



**TenStep Project Management Process
Section A - Introduction**

Version 9.0

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TenStep Project Management Process

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Welcome!

The TenStep Project Management Process® (“TenStep Process” or “TenStep”) will help project managers successfully manage projects of all kinds. The TenStep Project Management Process provides the information you need to be a successful project manager, including a step-by-step approach, starting with the basics and getting as sophisticated as you need for your particular project.

The TenStep Project Management Process is a methodology for managing work as a project. It is designed to be as flexible as you need to manage your project. For instance, it may not make sense to spend a lot of time on risk management for a project that requires 500 hours of effort and is similar to many projects that were done before. That does not imply that you ignore potential risks - just that you do not spend as much time as you might on another project (for instance, one where you were implementing new technology). This flexible and scalable approach is visible throughout the TenStep process and is one area that differentiates this methodology from others.

In Alice's Adventure in Wonderland, the king says to Alice, "Begin at the beginning, and then go 'til you come to the end; then stop". Those words can also describe a project. Regardless of the nature of the project work, project management processes help define the beginning and the end of a project, as well as provide the framework for managing all the work in the middle.

The term “project management” refers to the definition and planning, and the subsequent monitoring, controlling and conclusion of a project. Before you even begin, you should recognize that all projects need some level of project management. You are doing it today - even if it is in your head. The larger the project and the more complex it is, the more there is a need for a formal, standard, structured process. You may be able to manage a project of two people and 200 hours in your head. However, you cannot manage a project of five people and 1000 effort hours the same way. A project of ten people with 5000 effort hours needs more formal management and a project of 20 people and 20,000 hours needs even more.

Obviously there is a cost to the effort associated with project management as well. You want to be sure to apply the right level of project management to a project to ensure that the value gained is greater than the cost incurred.

To better understand the TenStep process, let's first look at the benefits that will be obtained, review some basic TenStep assumptions and caveats and then get an overview of how the TenStep Project Management Process works.

A1 The Value of Project Management

- **A1.1 Scalability – The Key to Project Management Value-Add**

A2 TenStep Writing Style

A3 How to Use the TenStep Process

A4 TenStep Process Guiding Principles

A5 Overall TenStep Process Model

- **A5.1 Capability Maturity Model**

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A6 Compare the TenStep Project Management Process to

- **A6.1 The PMI Project Management Body of Knowledge (PMBOK®) Guide Fourth Edition**
- **A6.2 PRINCE2®**
- **A6.3 Six Sigma**
- **A6.4 Agile Development**
- **A6.5 ISO 10006**

Now...Start at Step 1.0, and let the games begin!

A1 The Value of Project Management

(A1.P1)

There are some companies that have built reputations for being able to consistently manage projects effectively. However, the vast majority of organizations have a more spotty reputation. Does your organization have any of the following characteristics?

- Projects completed late, over-budget, or without meeting the functionality requirements of your client
- Weak standard processes and techniques used inconsistently by project managers
- Project management is reactive and not seen as providing value
- The time required to manage projects proactively is not built into the schedule
- Project management is considered 'overhead'
- Projects are 'successful' in spite of a lack of planning and project management, by "heroes" that overcome heavy stress and overtime work to get the job done

Good project management discipline is the way to overcome these shortcomings. Having good project management skills does not mean you have no problems. It does not mean that risks go away. It does not mean that there are no surprises. The value of good project management is that you have standard processes in place to deal with all contingencies.

Project management processes and techniques are used to coordinate resources to achieve predictable results. However, it should be understood up-front that project management is not an exact science and there is never a guarantee of success. Since projects involve people, there is always complexity and uncertainty that cannot be absolutely controlled.

Project management is both science and art. It is science in that it relies on proven and repeatable processes and techniques to achieve project success. It is an art because it also involves managing and relating to people and requires the project manager to apply intuitive skills in situations that are totally unique for each project. A good project management methodology provides the framework, processes, guidelines and techniques to manage the people and the work. A good methodology increases the odds of being successful and therefore provides value to the organization, the project and the project manager.

The value proposition for project management goes something like this. It takes time and effort to proactively manage a project. This cost is more than made up for over the life of the project by:

- **Completing projects more quickly and cheaply.** One of the biggest benefits of using a common methodology is the value of reuse. Once the processes, procedures and templates are created, they can be used (perhaps with small modifications) on all projects in the future. This results in reduced project start-up time, a shorter learning curve for project team members and time savings from not having to reinvent processes and templates from scratch on each project.

- **Being more predictable.** One of the first benefits that should occur with good project management processes is that you will be more predictable. You will find that if you do a better job of planning you will better understand the work to be accomplished, and you will do a better job of estimating this work. Then as the project progresses you will do a better job of managing the work to hit your estimated schedule and budget. This ability to be predictable is crucial when your company is making business decisions about which projects to execute. You should strive to achieve a level of predictability of 80%. In other words, 80% of your projects will finish on-time and within budget (accounting as well for any approved scope change requests).
- **Saving effort and cost with proactive scope management.** Many projects have difficulty managing scope, which results in additional unplanned effort and cost to the project. Having better project management processes will result in being able to manage scope more effectively. This does not mean that scope can never change. In fact it recognizes that scope changes are inevitable. Good scope management means that changes are recognized and managed so that the impact of the change is accounted for.
- **Better solution “fit” the first time through better planning.** Many projects experience problems because there is a gap between what the client expects and what the project team delivers. Using a methodology results in better project planning, which gives the team and the sponsor an opportunity to make sure they are in agreement on the major deliverables produced by the project.
- **Resolving problems more quickly.** Some teams spend too much time and energy dealing with problems because they do not know how to resolve the problems to begin with. Having a proactive issues management process helps ensure that problems are resolved as quickly as possible.
- **Resolving future risk before the problems occur.** TenStep includes processes to identify and manage risks. Sound risk management processes will result in potential problems being identified and managed before the problems actually occur.
- **Communicating and managing expectations with clients, team members and stakeholders more effectively.** Many problems on a project can be avoided with proactive and multifaceted communication. In addition, much of the conflict that does arise on a project is not the result of a specific problem, but because of surprises. The TenStep methodology focuses on proactive formal and informal communication, which results in fewer surprises.
- **Building a higher quality product the first time.** TenStep contains quality management processes that will help the team understand the needs of the customer in terms of quality. Once those needs are defined, the team can implement quality control and quality assurance techniques to meet the customer expectations.
- **Improved financial management.** This is the result of better project definition, better estimating, more formal budgeting and better tracking of the project actual costs against the budget. All this rigor results in better financial predictability and control.
- **Stopping “bad” projects more quickly.** “Bad” projects are those where the cost-benefit justification no longer makes sense. A project may have started with sound

cost-benefit justification. However, if the project is late and over-budget it may hit a threshold where the business case is no longer valid. Effective project management allows you to see these situations earlier so that you can make better decisions to re-scope or cancel the project.

