



جامعة الجميع الذكية
EVERYONE'S SMART UNIVERSITY

Everyone's Smart University

Project (Spring 2021)

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Section

Master

Date

Thursday

11 / 05 / 2021.

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 During Acquisition of The RFID Software

1. Introduction

Project risks can potentially occur when the project deliverables are influenced by unforeseen events, leading to the extension of project duration. In a software acquisition project, potential drawbacks are present, but how they are managed determines if the project completes successfully or stalls. Project risk management entails identifying, analyzing, planning, tracking, and controlling risk. Communication is essential to provide feedback on the effectiveness of the risk mitigation processes. The decision to acquire new software is an advancement opportunity, but it cannot be realized if the risk is not taken. Investing in the acquisition of risk is in itself a risk. However, effective risk management can provide a formidable balance between the negative consequences of potential risk and the benefits of a definite opportunity. The RFID software acquisition presents risks such as software coding specification breakdown, software and supports system requirements inflation.

2. Previous Scientific Studies

The past few decades have been marked with scientific research studies on how organizational goals could be achieved through internal management. Most development projects in the past were external to organizations, including building and construction and commercial campaign designing. Scientific research on organizational development narrowed down to the discipline of project management, which entails conception, planning, project execution, monitoring, and presentation of deliverables. Monitoring entails assessing project processes for potential risk. The project process performance

measurement models in risk management developed by previous scientific research include a common approach and singular methodology.

Other models are common language and ongoing improvement after analyzing risk and process performance indicators (Kerzner 32). Project management emerged due to the contemporary demands of the global economy to develop effective methods of managing organizational development processes. The driving forces of project management included consumers' demand for customized services and products and increased human knowledge (Meredith et al.1). Organizations also experienced an increased need for competitive advantage, and this required fast production processes.

3. Literature Review

RFID Software Acquisition Project Risk and Impact Matrix

Risk ID	Risk	Probability of Risk Occurrence	Impact of Risk Occurrence
1	Software coding specification breakdown	Medium	High
2	Software and support system requirements inflation	Medium	High
3	Inherent flaws in software development and installation schedules	High	Medium

4	Project team members turnover	Low	Low
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The identifiable risks in the RFID software acquisition revolve around software specification breakdown and project team turnover. Other risk factors entail software development and installation scheduling flaws and software and support system requirements inflation. Analyzing these risk factors is significant in determining the impacts and decision-making processes to mitigate the severity. Strategic decision-making is a requisite in project risk management because it enhances the adoption of corrective strategies to ensure that the benefits of a project outweigh the costs.

The acquisition of the RFID system for a tobacco business warehouse is complex because it entails doing away with the traditional warehouse management system. There may be no suitable structures or human capital to support the new automated warehousing system. However, the project management team is there to ensure that every acquisition and installation process works effectively. For the project to be successful, risk management is essential.

4. Methodological Research Method

The concept of RFID software acquisition project risk management is presented as an ensemble of works and actions designed to achieve cost and benefits objectives. The main concerns are time duration and costs. The identification of project risk was made through critical thinking by evaluating the main aspects of the project. Qualitative analysis, brainstorming, and risk checklists were also used to identify the most probable risk in the RFID software project. The main aspects entail the project team, software

development and installation, material requirements, and project schedule. The goal of project risk management is to reduce negative consequences that may influence the main aspects of the project. The project risk and impact matrix were used to identify the potential risk, probability of occurrence, and an impact rate of the RFID software project.

5. Result and Discussions

The risk of software coding specification breakdown entails the emergence of conflicting software requirements such as product tag types. It has a medium occurrence probability, and the impact of occurrence is high. Such conflicting coding can lead to trace and track errors and inventory inaccuracy in the implementation stage. The project manager has to commit to making critical trade-off warehousing decisions. It can ensure that the traditional processes are closely detailed to inform the coding of the RFID system. The project manager has to answer specification questions and understand all the software requirements for effective coding decisions. Software projects tend to suffer specification breakdown when the project manager does not have comprehensive knowledge of processes and requirements, and assumptions can be conflicting. Software specification decisions should be made timely to prevent coding requirement conflicts.

Software and support system requirements inflation is another common risk factor in software acquisition. It has a medium occurrence probability in the RFID software project, and the impact of occurrence is high. As the project progresses, features that were not identified in the first stages of the project emerge. The significant result is the threat to the initial project estimates of procurement and purchase costs and the timeline. However, the project manager and the team need to be aware that inflation and other changes are constant in software projects. Instead of using inflation suppression

strategies, it is essential to prioritize sessions that allow worthwhile changes to take the course. The emergence of inflation prepares the project team to develop coping mechanisms that are mostly anticipatory to address future project requirement changes.

Inherent flaws in software development and installation schedules are risk factors with high occurrence probability, and the impact can be rated medium. It isn't easy to schedule the processes of software development and installation. The timeline of software development depends on the purposive coding of the software. The RFID warehousing software is complex to develop, especially because warehouses operate in a broad supply chain spectrum. Each RFID system application is unique to the specifications provided. The impact of errors in scheduling development and installation is project delays. Project delays tend to prolong the procurement process, which in turn translates into an increase in costs. To reduce the probability of scheduling errors, engaging the project team in estimating and planning tasks timeline using activities like XP's project planning games and workshops can be effective.

Project team member's turnover has a low occurrence probability, and the impact can be rated low because there are alternative measures of communication. Project team members may leave because of other organizational tasks. Most organizations want to control all internal projects and achieve this by getting their employees on board the project teams (Radujković et al. 612). When a key project team member leaves, there can be delays, but a good project manager has to place several means of communication. Some effective communication means include scheduled meetings and workshops, video conferencing, phone calls, and text messages. Increased information sharing through

appropriate channels and collaboration within the project team is significant in ensuring project success.

5.1 Expected Monetary Value

Calculating the EMV entails calculating the product of the probability of risk events occurring and their respective impact. EMV is an overall statistical result of future potential risk probabilities and their effect on project success. The probability of events as high, medium, or low can be represented by numbers 3, 2, and 1, respectively. According to the probability matrix, the total number of projected events is 4. The favorable event in the matrix is just one, the project team turnover, because it has the lowest occurrence probability.

The formula for calculating probability: (number of favorable events)/ (total number of events). Therefore, the probability is $\frac{1}{4}$ or 25%.

The impact entails the total cost of monetary value that is spent if identified risk occurs. Therefore, the estimate of this paper on effects is \$2000.

The EMV formula: the probability of risk*risk impact. Therefore, 25%*\$2000 equals \$500. The expected monetary value is \$500.

Works Cited

Kerzner, Harold. *Project management metrics, KPIs, and dashboards: a guide to measuring and monitoring project performance*. John Wiley & Sons, 2017.

Meredith, Jack R., and Samuel J. Mantel. *Project Management: A Managerial Approach*. John Wiley, 2011.

Radujković, Mladen, and Mariela Sjekavica. "Project management success factors." *Procedia engineering* 196 (2017): 607-615.

Appendices:

RFID: Radio Frequency Identification

DWMS: Digital Warehouse Management System

IT: Information Technology

KPIs: Key Performance Indicators

