TERM PAPER

How to manage uncertainty in IT project management?

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Abstract

Project risk management is the process of identifying, analyzing and then responding to any risk that arises over the life cycle of a project to help the project remain on track and meet its goal. Risk management isn't reactive only; it should be part of the planning process to figure out risk that might happen in the project and how to control that risk if it in fact occurs.

This paper will explore, analyze and discuss about the risk parameters, its focuses on the projects in the long run, and steps involved in reducing it such that the deliverables are efficient as well as effective, and some insights about the IT project risk management processes. The purpose of this paper is to get an understanding of what exactly risk management process is and how to use that process to manage risks in IT project.

Introduction

WHAT IS IT PROJECT MANAGEMENT?

IT project management (ITPM) is the process of managing the plan, organization, and accountability to achieve information technology goals. Since the reach of IT spans across most of a business or enterprise, the scope of these projects can be large and complex.

The magnitude of IT project management often means that it's more than just applying knowledge, aligning skills, and using regular tools and techniques to drive a project to completion. IT project managers deal with the challenges of interdependent integrations, rapid technology upgrades, and version changes that can occur throughout the project timeline.

THE IT PROJECT MANAGEMENT LIFECYCLE

The ITPM lifecycle includes the five basic phases of project management, but the main difference for IT project management is how the project lifecycle is managed.

The most common ITPM method is the Waterfall methodology, which involves a predictive linear process. The entire project is defined before starting, and each phase is initiated and completed before moving on to the next phase.

Another lifecycle method is the Iterative method, which uses a more incremental approach. The iterative or incremental approach repeats phases, and each iteration completes the planning, analysis, and design phases with the ability to deliver on a specific goal at the end of the iteration.
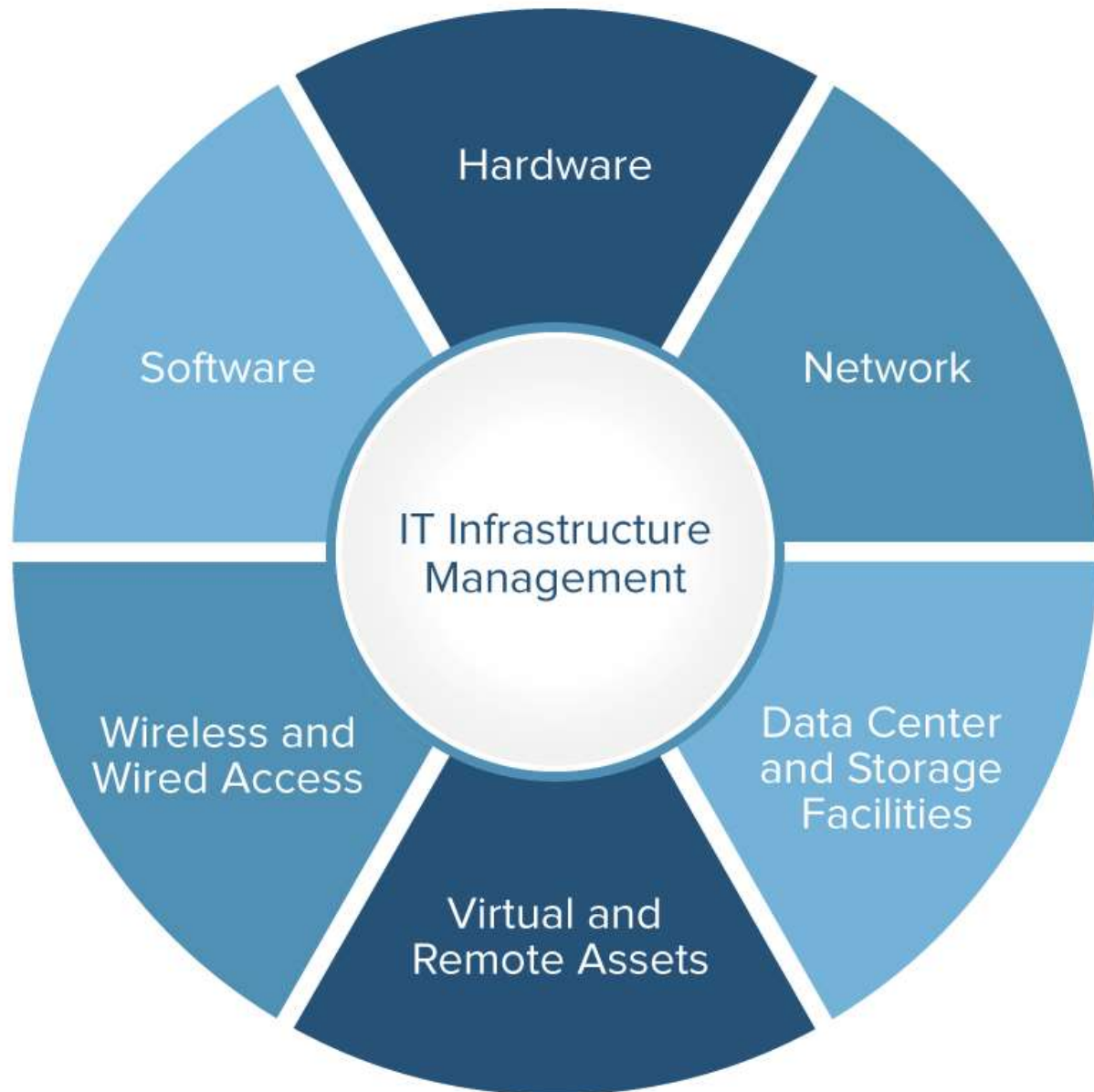
IT project management may also use an adaptive lifecycle, such as those found in Agile methodologies. This style is even more flexible than the iterative approach by condensing timelines into shorter activity bursts called sprints.