- **More focus on metrics and fact-based decision making.** One of the more sophisticated aspects of the TenStep Process is that it provides guidance to make it easier to collect metrics (measurements). Metrics give you information that helps you determine how effectively and efficiently your team is performing and the level of the quality of your deliverables. Metrics also give you the information necessary to validate whether or not you were successful.
- **Improved work environment.** If your projects are more successful, you will find additional intangible benefits associated with your project team. Your clients will have more involvement, your project team will take more ownership of the project, morale will be better, and the project team will behave with a greater sense of professionalism and self-confidence. This should make sense. People that work on projects with problems tend to be unhappy. On the other hand, people on successful projects tend to feel better about their jobs and themselves.

People who complain that project management is a lot of 'overhead' forget the point. All projects are managed. The question is how effectively they are managed. For instance:

- Your project is going to face issues. Do you want to proactively resolve them or figure them out as you go?
- Your project will face potential risks. Do you want to try to resolve them before they happen or wait until the problems arise?
- Are you going to communicate proactively or deal with conflict and uncertainty caused by a lack of project information?
- Are you going to manage scope or deal with cost and deadline overruns caused by doing more work than your budget covers?
- Are you going to build quality into your process or fix problems later when they will be more costly to resolve?

The characteristics of the project are not going to change whether you use a formal project management process or not. What changes is how the events are dealt with when the project is in progress. Are they dealt with haphazardly and reactively or proactively with a smoothly running process?

Generally, it is believed that organizations that follow good processes are more successful than organizations that do not. Organizations that have good processes, and follow them, are sometimes called "Process Driven Organizations". These organizations get more work done and they tend to do the work that is of most value. They also have organizational systems in place to help make everyone more successful, including project managers. There are many ways to assess how well your organization follows standard processes. Perhaps the most well-known assessment model is the Capability Maturity Model (CMM), which is described in more detail at 0.0.1.1 Capability Maturity Model.

Why Doesn't Everyone Practice Effective Project Management? (A1.P2)

After reading this section so far, you might wonder why everyone does not utilize good project management techniques. Or you might ask yourself – “why aren't I using them?” There are usually a couple reasons.

- **It requires an upfront investment of time and effort.** Many people consider themselves to be 'doers'. They might not be as comfortable with their planning skills. Many times there is a tendency to discuss a problem, and then go out and fix it. This works when you have a five-hour change request. It doesn't work on a 5,000-hour project. Resist the urge to jump right in. The project will be completed sooner if you properly plan it first and then have the discipline to manage the project effectively.
- **Your organization is not committed.** It's hard to be a good project manager in an organization that doesn't value project management skills. For instance, if you take the time to create a Project Charter document and your client asks why you were wasting your time doing it, you probably are not going to be very excited about the planning process on your next project. To be most effective, the entire organization must support a common project management process.
- **You don't have the right skills.** You may find that the lack of project management processes is not a matter of will, but a matter of skill. Sometimes people are asked to manage projects without the training or the experience necessary. In those cases, they struggle without the right tools or training to manage projects effectively. Your organization also may not have a Project Management Office (PMO) or other organization that is responsible for deploying these project management skills.
- **Senior managers think that project management is a tool.** When you discuss project management with some managers, they initially think you are trying to implement a tool that allows you to be a better project manager. Actually, if it were a tool, you might have more luck convincing them of the value. Even though some aspects of project management, like the creation and management of the schedule, may utilize a tool, that is not where the value of project management is. The value is in the disciplined utilization of sound, consistent processes.
- **You may have been burned (or buried) in the past.** When you start talking about processes, best practices and templates, some managers immediately start to think about overhead, delay and paperwork. They fail to immediately connect with the value that a methodology brings. A common criticism of methodology is that it is cumbersome, paper intensive and takes too much focus away from the work at hand. Sometimes this criticism is a legitimate concern, caused by not scaling the methodology appropriately to the size of your project. For instance, if you were required to develop a fifteen page Project Charter document even if your project is only 250 hours, you may have been turned off by project management methodology. However, this is not a methodology problem as much as it is a misapplication of the methodology.
- **There is a fear of control from team members.** Many people like to be able to do their jobs creatively and with a minimum of supervision. They fear that formal project management techniques will result in tight controls that will take the creativity and fun out of the work. To a certain extent they are right. However, common processes and procedures eliminate some of the creativity in areas where

you probably don't want it in the first place. You don't need to be creative when dealing with scope change, for instance. You just need to follow the standard processes that are already in place.

- **There is a fear of the loss of control from management.** If you really want to effectively implement a project management discipline at your company, you must give a level of control and authority to the project manager. Some organizations and middle managers do not want to lose that control. These middle managers may want project managers to coordinate the projects, but the middle manager wants to make all the decisions and exercise all the control. Formal project management will not be possible in organizations where this fear is prevalent.

Some of these fears are natural and logical, while others are emotional and irrational. Although these may be reasons to be hesitant about using formal project management, they must be overcome. The bottom line on project management is this - if the result of project management was that projects would take more time, cost more and have poor quality, it would not make sense to use it.

In fact, the opposite is true. Using sound project management techniques and processes will give you a higher likelihood that your project will be completed on time, within budget and to an acceptable level of quality.

That being said, when you use a project management process, be smart. Don't build the project management processes for a ten thousand hour project if your project is only two hundred hours. Consider all aspects of how to manage a project and build the right processes for your specific project.

Options for Obtaining a Methodology (A1.P3)

To successfully implement a project management methodology, first convince yourself that there is value if the processes are applied and utilized correctly. In fact, all projects use a mixture of processes, procedures and templates. If you don't think you have any, it really means that you have poor and informal ones.

If you need a good project management methodology, there are two major sources.

1. **Build one yourself.** You can build a custom methodology that perfectly reflects the philosophy and best practices of your organization. Many companies continue to do this today.
2. **Buy one.** If you build a methodology, you might be surprised to learn that it ultimately looks similar to most other project management methodologies that people use. No matter how you structure it, you still need to plan, build a schedule, manage scope and risks, communicate, etc. Therefore, many companies choose to buy or license a pre-existing methodology. These pre-built methodologies usually have everything your organization needs to be successful.

Of course, if you buy a methodology, you still may need to customize it to meet the specific needs of your organization. This gives you the benefits of option 1, while also taking less effort and cost, which is the major benefit of option 2.

A1.1 Scalability – The Key to Project Management Value-Add

In some organizations, project management is considered overhead. It is sometimes referred to as a “necessary evil”. The TenStep philosophy for project management is that it is a value-adding process. The value is added in a number of ways as stated in A.1 The Value of Project Management.

