



Everyone's Smart University

Project (Spring 2021)

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Project Risk Management

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Executive Summary

A software development project is to be undertaken by a university, for this a team of students had been chosen. Risks within projects may have potentially drastic impacts, which can further be linked with financial losses. Thus, project managers would not be able to deliver projects within the specified time as well as deadlines. As a part of the risk management process, financial implication of risks within projects had also been mentioned. Specifically, details regarding the project, possible risks and reason for occurrence, Ways to control risks have been mentioned in detail.

Introduction

Risks in most of the cases have been observed to be ascertain, hence, their occurrences cannot be predicted accurately. However, with proper experiences, certain strategies can be deployed for controlling the impacts of Risks. Risk management process is essentially a total package of identifying, analysing as well as mitigating Risks. Risks within projects may have potentially drastic impacts, which can further be linked with financial losses. Thus, project managers would not be able to deliver projects within the specified time as well as deadlines. Such events shall further reduce the credibility of the project manager and the project management teammates. This segment of the study shall help in identifying the potential risks associated with a project. Apart from this the controls and potential financial implications associated with the Risk shall also be identified.

Overview of the project

The project basically was a software development project that had been awarded to me by the university management comparatively. The main task had been to develop a software base module that shall integrate all aspects of student management. The main features of the project can be listed below;

- Maintain a stable database of records pertaining to each student.

- Mobile application to be designed for students and customised software shall be designed for University management.
- The student's module shall feature courses, fees, duration, assignments, submission of assignments as well as projects, Library links to tutorials and learning materials.
- The University management module shall, feature to add, modify and delete data from student database.
- Accessibility shall be provided through proper registration of both user and device

Using this project, the university management aims in reducing the work of co- coordinating with students. This shall be helpful as students are currently not attending university classes, rather, they are busy in online tutorials.

Description of the risks and Potential Impacts

As commented by Muriana & Vizzini (2017), software development process utilizes several technical knowledge as well as competencies. These aspects make project management complex and induce the probability of increasing errors within the project management process. In some of the cases, these risks have been observed to be difficult to manage as well. Identification of the risks and the potential impacts of the risks shall help in identifying the root cause of the issue. Thus, it would be easy for the management to implement a proper risk management strategy. The potential Risks that may influence the ability to accomplish the current project has been mentioned below.

Risk name	Description	Potential Impacts
Inaccurate estimations within projects	Urbański, Haque & Oino (2019) mentions that the project management process requires allocation of both physical, Human as well as financial capital to be accomplished. The requirements of the projects are to be estimated beforehand. Failure to make potential estimates can result in this kind of risks	The ultimate impact of this project shall be delay in project delivery. Specifically, within accurate estimations resources shall be consumed within a jiffy. Thus, the project management team shall have to wait till additional allocations are made

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Variations of scope	Project management process takes place in iterations. Agile methodologies are utilized in most project development processes resulting in incorporation of changes within fixed intervals. This results in project specifications that is not desirable by the client	Scope variation often leads to increase in financial spending of a project (Abioye <i>et al.</i> , 2020). Apart from this, the outcomes of the project in most of the cases are unmanageable. Thus the entire effort to create the project shall go in vein
End user Engagements	The main aim of the project is to ease the student management process. Apart from this, it makes it easy for the students to communicate with the university management. This types of risks are probably like to occur	There would be no specific impacts in cost, scope and schedule. Rather, the entire project shall go in vein
Poor Management	Samimi (2020) mentions that it is the project manager that looks after aspects of the project. However, in certain cases, it has been observed that project managers fail in managing projects strategically. It is in this cases, project management risks are likely to occur	There would be significant impacts on cost, scope and schedule of the project. Thus, neither shall the projects be delivered in time, nor shall the projects be delivered with quality

Table 1: Potential Risks and probable impacts on software development project

(Source: Adapted from a study by Samimi, 2020)

Indicators or triggers for the identification of Risks as early as possible

Risk name	Indicators or triggers
Inaccurate estimations within projects	Variations within cost of the project or projects being delayed
Variations of scope	The outcomes of the project do not match the expectation of the project management team. Apart from this, it also does not comply with the scopes that had been created at the beginning of the project
End user Engagements	Resistance from users and negative feedback of the application from the users can be considered as an indicator
Poor Management	Huge cost as well as schedule variances can be a major sign. Quality aspects not meeting the agreed upon criteria can also be a sign

Table 2: Risks and Indicators of Risks

(Source: Influenced from a study by Valério *et al.*, 2020)

The information provided in the table mentions about the possible indicators for the finalized set of Risks regarding the current project. In accordance with the views of Valério *et al.* (2020) inspections shall have to be organized within specific intervals to identify the triggers. Once the major triggers have been identified, it becomes the responsibility of the project managers to strategically device measures to control the process. If proper measures are not taken to control the risk, the potential impacts can be drastic for the project management team. In simpler terms, the risks within projects cannot be controlled.

Specific Risk response strategies that can be taken

Risk name	Risk Responses
Inaccurate estimations within projects	Abioye <i>et al.</i> (2020) mentions that the development tasks are to be divided in iterations. Proceeding it, tasks are to be prioritized and along with it, the resources needed for the same. recommend for additional resource right in the initial stage itself
Variations of scope	Variations within project scopes have been observed to be induced in case Frequent changes are allowed to be implemented in the project. One of the foremost strategies shall be to limit the changes that are allowed within a specific project
End user Engagements	End users, just as other stakeholders of a project must be incorporated within a project. Right from the initial stages of the project they must be consulted. Their demands would have to be incorporated within projects to avoid such risks.
Poor Management	Frequent monitoring can be considered as a major activity that can save a project from being misled. Using cost variance analysis as a tool, projects can be managed with efficiency.

Table 3: Strategies to mitigate the impact of potential risks within projects

(Source: Influenced from a study by Abioye *et al.*, 2020)

Probability matrix and calculation of expected monetary value

Risk	probability of occurrence	Non-occurrence probability	Impact Cost	Lost	Gained
Inaccurate estimations within projects	30%	70%	\$ 100,000.00	\$ 30,000.00	\$ 70,000.00
Variations of scope	40%	60%	\$ 250,000.00	\$ 100,000.00	\$ 150,000.00
End user Engagements	60%	40%	\$ 325,698.00	\$ 195,418.80	\$ 130,279.20
Poor Management	55%	45%	\$ 250,000.00	\$ 137,500.00	\$ 112,500.00
Total Cost			\$ 925,698.00	\$ 462,918.80	\$ 462,779.20

Table 4: Expected monetary value

(Source: Created by author)

Expected monetary value can be considered as an important aspect of the risk management process. It helps to quantify the risk management process, thus, the potential financial implications of all major risks can be identified easily. In accordance with the data that has been provided in the current table, it can be commented that In case the Risks occur in the project, the project

management team shall lose \$ 462,918.80. Considering the scale as well as Budget allocated for the project, the losses shall be heavy for the team

Conclusion

Risk management within projects can be considered as an important tasks, as it helps the project managers to oversee events that can cause potential damage to the project. Based on the project selected for the advanced project management module, it can be commented that a series of brainstorming sessions had been organized to identify the potential list of Risks within the current software development projects. Finalizing the Risks within projects and identification of Reason for occurrence, certain mitigation strategies had been provided. To make the project management team aware of the potential risk impacts, financial impacts of Risks had also been provided.

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