerbated by the high complexness related to the comes characterized by huge investment, in depth execution processes, numerous resources, and stakes in unstable economic and political environments, in several industries like construction and data and communication technology. Risk assessment and management throughout all phases of a project may be a robust necessity. A range of definitions and approaches have resulted from totally different perceptions, attitudes and requirements.

This project is associate degree application for one amongst my comes in my organization, and that I did this risk study and applied it to the project, that contributed to the project's success and created it distinctive. Project risk means that potential loss or injury. Project risk is Associate in Nursing unsure prevalence or condition that has a sway on a minimum of one project goal if this happens. world provide Chain Management Project is answerable for characteristic and managing the chance during the whole project so as to minimize the project impact. Project risk management is not regarding risk reduction and elimination, however regarding risk identification, risk assessment and risk management.

The characteristics of such tools and of the standards obtainable for his or her classification were taken thought into consideration} to spot the relevant aspects to be taken into consideration once choosing between project risk management techniques. it's

been wide incontestable and accepted that no technique for risk management is suitable for every part of the chance management method. within the context of its application, risk management ought to be defined: the lifecycle for a project ought to be thought-about. The Ward and Chapman studies indicate that moving from one part of the project a distinct} implies a different degree of unsafety, with a lot of elaborated and quantitative information obtainable. the main focus of all risk analyses thus the and also the} risk management techniques adopted should therefore modification with the project lifecycle phases.

Finally, so as to make sure that the approach adopted to the folks applying it's acceptable and to analysis its results.

Methodology:

Risk impact:

- High – (H)
- Medium – (M)
- Low – (L)

Risk Assessment Rating

Category	Severity	Risk Rating	Risk Level
1	Activities, systems, or equipment whose failure is likely to cause major injury or death of patients, staff, or visitors.	20-25	High
2	Failure of systems is likely to cause minor injury to patients or caregivers	15-16	Moderate
3	Failure of systems is not likely to cause injury to patients or caregivers, but can cause patient discomfort.	8-12	Low
4	Failure of systems have no impact on patient care	3-6 1-2	Nil

Consequence or Impact

Severity likelihood	In significant (1)	Minor (2)	Moderate (3)	Major (4)	Catastrophic (5)
Very likely (5)	5	10	15	20	25
Likely (4)	4	8	12	16	20
Fairly likely (3)	3	6	9	12	15
Unlikely (2)	2	4	6	8	10
Very unlikely (1)	1	2	3	4	5

It identifies the timeframe for this risk to have an effect on it. the subsequent is assessed as Examples of risk classification:

#	Utility/ Activities	Activities/Risk	RISK EVALUATION			Action / Control	Cost plan EVM	RESIDUAL RISK RATING
			Category	Impact	Risk rating			
1.	Medical air	Install New Units, Loss of air supply, Potential multiple fatalities.	1	H	20	<u>As Part of Engineering Control</u> Identify the areas that will be affected by loss of medical air thru distribution drawing, we have 10 riser that feeding block number 25 and that areas include critical areas (ICU) and Consumption of this building is 2, number of AVSU 's are 16 To controlling of this risk as in the following: 1- Providing different Source thru bypass the main riser 25 to the riser 11 depend on the flow rate and pressure of required areas.	1,2000,00 SAR	H
						2- Providing different Source thru calculating the Consumption, Flow rate and pressure by manifold cylinders Units.		
						3- Providing different Source from extension building thru bypass the main riser 15 to the riser (ICU) depend on the flow rate and pressure of required areas.		
						In cases of Medical air our backup plan is to distribute medical air cylinders in critical / areas affected thru the AVSU for New building.	1,0000,00 SAR	H
						<u>As part of Adminstrative controls</u> Memos will distribution for all areas effected and prepared emergency disaster plan in case of total failure of medical air.		