Why do some organizations and some people consider project management to be a “necessary evil”? It is generally because of the lack of scalability. In some organizations, the project management processes are built to deal with every contingency and every option. These processes might work fine on the projects that are very large and need a lot of rigor and structure. The problem is that all projects are told that they must use these same processes.

This does not make sense. If processes are going to add value, they must be applied in a scalable manner based on the size of the project. Big projects are going to need more rigor and structure. We have to acknowledge that. The problems on these large projects don't have to do with having too much process. The problems are generally related to project managers being overwhelmed because of a lack of good processes. The project managers don't have sufficient planning processes, estimating processes, scheduling processes, scope change processes, risk management processes, etc. This causes the project manager to feel like he is always reactive and responding to emergencies.

On the other extreme, project management processes tend to delay and frustrate small projects. These projects can be managed with very light and informal techniques. The schedule for a small project might be on a checklist or a spreadsheet. Small projects usually are not very risky so they don't need formal risk management. Generally the consequences of problems on small projects are also relatively small. For example, if a project of 100 hours ends up doubling in size, it is not going to have any significant consequences to the organization. If a project of 10,000 hours ends up doubling in size, it could have a major impact.

The TenStep Project Management Process was written in a way that recognizes this scalable approach to managing projects. There is a scalable philosophy built into the core project management model. The approach is to apply a “sufficient” level of project management. “Sufficient” does not mean the least you can get away with. Sufficient on large projects is going to mean a lot of rigor and structure. Sufficient on small projects could be very light.

Keep this overall value-add philosophy in mind as you utilize the TenStep process on your project.

A2 TenStep Writing Style

(A2.P1)

This page describes some disclaimers and caveats to keep in mind when using the TenStep Project Management Process.

- **Concise explanations.** This methodology is designed to provide a large degree of value, while also being as concise as possible. After all, you are not looking for one of those methodologies with thousands of pages that aren't applicable to most projects. There is much more information that can be written for each of the steps in the process. For instance, there are entire books about the risk management process alone. Building a schedule is also the subject of many five-day classes. It is not the purpose of the TenStep process to provide an exhaustive and totally comprehensive amount of information on each step. The value of the TenStep process is that it clearly defines most of the information that is applicable to most projects, instead of trying to provide all content that would be applicable to all projects.
- **"You" and "your" refers to the project manager.** The methodology is written with the project manager as the intended audience. In many cases, the name 'project manager' is specifically mentioned. In other cases, the content may refer to 'you' or 'your'. The assumption is that 'you' (the reader) are a project manager. Obviously, anyone can read and apply the material. But remember it is written specifically for the project management role.
- **The pronouns "he" and "him" are used for consistency and simplicity.** In prior released of TenStep, we used the pronouns "he or she" and "his or her" so that we did not imply the gender of a project manager. In our opinion, we found that this added too much clutter to the text. We have subsequently settled on the use of the pronouns "he" and "his" instead. This should in no way imply any gender bias. However, after referring to other publications and columns, we think that this is a common, standard and accepted manner in which to write.
- **The use of the term "dollars".** The TenStep process may refer to cost in terms of "dollars". This is obviously an American bias. However, the same principles will apply regardless of whether your currency is US dollars, Canadian dollars, Euros, Yen, etc. If you see US dollars as the currency used for cost, just substitute your currency instead.

A3 How to Use the TenStep Process

(A3.P1)

After you have classified your project as small, medium or large (1.0.1.2 Sizing your Project (Small, Medium, Large)), start at Step 1.0 - Define the Work. Notice that there are various levels of detail needed for defining a project, depending on the size of your project. Start evaluating the project management processes to apply to your project based on the information that is provided for a project your size (small, medium or large). It is also a good practice to review all of the processes for all three project sizes, because you may find other information that you want to incorporate into your particular project. For instance, if you have a medium-sized project, you may want to incorporate some aspects of managing a large project. If you review all of the content for all project sizes, you will have the information you need to build the project management processes that are right for your particular project.

Do the same for Step 2.0 - Build the Schedule and Budget, Step 3.0 - Manage the Schedule and Budget, and Step 4.0 - Manage Issues. Start by understanding the process recommendations for your sized project, and then add any activities from the other size projects that will help you. For the most part, all projects should follow the processes in steps 1.0 through 4.0.

Now on to Step 5.0 - Manage Change. Everything you have read so far is still applicable, but there is an additional element regarding scope management. On larger projects, it is not only important to be more rigorous managing scope, but you must also do a more thorough job of defining scope. So, you will see more information added to the Step 1.0 - Define the Work process. The additional rigor and detail may not have made sense when you first encountered it in step 1.0. However, now you will start to see how the additional work in step 1.0 ties to the later management of the project. That is why you need to categorize your project into small, medium and large ahead of time. In some cases, the higher-level project management processes also require more rigor in the early definition and planning processes.

The rest of the TenStep Project Management Process works the same way.

It is important to recognize that the ten steps of the TenStep methodology do not imply a sequential progression. It is true that you must define and plan the project before you can manage it. So, steps 1.0 and 2.0 would be done before the rest. However, the applicable activities in steps 3.0 through 10.0 are done in parallel. This means that a project manager will be managing the schedule (step 3.0), managing scope (step 5.0), managing quality (step 9.0), etc., all through the project.

The higher steps of the TenStep process imply a higher level of project management sophistication. For instance, smaller projects do not necessarily need to manage risk (step 7.0) since a small project typically does not have much risk to worry about. Likewise, there could be a fair amount of work required to manage quality (step 9.0) and manage metrics (step 10.0), which means that these processes are not rigorously applied to small and medium-sized projects.

Review the content of each step for each project size. Then determine what activities make sense for your project. For instance, you may have a large project, but it may make sense to manage communication (step 6.0) as if you had a medium project. You

may have a large project, but you may not need to gather many metrics. In that case you could gather metrics (step 10.0) as if you had a small project.

A4 TenStep Context

Guiding Principles (A4.P1)

The following statements represent a set of guiding principles for the TenStep Project Management Process and are reflected in all the subsequent content.

