



جامعة الجميع الذكية  
EVERYONE'S SMART UNIVERSITY

## 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 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..

## CCTV INSTALLATION PROJECT

- **INTRODUCTION**

The project is installing **CCTV (Closed-circuit television) Cameras in a 3 floors** retail store and the timeframe for this project will be 1 month and the deadline is end of April 2021 and my role is **Project Manager**. In this project/research I'm going to identify some risks that are associated with this project. Risk management encompasses the identification, analysis, and response to risk factors that form part of the life of a business. Effective risk management means attempting to control, as much as possible, future outcomes by acting proactively rather than reactively. Therefore, effective risk management offers the potential to reduce both the possibility of a risk occurring and its potential impact.

Risks management is an important process because it empowers a business with the necessary tools so that it can adequately identify and deal with potential risks. Once a risk's been identified, it is then easy to mitigate it. In addition, risk management provides a business with a basis upon which it can undertake sound decision-making.

For a business, assessment and management of risks is the best way to prepare for eventualities that may come in the way of progress and growth. When a business evaluates its plan for handling potential threats and then develops structures to address them, it improves its odds of becoming a successful entity.

In addition, progressive risk management ensures that risks of a high priority are dealt with as aggressively as possible. Moreover, the management will have the necessary information that they can use to make informed decisions and ensure that the business remains profitable. Vincent T.(1985)<sup>1</sup>

## **Compliance Risks**

Maintaining regulatory compliance is an important aspect of any institution, which can, in turn, become a huge risk. Companies need to ensure they have controls in place to monitor their organizations' compliance on a regular basis. They need to monitor all their existing processes, procedures, and technologies and stay compliant. This can be effectively done with a risk management system.

## **Safety Risks**

Also known as hazard risks there can be a risk to the safety of the operations within the company. This needs to be analyzed and monitored regularly as well. All maintenance processes need to be audited regularly to check for latent human error in the processes. This can also be handled very efficiently if companies implement a risk management system.

- **LITERATURE REVIEW**

Terje Aven (2010)<sup>2</sup> concludes that Risk management starts with a review of all relevant information, particularly from combined risk appraisal, consisting of both risk assessment and concern assessment where the latter is based on risk perception studies, economic impact assessments and the scientific characterization of social responses to the risk source. This information, together with the judgements made in the phase of risk characterization and evaluation, form the input material upon which risk management options are being assessed, evaluated and selected.

Also C Chapman (2000)<sup>3</sup> Has stated that All projects involve risk—the zero risk project is not worth pursuing. This is not purely conjectural but also a recognition that acceptance of some risk is likely to achieve a better and appropriate level of benefit in return for the organization. Risk involves both threat and opportunity. Organizations that better understand the nature of the risks and can manage them more effectively cannot only avoid unforeseen disasters but can work with tighter margins and less contingency, freeing resources for other endeavors, and seizing opportunities for advantageous investment that might otherwise be rejected as ‘too risky’. Risk is present in every aspect of our lives; so, risk management is universal but, in most circumstances, an unstructured activity, based on common sense, relevant knowledge, experience and instinct. Project management has evolved over recent years into a fully-fledged professional discipline characterized by a formalized body of knowledge and the definition of systematic processes for the execution of a project. so, project risk management has, until recently, generally been considered as an ‘important tool to the effective practice of project management.

Wang, 2020 discussed and reviewed the corona virus spread in china and the risks associated with it and its impact. The rapid spread of new coronaviruses throughout China and the world in 2019–2020 has had a great impact on China’s economic and social development. As the backbone of Chinese society, Chinese universities have made significant contributions to emergency risk management. Such contributions have been made primarily in the following areas: alumni resource collection, medical rescue and emergency management, mental health maintenance, control of staff mobility, Since China has previous history on dealing with such risk and pandemics they how to handle this risk and they were prepared.

## • METHODOLOGY

Risk impact:

|              |        |
|--------------|--------|
| Acceptable   | Low    |
| Unacceptable | Medium |
| Intolerable  | High   |

Risk Probability and Impact matrix:

|             |                  | Impact        |            |               |            |              |
|-------------|------------------|---------------|------------|---------------|------------|--------------|
|             |                  | Very Low<br>1 | Minor<br>2 | Moderate<br>3 | Major<br>4 | Extreme<br>5 |
| Probability | Rare<br>1        | Low           | Low        | Low           | Medium     | Medium       |
|             | Unlikely<br>2    | Low           | Low        | Medium        | Medium     | Medium       |
|             | Moderate<br>3    | Low           | Medium     | Medium        | Medium     | High         |
|             | Likely<br>4      | Medium        | Medium     | Medium        | High       | High         |
|             | Very likely<br>5 | Medium        | Medium     | High          | High       | High         |

Identifying risks:

| Risk Description                                    | Probability | Impact | P * I | How to prevent the risk                                                                                     |
|-----------------------------------------------------|-------------|--------|-------|-------------------------------------------------------------------------------------------------------------|
| 1.Camera damaged/not working received from supplier | 1           | 3      | 3     | Ensure that received materials are tested and quality checked                                               |
| 2.Camera fall while getting installed               | 2           | 3      | 6     | Ask the team to be careful when dealing with such devices and handle it with caution                        |
| 3.Wrong installed or termination for cameras        | 3           | 3      | 9     | Give the staff training to ensure that they are qualified                                                   |
| 4.Staff member getting injured                      | 3           | 5      | 15    | Provide safety training and PPE equipment's to staff, make sure that site is following the safety protocols |
| 5.Cameras are not matching the required quality     | 1           | 4      | 4     | Make sure we are following the project specification and complying with it                                  |

| Risk No.   | Risk Probability | Cost Impact | EMV   |
|------------|------------------|-------------|-------|
| 1          | 10%              | 1000        | 100   |
| 2          | 25%              | 1250        | 312.5 |
| 3          | 35%              | 1250        | 437.5 |
| 4          | 44%              | 5000        | 2200  |
| 5          | 12%              | 2000        | 240   |
| TOTAL EMV= |                  |             | 3290  |

Expected Monetary Value (EMV) = 3290

Which could be added to your budget as risk contingency.

## Strategies towards types of risk

**Low** no Action needed only to note the risk happened and add to risk register.

**Medium** To reduce the likelihood and probably and to be identified when actions have been taken.

**High** Are our top priority risk for the project and we should prevent them from happening and reduce the like hood and probability as much as possible and to be identified that protective actions has been taken.

### • RESULTS AND DISCUSSION

A contingency plan is executed when the risk presents itself. The purpose of the plan is to lessen the damage of the risk when it occurs. Without the plan in place, the full impact of the risk could greatly affect the project. The contingency plan is the last line of defense against the risk. For a project manager, it is better to have the contingency ready for implementation than to have to develop one as the risk is taking its toll. The contingency is another instrument in the arsenal of tools that a project manager carries to support project success. Due to the timing when a contingency need to be implemented, contingency planning is a necessity in today's project management world.

### • REFERENCES

- 1 Vincent T. Covello, June 1985, Risk Analysis and Risk Management: An Historical Perspective
- 2 Terje Aven, 2010, Risk Management and Governance.
- 3 Chapman, Chris 2002 Project Risk Management 2<sup>nd</sup> Edition.
- 4 Chuanyi Wang, 2020 Risk Management of COVID-19 by University of China