



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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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 1.5 line spacing
- عدد صفحات البحث (لا يقل عن ثلاث صفحات ولا يزيد عن ست صفحات).

Instructor's Name: Eng. Mosaab M. Hamed

1. Introduction:

We are real estate company, Our Purpose is Construction building than 6 stories, the purpose of constructing these building is for commercial purpose over 15 years and then sold it to make the full profits. At this time, we need to construction building with 12 stories every story has 2 apartments, the first two stories for commercial offices and the other 10 stories for residential apartments .My roles and responsibility as a Project manager of this project are to meet the organization and stakeholder requirements and to construct this building with exact time and cost. Now we are in the planning stage, and we prepare all project management plans (cost, schedule, risk, communication, resources, quality, stakeholder and prepare the Procurement plan) with the managers.

Risk management are processes of conducting risk management planning, identification, analysis, response planning, response implementation, and monitoring risk on a project. The goals are to **Increase** probability and/or impact of **positive risks** & **Decrease** probability and/or impact of **negative risks** , Identify and manage risks that are not addressed by other project management processes, so project will not deviate from the plan. Project risk management processes should be **conducted iteratively** as risk will continue emerge during the lifetime of the project. Project team should know what level of risk exposure is acceptable by measuring **risk threshold** that **reflect risk appetite** of the organization and stakeholders. A Risk threshold is The degree of acceptable variation around a project objective.

The Relationship between the risk and fast track project is important , so if the project is more risky so we cannot apply this compression method to compress the schedule we will use crashing method instead of fast tracking .

2. Literature Review

- Value Management of the risks for the implementation of fast tracking project (in Egypt)

Purpose: The purpose of this paper is to define and analyse the factors of risks, which have bad impact on fast track project's goals in Egypt (cost , Quality , time) , by using

value and risk analysis's strategies together. Design/methodology/approach: This research used three technique to collect data, the first on is a comprehensive questionnaire survey, the second one is interviews, and the third one is a brainstorming session with major construction project stakeholders. Then research used qualitative technique to analysis their responses to find the most critical risks, and value strategies to make alternative solution which help stakeholders to deal with risks and achieve project's cost, time and Quality Findings: The findings lead to the conclusion that there is a need to develop management system, which combine between value management and risk management, to help stakeholders to make the right decision as early as possible to deal with risks. In addition, the results showed that there are common and critical risks, which must take care about it from the first stage in fast track`1 construction in Egypt to suggest pervious alternative solutions to save project's value and goals. Originality/value: The paper identifies current fast track project's risks in Egypt and presents alternative solutions, which can help stakeholders to overcome them.

- Contractual Risks in Fast-Track Projects

Fast-tracking strategies are used to achieve a shorter project duration; however, these strategies may negatively impact project performance by imposing additional risks, uncertainties, and costs. Rework, change orders and site modifications are almost inevitable in fast-tracked projects. Although these problems are not specific to fast-tracking, their frequency is relatively higher in this approach. Contracts should deal with these extra risks and the responsibilities associated with them, and assign them reasonably among project stakeholders as well. Currently, no contractual framework specific to fast-track projects is available; therefore, risks may not be allocated equitably to stakeholders. The usual consequence of the inequitable risk allocation is additional contingencies and premiums added by designers and contractors to their bid price which hwill end with greater overall project cost. In this paper, particular legal risks and challenges in fast-track projects are identified through a literature review. In addition, contractual aspects of fast-tracking are briefly reviewed at three levels: contract language; contract type; and project delivery method. The study shows that inaccurate

cost estimating and cost overrun risk liability, liability for design errors and omissions, delay damages, change orders, construction rework and modifications, as well as risk liability for overlooked work are among the most common reasons for disputes in fast-tracking. The main purpose of this paper is to provide a better understanding of the contractual risks in fast-track projects and help to develop contract strategies and minimize the associated legal problems.

3. Methodology

We concern study risk management through collecting data from previous Brainstorming method and from expert judgment . We will give further application risk management applied on a project in the discussion.

4. Results and discussion :

Probability and impact matrix :

Propability/Impact	0.05	0.1	0.2	0.4	0.8
0.9 (very likely)	0.05	0.09	0.18	0.36	0.72
0.7 (likely)	0.04	0.07	0.14	0.28	0.5
0.5 (Possible)	0.03	0.05	0.1	0.2	0.4
0.3 (Unlikely)	0.02	0.03	0.06	0.12	0.24
0.1 (very unlikely)	0.005	0.01	0.02	0.04	0.08

High=red , Medium=yellow , Low=green

Examples of risk classification :

Risk event	Probability	Impact	Score
Heavy rains and winds hamper the movement of construction in the winter season	0.5	0.8	0.4 (high)=red

Delay in the arrival of approval from ministries to connect electricity and water to them, delaying the operation	0.3	0.4	0.12 (medium)=yellow
Existing Ground services may delay the project	0.5	0.1	0.05 (low)=green

Responses :

Risk 1 : Avoid the risk by Change the project implementation time to the beginning of the summer .

Risk 2 : Mitigate the risk by working on continuous communication with the ministries day by day to end the approval

Risk 3 : Transfer the risk , Before starting the project, we work with another company on a geographic survey to find out details of the services and deal with them quickly

EVM calculation:

Risk event	Risk probability	Cost impact	Risk contingency
1	0.5	220000 SR	110000 SR
2	0.3	150000 SR	45000 SR
3	0.5	100000 SR	50000 SR

The following objectives are addressed in the risk response plans:

1. Risk reduction 2. Reduces the risk probability 3. Reducing the risk impact on project objectives

Result and discussion :

Project risk analysis and management is an ongoing process that can begin at any stage of the project cycle and can last and continue until the costs of its use become more than its potential benefit that can be gained. The project progresses, the risks decrease and thus the effectiveness of using risk analysis and management tends to diminish so it is advisable to use it in the early stages of the project life cycle. There is no project that does not have risks, but all projects have risks, and analyzing these risks after identifying them and then managing them is an integral part of project management, and without that the project will be subject to failure.

5. References :

- M. MOAZZAMI^{1a}, R. DEHGHAN, and J. Y. RUWANPURA , 2011 , Contractual Risks in Fast-Track Projects
- Amira Hashem*, Akram farouk , and moataz Abd El-Fatah , 2020 , VALUE MANAGEMENT OF THE RISKS FOR THE IMPLEMENTATION OF FAST-TRACKING (SDFT) CONSTRUCTION PROJECT
- A guide to the project management body of knowledge PMBOK 6 edition .