- **Manage scalably.** A project management process must be flexible and scalable, based on the size of the underlying project. The TenStep process refers to this concept as "small methodology for small projects, large methodology for large projects™". Scalability refers to the level of complexity of the project management processes, as well as the time and focus applied to them.
- **Use on all projects.** The TenStep Project Management Process is designed to be applicable to all projects, whether you are building a house, a circuit board or a computer application. Fundamentally, all projects deal with planning, managing issues, scope, risk, etc. However, you may see some particular reference or example that is software-related (for instance, a suggested metric for system response time). In these cases, just substitute a comparable example that is applicable for your project (like circuit board speed).
- **Manage proactively.** Projects must be managed proactively regardless of the size. Project managers that wait for things to happen most often get into trouble.
- **Develop project team – client partnership.** A successful project normally requires a partnership between the project team and the client. The project is at higher risk of failure without active participation from the client.
- **Establish project management processes up-front.** Project management processes must be established up-front, and understood by the project team and the client. Most processes require the involvement of multiple members of the client and project team. These people will not understand their role in these processes if the processes are not discussed with them ahead of time.
- **Grant sufficient authority.** Project managers must have a sufficient level of authority to be successful. If the project manager is responsible for the delivery of the project, yet he cannot make key decisions needed to manage the project, he will not be successful.

TenStep does not Include the Project Life Cycle (A4.P2)

The project management methodology is an umbrella under which the rest of the project work gets done. Remember that project management is what facilitates a project being successful - it is not the project itself. The work of the project is referred to as the "life cycle". Regardless of the type of work, the life cycle typically follows a process that includes analysis, design, construct, test and implement (or one of many other project life cycles). While recognizing the importance of understanding the process needed to produce the project deliverables, this area is outside the scope of the TenStep process. (The life cycle for software development projects is explained in detail in the LifecycleStep product at www.LifecycleStep.com.)

TenStep does not Include the Gathering of Detailed Requirements (A4.P3)

Some methodologies include the gathering of business requirements to be part of the project management process. The TenStep Project Management Process includes enough high-level analysis so that the Project Charter document can be prepared. Otherwise, the formal analysis/business requirements phase is considered part of the project life cycle and is out of the scope of the project management process. (See the LifecycleStep product at www.LifecycleStep.com for more details on the Analysis Phase.)

Procurement is Important on Some Projects, but is not a Separate “Step” (A4.P4)

Some methodologies include work with vendors and contracts to be a key part of the project management process. In the TenStep process, procurement is seen as important, but not as important as the other processes defined in the TenStep methodology. In larger projects, the project manager needs to understand more and more about procurement and vendor management. However, it is also true that most companies have specialized Purchasing and Legal departments that tend to have primary responsibility for vendor management.

The need for procurement and vendor management is also dependent on your company and industry. Project managers on IT projects tend to have less responsibility in these areas. In other industries like construction, the project manager may have total responsibility.

The TenStep process contains information about procurement in a separate procurement extension document that can be integrated into the rest of the TenStep process. This is an optional step if this would be helpful for your organization.

The Project Officially Begins When a Project Manager is Assigned (A4.P5)

There are many events that can signify that a project has officially started. In the TenStep Process, the project officially starts when the project manager is assigned. Typically the first job of the project manager is to formally define the work using a Project Charter document and build the schedule and budget. This definition for the project start-date still applies even if the formal project manager does not complete the Project Charter and schedule (they may have been completed ahead of time). Remember that project management is a role. Whoever completes the Project Charter and schedule is filling the role of the project manager, even if another person is assigned to the formal role at a later time.

The Project Manager has Authority and Responsibility (A4.P6)

In the TenStep process it is assumed that the project manager has a degree of responsibility and authority on the project. They do not necessarily have total control, but they have some amount of authority. If your organization has project managers with very little authority they are probably project coordinators or project expeditors. In the TenStep process, the project manager has more authority than that.

Recognize the Purpose of the Business Case and the Project Charter (A4.P7)

In the TenStep process, the Business Case document is used to justify the project from a business perspective and it is used to allocate the funding for a project. However, just because the Business Case is approved does not mean that project is ready to start. It might be that it will be a number of months before the project actually starts.

The project officially starts when the project manager is assigned. The first thing that the project manager does is Define the Work and Build the Schedule and Budget. The Business Case is used as input. This work results in a Project Charter, schedule and budget. When the Project Charter is approved, the project is ready to begin execution. (Contrast this to the PMI PMBOK Guide where the Project Charter authorizes the project. In TenStep, the project is authorized when the Business Case is approved, and the project is ready to begin execution when the Project Charter is approved.)

The TenStep Model is Focused More on Internal Project (A4.P8)

The overall approach behind the TenStep model generally assumes that you have an internal project with internal customers. While most of the process is also applicable to client-vendor projects, some of the model will need to be revised. For instance, on a project where you have an external client, you may use a Statement of Work instead of a Project Charter. You might also have much stricter expectations about whether you are allowed to go over schedule and budget. Many of the roles might be different as well.

The Role of the Sponsor is Very Important (A4.P9)

TenStep identifies the role of the Sponsor as a key player in the success of the project. Many organizations have a person in this role, but they may be called by different names such as Project Champion or Customer. The TenStep process relies on this role to get project funding, approve major deliverables, clear roadblocks, and generally ensure that the project has the support it needs to be successful. However some organizations do not have this type of sponsor role. In some organizations, the sponsor is removed from having direct access to the project by a middle person that represents the client's interest. In some projects, such as a federal government grant, the role of the sponsor may not exist at all. However, in the TenStep process we need someone in this role. If a true sponsor does not exist or cannot be identified, the project manager should look for another person that can fill this role.

A5 TenStep Process Model

There are many different models for managing projects. Although most of the fundamental information is similar, they all have unique ways to organize the project management work, as well as unique roles, terms and philosophies. There are a number of key points to the TenStep Process Model.

The "Steps" do not Imply a Sequential Order (A5.P1)

It is important to recognize that the ten steps of the TenStep methodology do not imply a sequential progression. It is true that you must define and plan the project before you can manage it. So, steps 1.0 and 2.0 would be done before the rest. However, the applicable activities in steps 3.0 through 10.0 are done in parallel.

Step 3 is the Key Integration Step (A5.P2)

Once the project is executing, all of the project management processes are integrated in Step 3.0 Manage the Schedule and Budget. The integration occurs here because of an overriding philosophy of the TenStep process – “What’s in the schedule gets done!” In other words, all of the work of the project should be in the schedule, and if an activity is not in the schedule, it should not be worked on.