IT project management process

Phases of Project Management

Projects big and small have a lot of moving parts. There's so much to coordinate and track to get from Point A to Point B and execute a successful project. That's why projects are broken down into smaller, more digestible pieces, also known as project phases. Project phases allow you to take your unwieldy project and organize it so that you can wrap your mind around it and make progress.

In project management there are five phases: initiating, planning, executing, controlling and closing. Throughout these project phases there is a need to constantly monitor and report, which is where project management tools come in. Without project management tools, you'll be scrambling to gather actionable data, track progress and meet deadlines.

Let's take a closer look at the five phases of a project.

1. Initiation

This is where all projects begin. The value of the project is determined, as well as its feasibility. Before the project is approved or rejected, these two documents are created to sell the work to stakeholders or sponsors:

- **Business Case:** Here is where you justify the need of the project, which includes analyzing return on investment.
- **Feasibility Study:** You need to evaluate what the project's goals are, the timeline to completion and how much the whole endeavor will cost. You also note what resources will be required to fulfill the project, and if it makes financial and business sense.

2. Planning

If the project is approved, then the next step is to assemble a project team and to start planning how to manage the project so it can achieve its goals within budget and on time.

The project plan will include what resources are needed, financing and materials. The plan also gives your team direction and the following:

- **Scope**: There will be a written scope statement that reiterates the need for the project, and what its deliverables and objectives are.
- **Definition**: Here you break down the larger deliverables into smaller ones, which will help with managing them.

- **Tasks**: Identify what tasks are necessary to produce the deliverables, figure out if any tasks are dependent on other tasks.
- **Schedule**: Determine the duration of the tasks and set dates for their completion.
- **Cost**: Estimate the costs involved across the project and formulate a budget.
- **Quality**: Make sure the quality objectives are met throughout the project.
- **Organization**: Note how the project will be organized, including reporting on progress.
- **Staff**: Determine roles and responsibilities of the project team.
- Communications: Decide how information will be disseminated, to whom and with what frequency.
- **Risk**: Determine what risks are likely, how they'll impact the project and then plan how to resolve them.
- **Procurement**: Decide what work or materials will be contracted. Define those contracts and who they'll go to.

3. Execution

Now that you've done your planning, it's time to start the project. This is where the rubber hits the road, but that doesn't mean you're just cruising. This phase is made up of these detailed processes:

- **Executing the Plan**: Follow the plan you created, assign the tasks to team members and manage and monitor their progress with project management tools, like a project dashboard.
- **Administrate**: Manage the contracts secured in the project.

