



جامعة الجميع الذكية
EVERYONE'S SMART UNIVERSITY

Everyone's Smart University

Project (Spring 2021)

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Section
Master

Course Code
(PMG506)

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Advanced project Management

Instructions:

- اخر موعد للتسليم هو يوم الخميس 2021-05-20 في تمام الساعة 9 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 1.5 line spacing
- عدد صفحات البحث (لا يقل عن ثلاث صفحات ولا يزيد عن ست صفحات).

Instructor's Name: ~~Eng. Amaal Aburumman~~ **Eng. Dr. Akram M. S. Ali**

Project:

You are required to document your role in administering a project. The project may be set in a business, social, sporting, or family environment but must be of a significant size and scale. If you do not have an actual project to write about you may complete the project hypothetically.

This report will be between three to six pages in length. This is a significant research project.

Your report must address ~~each~~ **ONE** of the following issues:

1. Identify and describe the purpose, scope, and objectives of the project. **Display this information using an appropriate tool.**
2. Describe how the team is given an outline of the project.
3. Describe the strategies that are going to be set up to maintain communication with the team members.
4. Describe the tools that are going to be used to monitor the goals, time frames or milestones.
5. Identify project milestones and activities. **Display this information using an appropriate tool.**
6. Create a budget and link the costs to the key milestones for a project.
7. Describe how you are going to divide tasks and resources amongst a project team. **Display this information using an appropriate tool.**
8. Briefly describe how the progress will be monitored.
9. How are current project records maintained? Who has responsibility for this? provide some recommendations on how this process could be improved.
10. Describe the current procedure for finalizing projects. Create your own procedure and identify how you will evaluate the success of the project.
11. Legislation that may affect the project including health and safety, and anti-discrimination legislation.

Best of luck...

المشروع:

مطلوب منك توثيق دورك في إدارة مشروع. قد يتم تعيين المشروع في بيئة تجارية أو اجتماعية أو رياضية أو عائلية ولكن يجب أن يكون بحجم مناسب. إذا لم يكن لديك مشروع فعلي لتكتب عنه ، فيمكنك إكمال المشروع افتراضياً. ستكون هذا التقرير من ثلاث إلى ست صفحات.

يجب أن يعالج تقريرك ~~كل~~ **احد** القضايا التالية:

1. تحديد ووصف الغرض والنطاق والأهداف من المشروع. اعرض هذه المعلومات باستخدام أداة مناسبة.
2. صف كيف يتم إعطاء الفريق مخططاً تفصيلياً للمشروع.
3. وصف الاستراتيجيات التي سيتم وضعها للحفاظ على التواصل مع أعضاء الفريق.
4. صف الأدوات التي سيتم استخدامها لرصد الأهداف أو الأطر الزمنية أو المعالم.
5. تحديد معالم المشروع والأنشطة. اعرض هذه المعلومات باستخدام أداة مناسبة.
6. إنشاء موازنة وربط التكاليف بالمعالم الرئيسية للمشروع.
7. صف كيف ستقوم بتقسيم المهام والموارد بين فريق المشروع. اعرض هذه المعلومات باستخدام أداة مناسبة.
8. صف بإيجاز كيف سيتم رصد التقدم.
9. كيف يتم الاحتفاظ بسجلات المشروع الحالية؟ من المسؤول عن هذا؟ تقديم بعض التوصيات حول كيفية تحسين هذه العملية.
10. وصف الإجراء الحالي لإنهاء المشاريع. قم بإنشاء الإجراء الخاص بك وحدد كيفية تقييم نجاح المشروع.
11. التشريعات التي قد تؤثر على المشروع بما في ذلك الصحة والسلامة ، وتشريعات مكافحة التمييز.

مع تمنياتي بالتوفيق..

Determine a budget for production line development project.

Introduction:

In the cement plant, we have an old production line, and due to the high request for cement in the last two years, we decide to develop a cement production line and increase the cement produced and catch the market demand. Develop a cement production line is a big project and I was work on this project as a **project manager**. This search talking about determining the budget for our project and this stage happens in the planning stage. The aim of this research is to determine the methods used in our organization to determine the budget for the project and how effective it is to manage the budget. The main concerns of any organization are projects being delivered within budget, on time, to the expected quality, and with no surprises. so suggested that all project managers work within tight pre-defined budgets or cost plans. This budget (cost plan) is normally not expected to be exceeded; otherwise, the whole project may fail [1].