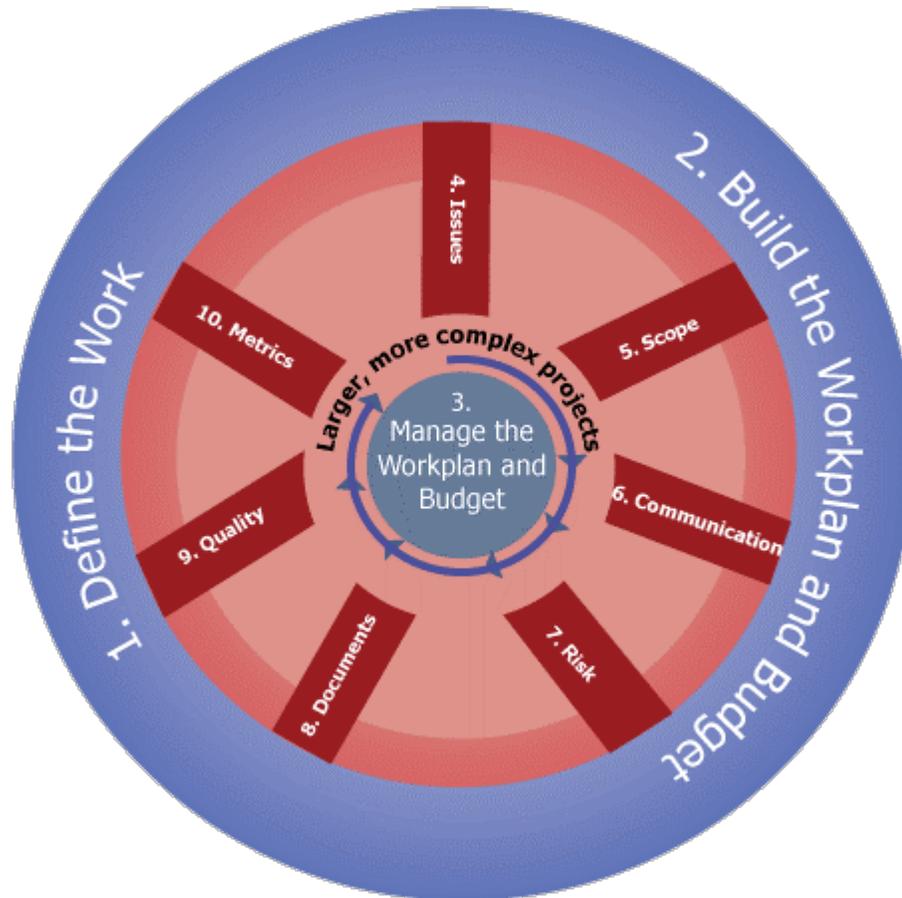
The schedule is the focal point of managing the project, and all the project management processes are integrated in the schedule. You should have activities and time allocated in your schedule for communicating, managing scope, updating the schedule and all other project management activities. The integration occurs when the project management processes touch each other, as well as when the project management and project life cycle activities overlap. Consider the following examples:

- A large scope change request is approved, resulting in more effort and more cost. This is a typical integration of project management and project life cycle work. The impact is reflected in the updated schedule and budget.
- You identify risks and create a Risk Management Plan to manage the risks. You communicate the resulting Risk Management Plan to all interested stakeholders for feedback. This is an integration of managing risk and managing communication. Since all of this work takes time and effort, the activities are on the schedule and the integration occurs in this step.

All project work should be reflected in the schedule and the budget. Therefore, this step is where the project is managed and controlled, and it is the place where all of the project life cycle and project management activities are planned, executed, tracked and integrated.

The Higher Steps do Imply More Project Management Sophistication (A5.P3)

The higher steps of the TenStep process do imply a higher level of project management sophistication. For instance, smaller projects do not necessarily need to manage risk (step 7.0) since a small project typically does not have enough risk to worry about. Likewise, the work required to manage quality (step 9.0) and manage a metrics process (step 10.0) normally means that you don’t do as much in those areas for small and medium-sized projects.



Other Related and Contrasting Terms (A5.P4)

- A5.1 Capability Maturity Model
- A5.2 Project Management vs. Project Life Cycle
- A5.3 Project Management vs. Product Management

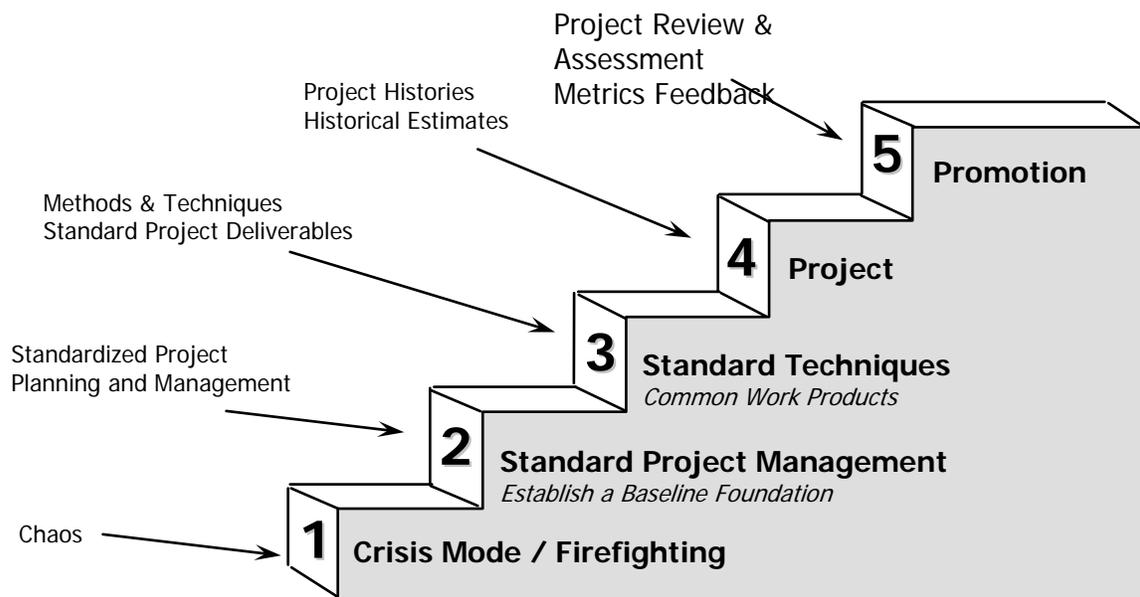
A5.1 Capability Maturity Model (CMMI)

(A5.1.P1)

The Capability Maturity Model describes a continuum of five stages based on how well a company or organization follows common and repeatable processes to get work done. The low end of the scale describes companies without repeatable processes, where much of the work is chaotic and ad-hoc. The highest end describes companies that use defined and repeatable processes, collect metrics to help them continuously improve their processes, and look for creative ways to do things better on an ongoing basis.

The CMM was developed from 1984 to 1987 by Watts Humphrey and the Software Engineering Institute (SEI). The SEI is a part of Carnegie Mellon University. The work was funded, and continues to be funded, by the Department of Defense (DoD), which was originally looking for ways to compare and measure the various contractors that were developing software for the DoD.

In the past, there were a number of different CMM models. These models were combined in 2002 into one integrated model – hence the newer acronym of CMMI. (The “I” means “integrated”.) Although the SEI continues to enhance and expand the scope and breadth of various CMMI models, the primary focus for most companies continues to be the software development world.



