



جامعة الجميع الذكية
EVERYONE'S SMART UNIVERSITY

Everyone's Smart University

Project (Spring 2021)

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Section

Master

Date

Thursday

18 / 03 / 2021.

Course Code

(PMG506)

Advanced project Management

Instructions:

- اخر موعد للتسليم هو يوم الخميس 2021-05-20 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. Amaal Aburumman

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 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. سيتمكنون هذا التقرير من ثلاث إلى ست صفحات .

يجب أن يعالج تقريرك كل من 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 ميزانية 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..

Fire & Gas Safety System Upgrade Project (Oil & Gas Plant Industry)

1. Introduction:

For today's manufacturers, the safety of their facilities, personnel, production processes and the environment are crucial to achieving on-time delivery and minimizing any potential losses (1). Industrial Customers can reduce costs by minimizing damage to equipment and eliminating incidents that impact people and the environment. The ideal customers in industrial market are offshore petroleum exploration and production, onshore oil and gas facilities, refineries and chemical plants, marine operations, tank farms and terminals, pipelines, power plants, mining, and paper mills.

Fire and Gas (F&G) systems are the mechanisms for safeguarding process plants and production facilities that handle flammable and toxic materials, which is classified as top hazardous zone. A F&G safety system continuously monitors for abnormal situations such as a fire, or combustible or toxic gas release within the plant; and provides early warning and mitigation actions to prevent escalation of the incident and protect the process or environment. By implementing an integrated fire and gas strategy based on the latest automation technology, plants can meet their plant safety and critical infrastructure protection requirements while ensuring operational and business readiness at project start-up.

So, in order to maintain a high level of process and plant safety, customer & vendors should have collaborated effort on the lifecycle management of F&G infrastructure and that's was the main justifier for our project business case approval, because when any product becomes out of lifecycle it will become out of support from manufacturers. Our project scope is to upgrade the existing Fire & Gas infrastructure in order to manage the lifecycle and replace the old & obsolete F&G system.

The F&G project is coming as component under big program in our organization. As our project still didn't start the execution phase the program manager has assign the project manager responsibilities to me as am having the technical product expertise along with project management knowledge. I will concentrate on the most two important phases

which took a lot of effort from me and the project team which is, firstly the project master schedule development phase and secondly the project cost estimation phase.

The main reason of selecting the scheduling & cost estimation area because it's has crucial role in ensuring project success. To keep projects on track, set realistic time frames, assign resources appropriately and manage quality to decrease product errors. This typically results in reduced costs and increased customer satisfaction.

2. Literature Review:

Our company used to do such upgrading projects as it's our main field of specialty. We depend mostly on the historical analysis on building the project master schedule and cost estimation. The main reason of using historical analysis as main tool is to have clarity on required resource efforts and to develop realistic schedule based on organization capability and capacity and to avoid budget inflation.

3. Methodology:

3.1 Project Schedule development:

In the F&G upgrading project, we have start building the Work Breakdown Structure (WBS) work packages and decompose them further to define schedule activities and then start sequencing to identify inter/dependencies between them thru subject matter expert's review.

I assigned the duration estimation activity to our project technical experts and then combined the expert judgment methods with Analogous estimation tool which is a top-down estimation approach taken by looking at similar projects within our organization for developing master schedule and build the network diagram.

3.2 Project cost estimation development:

As we are late on the project estimation, we just used also the analogous estimating tool in building the cost budgeting. This technique has a quick result with less effort. We had estimated the cost and required efforts and then used the historical analysis to compare with the most closely project in the past. We looked into the organization's historical records.

To avoid cost inflation and have precise estimation we used the expert judgment to validate our project's cost estimate. We compared between current and past projects and adjust to get the precise project cost. The resulted estimate was accurate as the similarity between compared projects is high and the SME participation in the estimate also guided to this precise estimation.

4. Results & Discussions:

The initial results as shown below from analogous estimates for cost & schedule estimation.