Literature Review:

There are many previous studies on the methods of determining the budget like what we use in our organization and the importance of determining the budget.

Estimating an accurate project budget is challenging for project managers, because of the unpredictable risks concerning how big the impacts on project results are and when they will occur. Furthermore, budget estimation is conducted during the planning phase which is an early stage of the project life cycle, when there is a lack of data and information. Project managers need a budget estimation method to respond to risks as accurately and precisely as possible to prevent cost overruns. In response to uncertainties and risks, Project Management Institute (PMI) defined reserves that are composed of a contingency reserve for identified risks (known-unknowns) and a management reserve for unidentified risks (unknown-unknowns) [2].

Bottom-up estimation approach:

Once deliverable orientated WBS elements have been developed for a project, creating a cost estimate becomes a simple matter of mapping the WBS onto the RBS and assigning the appropriate resources to individual WBS elements. This methodical approach may firstly require some extra effort then become a normal process. The project manager's concern about cost estimating will decrease, and the organization will achieve significant efficiencies in planning, scheduling, and monitoring [3].

Analogous Estimation approach:

Estimation by analogous is compared the project under consideration with a few (e.g., two or three) similar historical projects (i.e., projects with known characteristics, effort, and schedule). Estimation by analogous is concentrating on a well-defined estimation structure provided that, proper projects of the past may be simply found and the mechanism applying analogy is correct [4].

contingency risk budget:

The contingency risk budget is specific funds set aside to deal with accepted risks that depend on the nature of the project and the risk tolerance of the organization in case they occur [5].

Methodology:

In the project of development cement production line, the methods used to calculate the project budgets are the Analogous approach and Bottom-up approach.

First, we estimate the budget by the Analogous method and find the range of the project budget to taking the approval of the project sponsor. We search in our database for historical information of similar project and start comparing and find an approximately budget.

Secondly, we calculate the project budget in detail by bottom-up estimation method. We begin at the lowest level of the Work Breakdown Structure (WBS), which we call it work package, then we calculate the cost of each work package by multiplying the number of resources required by its unit of cost, which is obtained from the Resource Breakdown Structure (RBS), then in the next step, we move up a level in WBS to determine by the

total quantity of resources necessary for all elements at all levels until higher level which represent milestones of the project.

After calculating the project budget by bottom-up estimation method we use risk probability and impact matrix to calculate how much fund we need to contingency risk budget to use in accepted risk.

Finally, we add a fixed amount like 10% from our budget for management reserve which is used in unknown's risk.

Results and Discussion:

Based on the Analogous estimation method which used in the project and after comparing our project with other projects I found out the estimated budget of around a million dollars.

Based on the bottom-up estimation method used in the project and after calculating all levels of work breakdown structure starting from work package until project milestones or project deliverables, I found our estimating budget for the project is 1,200,000 dollars. also, we calculated our contingency risk budget by risk and impact matrix, and we found we need 100,000 dollars. Now we have calculated the cost baseline which is the sum of the work package costs plus the contingency risk budget and its equals 1,300,000 dollars. Finally, for the total budget of the project, we add ten percent of the baseline for the management reserve, so that the last budget becomes 1,430,000 dollars.

I conclusion of this research that the Analogous estimation method was not accurate. It was also concluded that the bottom-up estimation method is more accurate, and we should calculate the contingency budget to avoid any chance of failing the project.

References:

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2. Kwon, H., & Kang, C. W. (2019). Improving project budget estimation accuracy and precision by analyzing reserves for both identified and unidentified risks. *Project Management Journal*, 50(1), 86-100
3. Rad, P. F., & Cioffi, D. F. (2004). Work and resource breakdown structures for formalized bottom-up estimating. *COST ENGINEERING-ANN ARBOR THEN MORGANTOWN-*, 46(2), 31-37
4. Angelis, L., & Stamelos, I. (2000). A simulation tool for efficient analogy based cost estimation. *Empirical software engineering*, 5(1), 35-68
5. Cioffi, D. F., & Khamooshi, H. (2009). A practical method of determining project risk contingency budgets. *Journal of the Operational Research Society*, 60(4), 565-571