The Five-Stage Capability Maturity Model (CMMI) (A5.1.P2)

There are some slightly different interpretations of the CMMI. Some companies have also identified their own proprietary versions of the CMMI process. However, in general, there are five defined stages.

- **Ad-hoc / crises.** Your organization has few common processes. The success of your projects depends on the strength and skills of your people. The organization provides little in a supporting environment to help make all projects successful. Most

companies are at this level; although some companies say half-jokingly that they are at a 0 or even a -1 level.

- **Standard project management.** Your organization has implemented standard project management processes, and you utilize these common processes on all projects. You are trying to establish a baseline foundation upon which to improve further in the future. Most companies that start down the CMMI path are trying to reach this level.
- **Standard software development.** You are trying to achieve standardization in your development process similar to what you did for project management in level 2. This includes common and repeatable software development processes, deliverables, tools, etc.
- **Managed feedback.** You collect metrics on all aspects of your project management and development processes. You have a repository of metrics and key learnings on historical projects that can be leveraged by new projects.
- **Optimizing / continuous improvement.** You have a closed loop of process execution, measurement and continuous improvement. You continuously use measurement, feedback and creativity to optimize your processes.

Is CMMI Right for You? (A5.1.P3)

Should your company start down the CMMI road? Just as there are real benefits to reusing common software components, there is also value in reusing common processes. Why should every project manager in your company struggle to understand how to define a project and how detailed the schedule should be? Why should project managers struggle to understand how to effectively manage scope, risks and quality? These are not new concepts, even within your own company. These processes should all be defined once at an organizational level and then reused by all project managers.

You can use the CMMI model as your guide as you try to implement common processes. You don't have to start from level 1 and jump to level 5 in one year. The CMMI scale is a journey. Most companies only want to start by moving to level 2. However, even that short jump is not without pain. In many respects, implementing common project management processes is the most difficult part of the journey. In many organizations, this is the first time people will be asked to follow a common set of processes and many won't like it. If you can successfully get to level 2, then you should have already established the paradigm shift that will make the transition to level 3 a little easier.

In general then, many companies are seeing that they can drive business value by implementing good, reusable processes throughout their organization. The Capability Maturity Model provides a framework that companies can use to measure themselves on a standard 1 - 5 scale. Most companies today are at level 1 and would love to get as high as level 2. However, there is definitely pain involved. There is pain involved with all culture change initiatives when you ask people to change how they do their jobs. The pain can definitely be worth the gain, if your company can stay focused for the time it will take for the culture change to take effect.

A5.2 Project Management vs. Project Life Cycle

(A5.2.P1)

Projects are the way that most new work gets delivered. All projects have certain characteristics in common.

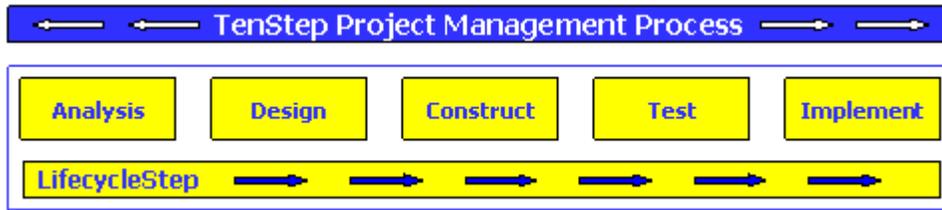
- They all have a beginning and an end.
- All projects are unique. They may be similar to prior projects but they are unique in terms of timeframes, resources, business environment, etc.
- Projects result in the creation of one or more deliverables.
- Projects have assigned resources - either full-time, part-time or both.

All organizations have projects. Projects can be managed using a common set of project management processes. In fact, a similar set of project management processes can be utilized regardless of the type of project. For instance, all projects should be defined and planned and all projects should have processes to manage scope, risk, quality, status, etc. One of the valuable things about having a common project management methodology in your organization is that the same processes can be used on all projects.

Some people are confused on the difference between project management and the project lifecycle. It takes both types of work to complete a project successfully. The general difference is that project management is used to define, plan, control, monitor and close the project. The work associated with actually building the project deliverables is accomplished through work that is referred to as the "lifecycle". Project management is used to build the schedule, but the vast majority of the work in the schedule is the lifecycle work associated with building the project deliverables.

The thing that makes a project unique is the deliverables that each project builds. For example, building a bridge is a different type of project than building an IT solution, or building a new consumer product. The lifecycle describes the activities used to build the deliverables and is generally unique for each project.

Even though all projects are unique, there are still common lifecycle models that can be used to build deliverables in similar ways. An example of a lifecycle model is the generic "waterfall". In a waterfall project you start off understanding the requirements of the solution, designing a solution, building and testing a solution and then implementing the solution. Each of these major areas of focus is called a phase (Analysis Phase, Design Phase, Construct Phase, etc.) The classic waterfall approach is the lifecycle model you would probably end up with if you knew nothing about methodology and just had to build a project schedule from scratch.



What could be easier? Even if you have a small project you still go through these basic steps, although some of them may be a mental exercise. If you have a forty-hour enhancement project, for instance, it may seem that you can jump right in with construction. But are you really? It is more likely that you are receiving some type of service request that describes the work required (analysis and requirements), which you take and mentally map into the work to be performed (design). You then make the enhancement changes required, test them and implement them (construct, test, implement). The classic waterfall approach is the life cycle model you would probably end up with if you knew nothing about methodology and just had to build a project schedule from scratch.

There are other life cycle models other than classic waterfall. Although the waterfall model can be applied to all projects, other life cycle models might be more efficient and effective based on the characteristics of the project. For instance, if you are installing a software package, you can utilize a specific life cycle model for package implementation that is light on the design and construct phases. Likewise, if you are conducting a research and development (R&D) project, you can use a specific R&D life cycle model that takes into account that the work might be thrown away when you are done. Other important life cycle models can be used to accelerate projects with certain characteristics. IT online development projects, for instance, may be able to utilize iterative development and Agile techniques.

The important point is that a common, scalable project management process can be used effectively on all your projects. The specific, detailed work to build your deliverables is referred to as the "life cycle".

A5.3 Project Management vs. Product Management

Projects vs. Product (A5.3.P1)

“Projects” are the way that new work gets delivered. All organizations have projects. Projects can be managed using a common set of project management processes.

“Project management” refers to the processes used to create or enhance the product

“Products” on the other hand, are tangible items that are produced by a project. (If you purchased a vendor product, then the vendor produced the product using a project.) If the product is temporary or has a short lifespan, we don’t normally consider it a “product”. Usually “products” are a term given to something that we build and maintain for a long period of time.

“Product management” is an approach for centrally coordinating the activities surrounding the inception, business case, development and the long-term support and enhancement of a product. You can think of product management as encompassing the full life cycle of the product. The person that executes these responsibilities is called a product manager.