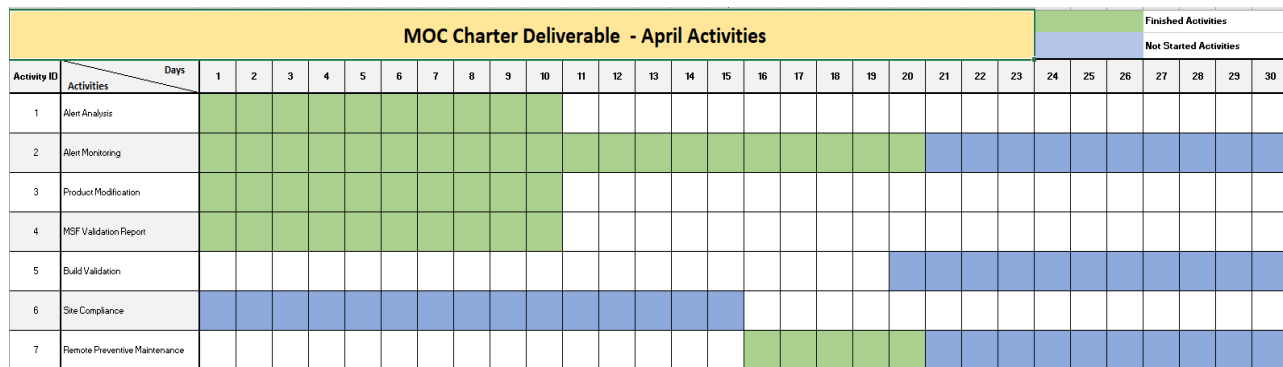


Figure 1: Scheduled activities

QTY	MODEL NO.	DESCRIPTION	UNIT LIST	EXTENDED LIST	UNIT GFA	EXTENDED GFA	UNIT TRANSFER	EXTENDED TRANSFER
Upgrade Release of EBI for FGCP								
377	EBI-UPGDR3	EBI Upgrade Unit - Release Minus 3	\$87.98	\$33,168.46	\$57.19	\$21,559.50	\$53.00	\$19,981.00
2	EBIX-DRR006	6 Reader Conversion to Redundancy	\$415.00	\$830.00	\$269.75	\$539.50	\$250.00	\$500.00
4	EBIX-DBP02500	2500 Point Adder to Database Size	\$6,787.74	\$27,150.96	\$4,412.03	\$17,648.12	\$4,089.00	\$16,356.00
1	EBIX-DBP20000	20000 Point Adder to Database Size	\$38,254.70	\$38,254.70	\$24,865.56	\$24,865.56	\$23,045.00	\$23,045.00
2	EBIX-DRP00250	250 Point Conversion to Redundancy	\$498.00	\$996.00	\$323.70	\$647.40	\$300.00	\$600.00
4	EBIX-DRP02500	2500 Point Conversion to Redundancy	\$3,605.52	\$14,422.08	\$2,343.59	\$9,374.35	\$2,172.00	\$8,688.00
2	EBIX-DRP20000	20000 Point Conversion to Redundancy	\$19,315.76	\$38,631.52	\$12,555.24	\$25,110.49	\$11,636.00	\$23,272.00
15	EBI-XXCAL	MS SQL 2017 Client Access Licenses	\$219.12	\$3,286.80	\$142.43	\$2,136.42	\$132.00	\$1,980.00
3	EBI-ZZDVD600	EBI R600 DVD Media Set (Dual Layer DVDs only; no docs)	\$79.68	\$239.04	\$51.79	\$155.38	\$48.00	\$144.00
3	EBIX-CLST	Additional Station Connection license	\$3,066.02	\$9,198.06	\$1,992.91	\$5,978.74	\$1,847.00	\$5,541.00
1	EBIX-OPDSAPTS	Distributed System Architecture for Points	\$3,837.92	\$3,837.92	\$2,494.65	\$2,494.65	\$2,312.00	\$2,312.00

Figure 2: Cost Estimation

As discussed with management they advise to increase level of confidence regard the schedule & cost estimates, so I conducted Expert judgment sessions and used historical information analysis to have more accuracy on the estimation.

We increase the critical path duration by 10% and accordingly the cost has increase by 5%.

5. References:

1. Honeywell White Paper (2019)- Integrated Fire and Gas Solution - Improves Plant Safety and Business Performance.
2. Dr. JON D. MILLER (2021), Fire and gas safety systems for oil and gas applications article.
3. PMBOK Guide Sixth Edition, chapter 7 project cost management.