4. Monitor and Control

To ensure that the project plan is being actualized, all aspects of the project must be monitored and adjusted as needed. To do this, follow these processes:

- **Reporting**: Have a metric to measure project progress and an instrument to deliver this information.
- **Scope**: Monitor scope and control changes.
- **Quality**: Measure the quality of deliverables and make sure that the planned quality is being met. If not, evaluate how to improve the quality.
- **Schedule**: Keep track of delays or blocks that impact the timeline of the project and adjust to stay on track.
- **Cost**: Monitor expenses and control cost changes.
- **Risk**: Note changes in risk throughout the project and respond accordingly.

5. Close

The project isn't over once the project goals and objectives have been met. The last phase of the project is closing it out. This involves another set of processes:

• **Scope**: Make sure the project deliverables have been completed as planned.
• **Administration**: Close out all outstanding contracts and administrative matters, archive the paperwork and disseminate to proper parties.

IT Project Requirements

Stakeholders hear the term "requirements" but interpret the meaning in different ways. Before we can manage anything, it's critical that we have a working definition.

Requirement: something that is needed or that must be done.

- **Business requirements:** Describe why the project is being undertaken

- **Stakeholder requirements:** Describe the needs of a stakeholder or stakeholder group

- **Solution requirements:** Describes features, functions, and characteristics of the product, service, or result that will meet the business and stakeholder requirements

- **Functional requirements**: Describes the behaviors of the product

- **Non-Functional requirements**: Describes the environmental conditions or qualities required for the product to be effective

- **Transition requirements**: Describes the temporary capabilities needed to transition from the current as-is state to the desired future state

- **Project requirements**: Describes the actions, processes, or other conditions the project needs to meet

- **Quality requirements**: Describes any condition or criteria to validate the successful completion of a project deliverable or fulfillment of other project requirements

IT Project Risks

Simple or complex, every project has a certain amount of risks in it. In order to manage projects successfully, you need to know what those risks are and be able to deal with them efficiently.

Common types of project management risks:

- **Estimating time and risks**. One of the most important things about implementing a project is estimating it correctly. But since every website and mobile app is somewhat unique, it's not always possible to come up with exact estimations right off the bat.

- **Change of requirements**. Today's market is competitive as ever. Because of that, clients may sometimes change their vision of how their product or certain features in it should look like. Even though it's hard to be prepared for change of requirements, it's one of the things that you need to consider.

- **Unforeseen circumstances**. Just like any other people, project managers and developers are humans. For example, if some of them gets sick, it can delay the project for an indefinite period of time or even derail it.

- **Unclear specifications**. Because of incorrect project initiation, specifications may not always be clear or complete enough for developers to start their part of the work.

- **Neglecting design**. Trying save time, many developers sometimes tend to neglect design processes. However, that decision often throws them a wobbly, since design plays one of the most crucial aspects about development.

- **Technical risks**. Budget cut is among the most challenging risks as it forces you into a situation where you need to satisfy client's requirements while being low on resources.

- **Unavoidable risks**. These are risks, which can't be controlled or estimated: starting from technologies being discontinued to even changes in government policy.

How to mitigate risks in an IT project management?

- **Identify risks.** In the very beginning, thoroughly analyze the whole project and put down all potential problems that may occur in the future. Brainstorming with your team is also a good way to identify risks. Also, don't forget to explain each team member their scope of work and responsibilities.

- **Keep in touch with your client's**. In order to avoid any conflict situations or misunderstandings, make sure you always inform your clients about everything that can somehow affect the project, including potential risks. The last thing you want to happen is your client finding out that they are out of budget.

- **Don't miss good opportunities**. Make sure you spend an equal amount of time on outlining both risks and opportunities to improve things. It'll allow you to be more effective and help the client to save their time and/or money.

- **Remember to prioritize risks**. Each risk affects the project you're working on differently. From this perspective, you should focus on the project managment risks that cause the biggest losses and deal with them first.

- **Make a risk response plan**. Arrange a meeting with your team and try to find answers to the following questions: What can be done to avoid risks? How can we manage them effectively? How to make sure we haven't missed any opportunities? Answering these questions should allow you to improve the development processes.

- **Keep track of every risk**. This will allow both you and your team to avoid your mistakes in future projects.

Conclusion

As we know every project includes few risks and we cannot remove them from the project. So, we should manage the risks which interferes in the successful completion of the project. Risk management is one of the most important and challenging aspect of managing projects. As we cannot be sure of what risks we might face in future, we can surly implement a simple and standard risk management process to predict the uncertainties in the project and also to reduce the impact of these uncertainties.

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