The role of the product manager varies depending on where the product is in the product life cycle. The following areas describe some of the specific responsibilities of the product manager for internal and vendor developed products.

Inception

- Capture the idea so that it can be explored more fully.
- Identify opportunities for use of the product

Business case

Nurture an idea through the company’s business planning process to see if the idea can be funded. If the idea is never fulfilled, then the product management life cycle is very short.

Project

A project is started to build the product. At this point project management and product management overlap. The product manager may be assigned the role of the project manager as well, but it is more common that a project management specialist is introduced to manage the project to completion.

- Coordinate testing of new products and releases, including coordinating pilots with potential product users
- Determine when a product is “production-ready” based on testing and pilot projects
- Coordinate the deployment of the product or new releases

Maintenance and support

This is where the long-term product management occurs. It may have taken a few months to get the work funded, and it may take some months for the product to be

built. However, the product may be supported and enhanced for many years afterward. The product manager may do the support and enhancements, but it is likely that a dedicated support organization is involved.

- Act as the primary contact for coordination and communication with the product vendor (vendor products)
- Monitor product direction with the vendor (vendor products)
- Track where the product has been deployed
- Receive ongoing requests from the staff for individual products
- Integrate and adds new products and releases (vendor products)

Financial Management

- Coordinate negotiation of product contracts, purchase agreements, and maintenance agreements (vendor products)
- Ensure that budget is available for product purchases and maintenance
- Determine when to consider canceling or reducing maintenance payments based on product direction (vendor products)

Product Release Management

- Coordinate certification of new releases (vendor and internal products)
- Plan and manage new release implementation (vendor and internal products)

Product Retirement

- Determine when product need to be retired
- Plan and manage product retirement
- Retire (uninstall) the product from the environment

A6 Compare the TenStep Project Management Process

(A6.P1)

The TenStep Project Management Process is a methodology for managing work as a project. There are other methodologies and philosophies available as well – some of which are similar and some of which are complementary to the TenStep process. The purpose of this section is to draw comparisons between some of these common methodologies. The intent is to be fair and unbiased in describing the differences and similarities. However, if readers have different opinions or more information, please send them to us at admin@tenstep.com.

Compare the TenStep Project Management Process to:

A6.1 The PMI Project Management Body of Knowledge (PMBOK®) Guide Fourth Edition

A6.2 PRINCE2®

A6.3 Six Sigma

A6.4 Agile Development

A6.5 ISO 10006

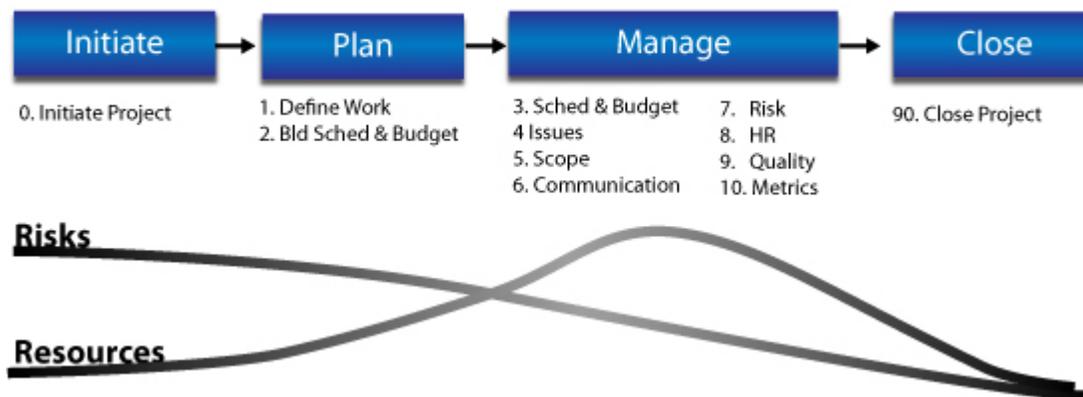
A6.1 Comparison of the TenStep Process to the PMBOK® Guide Fourth Edition

(A6.1.P1)

Every project management model has its own way of laying out the processes, procedures, best practices and templates required to successfully manage projects. If you look at them in more detail, you start to see many similarities. Differences are present as well; not so much major disagreements as differences in emphasis

One of the best known project management models is the Project Management Body of Knowledge (PMBOK® Guide), which is the standard put forward by the Project Management Institute (PMI). The PMBOK® Guide contains a lot of valuable information and includes most all of the processes that the TenStep process contains. However, there is a difference in the packaging and emphasis. The PMBOK® Guide provides a basic foundation of the knowledge areas required for a project manager to be successful, but is not a methodology that you can utilize to manage a project directly.

TenStep Project Management Process Groups



The TenStep Process can be mapped into process groups similar to the PMBOK® Guide.

In fact, PMI has stated in a 2004 issue of PMNetwork magazine that "The PMBOK® Guide is not a methodology, a how-to or a specific set of procedures." For instance, there is information, but no procedures. There are definitions, but not necessarily best practices. There are inputs and outputs, but these are not necessarily practical from the standpoint of actually managing a project.

On the other hand, there is nothing that is published in the TenStep Project Management Process that directly contradicts the PMBOK® Guide. Since many readers of the TenStep process are familiar with the PMBOK® Guide (and many are PMP® certified) this section provides a mapping of the knowledge areas and project

management processes within the PMBOK® Guide, with the corresponding processes within the TenStep Project Management Process.

The TenStep process is published in two models. The first model contains the project management processes within the “ten steps” view. This is the classic way that TenStep was originally published in 2000. In addition, this exact same content is also published in a process group view that better aligns to the PMBOK® Guide. Either model can be used to successfully manage a project. Both models contain the exact same content - only the presentation is different.

Readers that would like to utilize the PMBOK® Guide as the basis for their project management process can review TenStep PB Framework, available at www.TenStepPB.com. This product incorporates all of the content of the TenStep Project Management Process into the full PMBOK® Guide.

Project Management Body of Knowledge (PMBOK® Guide) Fourth Edition	TenStep Project Management Process
4. Project Integration Management	
4.1 Develop Project Charter	The PMBOK® Guide Charter contains information to authorize the project. The TenStep process uses the Charter to define the work and begin project execution.
4.2 Develop Project Management Plan	The Project Management Plan is referenced in TenStep Step 1.0 Define the Work.
4.3 Direct and Manage Project Execution	This is the execution of the Project Management Plan. The execution of the project schedule is contained in 3.0 Manage the Schedule and Budget. Each portion of the Project Management Plan is executed in the respective TenStep Process such as 4.0 Manage Issues, 5.0 Manage Change, etc.
4.4 Monitor and Control Project Work	This is the monitoring and controlling of the Project Management Plan. The monitoring and controlling of the project is contained in all of the “manage” steps 4.0 through 10.0.
4.5 Perform Integrated Change Control	5.0 Manage Change
4.6 Close Project or Phase	Closing a project are a part of 9.0 Close the Project
5. Project Scope Management	
5.1 Collect Requirements	1.0 Define the Work - the high level project and product requirements are collected and used as input into the Project Charter and Project Management Plan.

