



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 الان 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..

Risk Management Plan in The Workplace

Introduction

This document will present a systematic method that enables establishments to assess the risks related to specific projects, specific departments, or the enterprise as a whole. The risk assessment is an essential component of the construction process

Occupational safety and health system and practices in any facility.

This document will help facility owners to:

- Create a risk matrix that is monitored and resolved during work in order to avoid or minimize as much as possible accidents, injuries, or occupational diseases.
- A standardized risk assessment methodology is applied.
- The development of work practices related to occupational safety and health to enhance the protection of the safety and health of workers, as well as the preservation of property and the environment.

Methodology

First: Identifying the existing risks (see Table 1) and focusing on the main ones of these risks:

- Determine the type of work
- Identify the risks involved in this work
- Determine the expected accident from the recorded risks

No	List of Risks
1	Moving the cabinet from store or Packing/Unpacking area to integration area.
2	Powering up/down the cabinet.

3	Cables running along floor spaces.
4	Working with hand tools.
5	Working with power tool.
6	Working at height.
7	Using ladder, stepstool, step chair.
8	Illumination Lighting.
9	Slips, Trips and Falls.
10	Usage of rust prevention solvents (E.g. WD40).

Table 1

Second: Identifying personal or properties for these existing risks:

- Who will be harmed by these recorded risks?

Third: The risk assessment will present in this document as follows: (see Table 2)

- Determine level of risks.
- The probability that these risks will occur.
- The impact of these risks once occurs.

The risks Matrix extent / level of severity will present in this document as follows: (see Figure 1)

- Low = 0 to 0.29.
- Medium = 0.3 to 0.69.
- High = 0.7 to 1.

Probability	0.7-1	High	High	Medium
	0.3-0.69	High	Medium	Low
	0-0.29	Medium	Low	Low
		0.7-1	0.3-0.69	0-0.29
		Impact		

Figure 1

No	List of Risks	Hazard/ Impact	Hazard/ Impact Effect	Probability	Impact
1	Moving the cabinet from store or Loading / unloading area to integration area.	- Collision with pedestrians /material/cabinets -Fall of material/cabinets -Collision with inner shutter door -pallet trolleys failed	-Injury to personal Damage to properties. -Damage to the equipment.	0.4	0.8
2	Powering up/down the cabinet.	- Wrong cable connection -Electric shock	-Injury to personal. -Damage to properties.	0.4	0.8

			-Damage to the equipment.		
3	Cables running along floor spaces.	Fall/ trip hazards.	-Injury to personal. -Damage to properties. -Damage to the equipment.	0.3	0.3
4	Working with hand tools.	Hand injuries.	Damage to properties	0.2	0.8
5	Working with power tool.	- Hand injuries. -Electrical shock.	Injury to personal	0.4	0.8
6	Working at height.	-Fall of persons. - Injuries of persons working/sitting under.	Damage to the equipment	0.4	0.8
7	Using ladder, stepstool, step chair.	Falling	Injury to personal	0.2	0.8
8	Illumination Lighting.	- Collision with pedestrians /material/cabinets -Fall of material/cabinets	Injury to personal	0.2	0.8
9	Slips, Trips and Falls.	Falling	Injury to personal	0.2	0.8
10	Usage of rust prevention solvents (E.g. WD40).	Contact with the Skin and eyes.	-Irritation and redness of eyes and eye damage. -Skin irritation and rashes	0.1	0.2

Table 2

Fourth: Procedures for controlling and controlling risks:

- What are the measures to control risks and additional measures can be added?
- The level of risk of additional measures.
- The likelihood of risk occurring in additional measures.
- And prevent any result from that procedure.
- Priority for additional measures.
- Responsible for controlling risks as well as for taking additional measures.
- Date of resolution of recorded risks as well as for additional measures.

No	List of Risks	Hazard/ Impact	Hazard/ Impact Effect	Probabil ity	Impa ct	Severi ty	Control & Contingency Measures to be Implemented
1	Moving the cabinet from store or Loading / unloading area to integrati on area.	- Collision with pedestrians /material/cabi nets -Fall of material/cabin ets - Collision with inner shutter door -pallet trolleys failed	-Injury to personal - Damage to properties. -Damage to the equipment.	0.4	0.8	High	- Ensuring the way in which trolley will move is clear from any obstruction. - While moving heavy material/cabi nets appropriate man power to involved to support and balance the load. - Materi als entry/exit shutter door to be fully opened.

