

project Management Knowledge Areas

As a PMP I often get questions about what goes into running a project. I will try to explain in a couple of articles the various components that make up a project. There are several ways to look at a project as a whole.

You can view it as a series of processes. Some processes are executed in order and some are recurring processes that are executed at various stages throughout the entire project.

You can also view the project from the different knowledge areas that are needed to execute the project. I will cover the knowledge areas in this article and go on to the processes in my next article.

There are nine knowledge areas each covering it's own important part of the project. A knowledge area can cover several phases or process groups of the project. The nine areas are mentioned below in some detail.

Integration Management

If each little part of the project is a tree, Integration Management is the entire forest. It focuses on the larger tasks that must be done for the project to work. It is the practice of making certain that every part of the project is coordinated.

In Integration Management the project is started, the project plan is assembled and executed, the work is monitored and verification of the results of the work is performed. As the project ends the project manager also performs the tasks associated with closing the project.

A project manager must be very good at Integration Management or the project may very well fail. Other knowledge areas are also important, but Integration Management is the area that requires the most management and control of the entire project.

Scope Management

This area involves control of the scope of the project. It involves management of the requirements, details and processes. Changes to the scope should be handled in a structured, procedural, and controlled manner. The goal of scope management is to define the need, set the expectations, to deliver to the expectations, to

manage changes, and to minimize surprises and gain acceptance of the product.

Good scope management focus on making sure that the scope is well defined and communicated very clearly to all stakeholders. It also involves managing the project to limit unnecessary changes.

Time Management

Project Time Management is concerned with resources, activities, scheduling and schedule management.

It involves defining and sequencing activities and estimate the duration and resources needed for each activity. The goal is to build the project schedule subsequently manage changes and updates to the schedule.

When the schedule is first created it is often referred to as the time baseline of the project. It is later used to compare updated baselines to the original baseline.

Many project managers use software to build and maintain the schedule and baselines.

Cost Management

This knowledge area includes cost estimating and budgeting. After the cost of the project has been estimated the project management must control the cost and makes changes to the budget as needed. The Project Cost Estimate is dependent on the accuracy of the cost estimate of each activity in the project. The accuracy changes as the project progresses. For instance, in the initiation of the project the estimate is more difficult to assess than later in the project when the scope and the schedule has been defined in detail.

Quality Management

This area is an important area where outputs of different processes are measured against some predetermined acceptable measure.

The project manager must create a quality management plan. The quality plan is created early in the project because decisions made about quality can have a significant impact on other decisions about scope, time, cost and risk. The area also includes quality control and assurance. The main difference between control and assurance is that control looks at specific results to see if they conform to the

quality standard, whereas assurance is focused primarily on the quality process improvement.

Human Resource Management

This area involves HR planning like roles and responsibilities, project organization, and staff management planning. It also involves assigning staff; assess performance of project team members, and overall management of the project team. The project manager is the "Boss" of the project and Human Resource Management is essentially the knowledge area of running the project in relations to the resources assigned to the project.

Communications Management

This area focuses on keeping the project's stakeholders properly informed throughout the entire project. Communication is a mixture of formal and informal, written and verbal, but it is always proactive and thorough. The project manager must distribute accurate project information in a timely manner to the correct audience.

It involves creating a communications plan that explains what kind of information should be communicated on a regular basis and who should receive it. It includes project performance reporting to stakeholder so everyone is on the same page of the project progress, what is outstanding, what is late, what risks are left to worry about etc.

Risk Management

This involves planning how to handle risks to the project.

Specifically the project manager must identify risks and also plan how to respond to the risks if they occur. Risk has two characteristics: Risk is related to an uncertain even, and a risk may affect the project for good or for bad.

When risks are assessed the project manager usually have to assess several things: How likely is it that the risk will happen, how will it affect the project if it happens, and how much will it cost if it happens? The project manager will be using a lot of risk analysis tools and techniques to answer these questions.

Procurement Management

This area focuses on a set of processes performed to obtain goods or services from an outside organization. The project manager plan purchases and acquisitions of products and services that can't be provided by the project manager's own organization. It includes preparing procurement documents, request vendor responses, select the vendors and create and administer contracts with each outside vendor.

As you can see there are many knowledge areas that a project manager must excel at. Even though some areas are more important than others, each area must be executed with care and professionalism in order for any project to be successful.

The next article in the project management series will view the project from a process point of view and will go through the five process groups that make up a project.

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