

Many times in IT, becoming a "project manager" is as simple as having your boss hand you a project to manage. At those times, you need a quick way to find answers to your questions. Even with experienced project managers, some terms of the methodology get a little confusing. That's why we created this FAQ—where you'll find the answers to some of the most frequently asked questions about project management.

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What is ROI?

ROI stands for return on investment. Business executives want a quantitative measure that tells them what they get back from a project (i.e., beneficial returns) for what they give (i.e., resources invested). The value or worth of IT may be financial or non-financial; sometimes, it is both. There are generally three reasons for ROI analysis: justification of an existing project, rationalization of a previous expenditure, and persuasion to take a specific course of action.

How do I calculate ROI for a project?

Here's a list of the information that you would need for most financial ROI calculations:

- Project cost: maintenance and operating costs (Annual for each year included in the analysis period.)
- Financial benefits (If any. Annual for each year included in the analysis period.)
- Annual cash flow (Just subtract the annual costs from the annual financial benefits.)
- The numbers needed for non-financial calculations depend upon the measure used. Generally, it will include a combination of costs over time and either a rate or amount indicating a non-monetary business improvement (e.g., timeliness, quality, or quantity).
- More often than not, you will be expected to produce financial ROI numbers. Anyone can complete these calculations very simply and quickly with a commercial ROI calculator or a comparable tool developed in-house.

What is a cost-benefit analysis?

Every business-IT decision involves choices. You can choose "A," "B," or nothing at all. Ultimately, only one of these choices is "best." A cost-benefit analysis (CBA) compares choices (technologies, projects, etc.) and indicates which one is the best way to go. A good cost-/benefit analysis will help you to calculate data that will illustrate the impact of your project. Sometimes, a CBA is a systematic assessment of the costs and benefits of two or more alternative solutions to a problem to see which offers the best value for the money. But a CBA is also used to flesh out the monetary expectations of one project. It would include the average cost for internal corporate labor, the number of years the system is expected to be utilized, capital costs, contract labor costs, etc.

Is a business case the same as a cost-benefit analysis?

They're similar, but they're not the same. Both are techniques for generating facts to help decision-makers make more informed decisions. A "business case" is an advocacy document whose purpose is to persuade interested parties to follow a certain course of action. It's more comprehensive than a cost-benefit analysis. For example, a business case will often include a discussion of strategic alignment, while a CBA often does not. The cost-benefit analysis is a "neutral" assessment of a few viable alternatives. The CBA develops key facts regarding the costs, benefits, risks, and returns of alternative choices. It also compares the choices to identify which is most advantageous. A business case generally includes the results of a CBA.

What is a project plan?

A project manager creates a project plan before the project starts. It's used to help you estimate the total project effort and duration. It's also a way for the project manager to map out the detailed work over a few months and to make sure all roles and resources are assigned correctly. It's very helpful to have an agreed-upon set of project management procedures that are used to manage the project. Elements that should be included are scope management, risks, communication, staffing, etc. Again, the key is to define these all up front to better manage expectations. For instance, if you define and get agreement on the procedure for approving scope change requests, you should have a much easier time managing change once the project begins.

How important are deliverables in a project?

Very. Deliverables help you get buy-in from the stakeholders and sponsors, and they make them aware of the progress your project is making. Deliverables are the output of what you're doing in a project as it progresses that are delivered in a tangible format, like a project plan, or as specific aspects of a project plan, like status reports.

What's the purpose of an impact analysis?

Your project will change the way things are done, and there will be costs incurred in doing it. Working out what the difference will be is impact analysis. This is one of the most important metrics in determining whether a project should proceed.

What exactly is risk management?

Risk management is trying to ascertain what could go wrong with the project and what could go wrong with the system once it's live. For each thing that could go wrong, it's deciding what its impact would be. Another component is assessing how likely each is to occur. Combine all of those and you've got your register of risks. In your project plan, you would list any risks that have a high probability of occurring and have a high negative impact, as well as risks that have a medium probability of occurring. For each risk listed, identify activities to perform to eliminate or mitigate that risk.

What is scope management?

The purpose of defining scope is to clearly describe and gain agreement on the logical boundaries of your project. Scope statements are used to define what is within the boundaries of the project and what is outside those boundaries. The more aspects of scope you can identify, the better off your project will be. The following types of information can be helpful:

- The types of deliverables that are in scope and out of scope (business requirements, current state assessment)
- The major life-cycle processes that are in scope and out of scope (analysis, design, testing)
- The types of data that are in scope and out of scope (financial, sales, employee)
- The data sources (or databases) that are in scope and out of scope (billing, general ledger, payroll)
- The organizations that are in scope and out of scope (human resources, manufacturing, vendors)

- The major functionality that is in scope and out of scope (decision support, data entry, management reporting)

How does scope creep happen?