							- Inspection of pallet trolley to ensure proper functioning. - Ensure cabinets door is lock properly. - Usage of appropriate PPE.
2	Powering up/down the cabinet.	- Wrong cable connection. - Electric shock.	-Injury to personal. -Damage to properties. -Damage to the equipment.	0.4	0.8	High	-Skill technician to perform the task. -Checking cables connection before connecting. -Ensure disconnecting of main power. -Use Multimeter devices to check the power. -Usage of appropriate PPE.
3	Cables running along floor spaces.	Fall/ trip hazards.	-Injury to personal. -Damage to properties. -Damage to the equipment.	0.3	0.3	Medium	-Cover all cable crossing the walkways with cable ducks. -Don't use long cable as

							much as possible.
4	Working with hand tools.	Hand injuries.	Damage to properties	0.2	0.8	Medium	-Toolbox talks on equipment usage. -Usage of appropriate PPE. -Using the right tool for task undertaken. -Inspection of the tool to ensure no defects before use.
5	Working with power tool.	- Hand injuries. -Electrical shock.	Injury to personal	0.4	0.8	High	-Toolbox talks on equipment usage. -Usage of appropriate. PPE. -Using the right tool for task undertaken. -Inspection of the tool to ensure no defects before use.
6	Working at height.	-Fall of persons. - Injuries of persons working/sitting under.	Damage to the equipment	0.4	0.8	High	-Toolbox talks on equipment usage. -Inspection of the ladder to ensure no defects before use. -Ensure that there is appropriate

							manpower to support. - Ladder when working at height. Ladder to be used with in safe access limits. Usage of top 2 rungs to be avoided for stepping. -Barricade the area around ladder usage. -People under the ladder should wear helmet. -Usage of appropriate PPE.
7	Using ladder, step stool, step chair.	Falling	Injury to personal	0.2	0.8	Medium	-Inspection of the ladder to ensure no defects before use. -Toolbox talks on equipment usage. -Usage of appropriate PPE.
8	Illumination Lighting	- Collision with pedestrians /material/cabinets -Fall of material/cabinets	Injury to personal	0.2	0.8	Medium	-Racking of materials should not block the lighting by creating shadows. -Damaged lights and

							light fixtures should be replaced immediately.
9	Slips, Trips and Falls.	Falling	Injury to personal	0.2	0.8	Medium	-Usage of appropriate PPE. -Use with safe distance. -All warehouse staffs should be trained to clean the spillages immediately. Extra waste bins to be provided in loading areas. -All the walkways shall be free from debris, slipping materials, etc. for the easy passage.
10	Usage of rust prevention solvents (E.g. WD40).	Contact with the Skin and eyes.	-Irritation and redness of eyes and eye damage. -Skin irritation and rashes	0.1	0.2	Low	-Usage of appropriate PPE. -Use with safe distance

Table 3

Results

Below (Table 3) shows the result of calculation of the EMV cost value for the risk management in the workplace, which was identified previously. All the numbers in this

document will present approximate cost value, which it does not exact cost value, but it was evaluated based on experience. The total potential impact on the plan is 25800 SAR, while the contingency cost is 8180 SAR.

No	List of Risks	Probability	Impact cost SAR	Risk contingency SAR
1	Moving the cabinet from store or Loading / unloading area to integration area.	0.4	4000	1600
2	Powering up/down the cabinet.	0.4	6000	2400
3	Cables running along floor spaces.	0.3	1000	300
4	Working with hand tools.	0.2	2500	500
5	Working with power tool.	0.4	3500	1400
6	Working at height.	0.4	1700	680
7	Using ladder, stepstool, step chair.	0.2	1500	300
8	Illumination Lighting.	0.2	3000	600
9	Slips, Trips and Falls.	0.2	2000	400
10	Usage of rust prevention solvents (E.g. WD40).	0.1	600	0
TOTAL			25800	8180

Table 4

Discussion

As per (Table 4) it shows that the reflecting result of reposing plan and how to mitigate the risk. The cost value of risk contingency was decreased It came down sharply once controls applied in place.

References

- Paul Hopkin, Fundamentals of Risk Management, Understanding, evaluating and implementing effective risk management, Fifth Edition.
- Hillson, D., & Simon, P. (2020). Practical project risk management: The ATOM methodology. Berrett-Koehler Publishers.
- Chapman, R. J., and Ward, S. (1997). "Project Risk Management Processes, Techniques and Insights" John Wiley & Sons, Chichester, UK.