2.	Medical air	<u>Exposure to fire</u> "Improper use of regulator pressures, the use of a package which has not had flash back arrestors fitted. "	1	H	20	-Use of proper regulators designated for the gas use. -Use of flash-back arrestors. -The worker must be adequate train to use it. -Proper SOPs must be followed. -Use of fire extinguishers."	20,000,00 SAR	H
		<u>Welding Leakage leading to Fire</u> Fuel gas release could cause a fire if ignited and the fire could impact on the gas cylinders or the gas cylinders are depressurized.	1	H	20	Hot work permitted " -Hoses shall be manufactured to BS EN ISO 3821 and correctly colored for the gas service -Never hang up the welding or cutting torch whilst still alight. -Position gas hoses out of the line of fire from the flame or metal sputter. -Hoses are to be fully uncoiled during use. -Proper ventilation must be provided in closed environment.	80,000,00 SAR	H
		<u>Electrical circuit and machinery parts</u> during the Installation of New Control Panel that may can cause electrical arc, short-circuit, lack of maintenance, contact with electrical wire, task performed by a non-qualified person, ...	2	M	15	"-Use LOTO when isolating power. -Qualified personnel to work on electrical. - Appropriate PPE's to be used."	168,000,00 SAR	M

		<u>"Struck-by and truck against (transportation, traffic moving)"</u> "over speed, weather conditions, short distance between both cars involved in the accident, fatigue, alcohol, drugs, ..."	2	M	16	"-Vehicle should be adequate for the load. -Lightening Should be adequate during equipment transportation. -Driver must follow the speed limit. -Check the fitness of the vehicle. -Driver must hold a valid driving license." "	20,000.00 SAR	M
3.		<u>Forklift dysfunction, tipping over</u> Damaging of equipment, body injuries Depending on the load, accelerate quickly in reverse, collide with another vehicle, use a forklift that is not designed to tow (pushing or pulling), improper floor condition	2	M	12	"-Certified forklift must be used. -Forlift should be checked prior to start work. -Driver have valid certification. -Load must not be above the weight specified in the load capacity chart. -Ensure seatbelts are correctly fitted and worn. -Obey speed limits and warning signs"	18,000.00 SAR	L

		Cylinder Handling Repetitive movements, heavy loading/handling Dropped or damaged gas cylinder, "Improper securing of cylinders, use of defective trolleys"	2	M	12	"-Proper securing of cylinders. -Use trolleys with good condition. -All workers to use appropriate PPE -The transported cylinders should be limited to absolute minimum."	12,000.00 SAR	L
4.	Medical air	loss of air supply By-Pass between Medical and non-medical air compressors - potential multiple fatalities (high dependency unit) wrong selection of point for the by-pass	1	H	20	"-Checked the P&ID before making the by-pass. - The bypass does not required the shutdown of gas.(check P&ID) -Arrange gas cylinders as backup. -Permit to Work."	30,000.00 SAR	L
		De-commissioning of Equipment loss of air supply	1	H	20	"-Before decommissioning, check the other compressor system is working. -Proper SOPs must be followed. -Permit to work. -Check safety control measures"	35,000.00 SAR	H
		Installation of equipment - Equipment will not work	2	M	12	"-Check the P&ID. -Check all project activities followed prior to installation. - Check all the connections. -Pressure test of pipelines"	120,000.00 SAR	L

		<u>Commissioning of equipment</u> changing in the pressure, contamination in the supply line, false alarm.	2	M	12	"-Follow the SOPs for commission -Pre-commissioning checklist -P&ID must be followed. -Check of air quality before supply." "	37,000,00	L
		<u>Shutdown for the Air Supply</u> Loss of compresses air for the hospital network	1	H	20	"-Permit to work. -Arrange backup cylinders. -Advisable to take shutdown on weekends, -Try to avoid take shutdown during surgeries. - Check the gas alarm continuously."	11,500,00 SAR	H

Conclusion,

The application of the framework will derive variety of benefits. It contributes from a decision-making purpose of read to improved project understanding, therewith rising management over resources, supporting the event Associate in implementation of police work methods and stimulating the higher use of the way of characteristic and assessing risk with an inherently helpful impact on contingencies analysis.

References

- SEYED, H. S., & HATEFI, M. A. (2009). Two-pillar risk management (TPRM): a generic project risk management process.
- Ward, S. C., & Chapman, C. (2003). Project risk management: processes, techniques and insights.