Many project managers recognize large scope changes but are not as diligent on smaller changes. There is a tendency to just go ahead and add the additional work without too much thought. Scope creep refers to what happens when a project accepts a large number of small changes. When all of these small changes are combined, the team realizes that it has taken on too much extra work and, consequently, can no longer make its budget and must delay commitments.

What are completeness and correctness criteria?

Quality is determined by the client, not by the project manager. That might make the project manager uneasy, since he or she may not be sure of the client's expectations. That is where completeness and correctness criteria come in. The project team and client then have a common expectation of what is required for each deliverable to be accepted. Completeness and correctness criteria should be included in the project plan.

What does an SLA do?

The SLA (service level agreement) contractually spells out the unique demands of IT by service providers to their clients. Though the document has evolved somewhat over the years to include other IT functions, its beginnings were rooted in the delivery of bandwidth and connectivity to network services.

What is the difference between a sponsor and a stakeholder?

A sponsor is the person, or representative of the organization, who is paying for the project. A stakeholder is anyone with a valid interest in your project. If your project affects someone else's work, that person is a stakeholder. Some stakeholders will have direct input into your project, as well as sign-off, while others will simply have someone representing their interests.

What is a project-level audit?

During the project-level audit, the project manager asks a series of questions to ensure compliance with the required processes and procedures. For example, the types of questions would include:

- Did the key stakeholders participate in the planning of the project?
- Have the sponsor(s) and major stakeholders formally approved the project definition?
- Is the work plan being used to manage the work performed by the team?
- Does the work plan accurately reflect the remaining work effort?
- Can the project manager clearly explain where the project is vs. where it should be at this time?
- Will all the deliverables specified in the project definition be completed?
- Is the project on track in terms of cost, duration, and quality?
- Are old risks being managed and new risks being identified?
- Are issues being addressed and resolved in a timely manner?

Although the internal PMO will handle this service in most companies, project auditing is a stand-alone service that service providers can also handle. In fact, there are consultancies that have special expertise in auditing. In some cases, having an outside party perform the audits gives the process an extra air of legitimacy that will cause senior management to pay attention.

I've been asked to figure out our project "dependencies." Where do I start?

Dependencies are tasks that depend on one another for completion. For example, before you can start creating a visual design for an intranet, you'll need to access to the business requirements. Dependencies come in two major forms:

- End to Start—You can't start your work until someone else has finished theirs.
- End to End/Start to Start—You feed your deliverables to the next person as you get them done, so that person can get on with his work. An example would be a project in which you can get started on producing HTML templates as soon as the visual designs are completed.

What are project milestones?

Milestones are based solely on dependencies and allow you to set out a plan's "skeleton." These are listed in the project plan so that stakeholders can know when to expect major tasks to be completed within the project.

What phases are associated with a project?

Here are the phases:

- Discovery phase—This is when the organization decides if it needs the project at all. In this phase, you conduct a needs analysis of the current situation and find out if the resources you're going to need are available.
- Initiation phase—This is the phase of the project when you do the initial planning, get the okay from stakeholders, and get a budget that allows you to actually run the rest of the project.
- Design phase—This is when you analyze the current situation, define what you want to happen, and what you have to do to get there.

In almost all projects, the stakeholders would first define its requirements, to clearly state what is required. The technical team then defines how it's going to be built. This order is essential for ensuring that the project delivers against the business need.

- Build phase—This is when you put the project to work.
- Test phase—Here's when you find out if what you built actually works, before you launch it.
- Launch phase—This is when you'd train any business users on the new system, communicate to the rest of the stakeholders, and move the product to production.
- Evaluation phase—You don't know if the new system meets business needs until you evaluate it. This is when you decide to modify the system, maintain it as it is, expand it, or kill it.

What is a quality control process, and how does it differ from a quality assurance process?

They're different, although they both refer to the ongoing activities that the project team will perform to ensure that the deliverables are of high quality. This can include deliverable walk-throughs, testing of subcomponents, completeness checklists, and so on. But a very important distinction that is often understated is that quality control without quality assurance may find errors after the fact, rather than preventing errors before they occur. Everyone on the team needs to have a quality control mindset to ensure that work is completed with a minimum number of errors—the first time around. The project manager and team need to understand that the first goal of quality management is to produce deliverables with no errors. The second goal is to catch any errors as early as possible.

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