5.2 Define Scope	1.0 Define the Work - the Scope Definition content is a part of the Project Charter document.
5.3 Create WBS	2.0 Build the Schedule and Budget - the WBS is part of the process for building a schedule.
5.4 Verify Scope	This process involves client inspection and approval of major deliverables. In the TenStep process, this is considered part of Quality Control and Acceptance Criteria, both of which are a part of 9.0 Manage Quality. The actual verification could be a part of the completion of a milestone review, which is a part of 3.0 Manage the Schedule and Budget.
5.5 Control Scope	Scope change management is a part of 5.0 Manage Change.
6. Project Time Management	
6.1 Define Activities	Defining the low-level activities are a part of TenStep process 2.0 Build the Schedule and Budget.
6.2 Sequence Activities	2.0 Build the Schedule and Budget
6.3 Estimate Activity Resources	2.0 Build the Schedule and Budget
6.4 Estimate Activity Durations	2.0 Build the Schedule and Budget
6.5 Develop Schedule	2.0 Build the Schedule and Budget
6.6 Control Schedule	3.0 Manage the Schedule and Budget
7. Project Cost Management	
7.1 Estimate Costs	2.0 Build the Schedule and Budget
7.2 Determine Budget	2.0 Build the Schedule and Budget
7.3 Control Costs	3.0 Manage the Schedule and Budget
8. Project Quality Management	
8.1 Plan Quality	The Quality Management Plan is created as a part of the Project Management Plan created in 1.0 Define the Work.
8.2 Perform Quality Assurance	9.0 Manage Quality
8.3 Perform Quality Control	9.0 Manage Quality
9. Human Resources Management	
9.1 Develop Human Resource Plan	8.0 Manage Human Resources
9.2 Acquire Project Team	8.0 Manage Human Resources

9.3 Develop Project Team	8.0 Manage Human Resources
9.4 Manage Project Team.	8.0 Manage Human Resources
10. Communications Planning	
10.1 Identify Stakeholders	Part of 1.0 Define the Work
10.2 Plan Communications	The creation of the Communication Management Plan is a part of the Project Management Plan in 1.0 Define the Work.
10.3 Distribute Information	6.0 Manage Communication
10.4 Manage Stakeholder Expectations	Stakeholder Analysis is a part of 1.0 Define the Work. The Communication Management Plan for each stakeholder group is a part of 1.0 Define the Work.
10.5 Report Performance	Much of the performance data is collected in 3.0 Manage the Schedule. The information is reported in 6.0 Manage Communication.
11. Project Risk Management	
11.1 Plan Risk Management	7.0 Manage Risks
11.2 Identify Risks	7.0 Manage Risks
11.3 Perform Qualitative Risk Analysis	7.0 Manage Risks
11.4 Perform Quantitative Risk Analysis	7.0 Manage Risks
11.5 Plan Risk Responses	7.0 Manage Risks
11.6 Monitor and Control Risks	7.0 Manage Risks
12. Project Procurement Management	
12.1 Plan Procurements	TenStep Extension – Project Procurement
12.2 Conduct Procurements	TenStep Extension – Project Procurement
12.3 Administer Procurements	TenStep Extension – Project Procurement
12.4 Close Procurements	TenStep Extension – Project Procurement
Other	
Issues management is not emphasized in the PMBOK® Guide. The PMBOK® Guide does refer to issues as problems that can keep a team from reaching its goals, and identifies safety issues, performance issues, compliance issues, etc. Issues	4.0 Manage Issues. Issues are major problems that can impede the project but are outside the total control of the project team.

can come up in 9.0 Managing Quality, 8.0 Managing Human Resources and elsewhere.	
The PMBOK® Guide does not place major emphasis on collecting data during the project for process improvement or for declaring project success.	10.0 Manage Metrics

(A6.1.P2)

The TenStep process can be fully mapped to the nine PMBOK® Guide Knowledge Areas and the five PMBOK® Guide Process Groups. The table below represents a view for how the TenStep process covers each element of the PMBOK® Guide when viewed by process group. The TenStep process is easier to understand because it is developed in a process framework already, instead of the knowledge areas as the PMBOK® Guide is.

TenStep "Steps"	PMBOK® Guide Process Groups				
	PMBOK® Guide Knowledge Area Numbers are in Red				
	Initiating	Planning	Executing	Monitor / Controlling	Closing
1.0 Define the Work	1.1.3.P4 Develop Project Charter (4.1)	1.1.3.P5 Develop Project Management Plan (4.2) 1.1.3.P2 Collect Requirements (5.1) 1.1.3.P3 Define Scope (5.2) 1.1.3.2 Identify Stakeholders (10.1)		1.1.3.P4 Verify Scope (5.4)	
2.0 Build Schedule and Budget		2.1A.P5 Create WBS (5.3) 2.1A.P5 Define Activities (6.1) 2.1A.P6 Sequence Activities (6.2) 2.1A.P7 Estimate Activity Resources (6.3) 2.1A.P8 Estimate Activity Durations (6.4) 2.1B.P5 Estimate Costs (7.1) 2.1A.P9 Develop Schedule (6.5) 2.1B.P6 Determine Budgets (7.2)			
3.0 Manage Schedule and Budget			3.1A.3.P4 Direct and Manage Project Execution (4.3)	3.1A.3.P3 Monitor and Control Project Work (4.4) 3.1A.3.P2 Control Schedule (6.6) 3.1B.3.P1 Control Costs (7.3)	
4.0 Manage Issues					
5.0 Manage Change				5.1.3.2 Perform Integrated Change Control (4.5) 5.1.3.P1 Control Scope (5.5)	

6.0 Manage Communication		6.1.3.P2 Plan Communications (10.2)	6.1.3.P3 Distribute Information (10.3) 6.1.1.1 Manage Stakeholder Expectations (10.4)		
7.0 Manage Risk		7.1.2.P2 Plan Risk Management (11.1) 7.1.2.P3 Identify Risks (11.2) 7.1.2.P4 Perform Qualitative Risk Analysis (11.3) 7.1.2.P5 Perform Quantitative Risk Analysis (11.4) 7.1.2.P6 Plan Risk Response (11.5)		7.1.2.P7 Monitor and Control Risks (11.6)	
8.0 Manage Human Resources		8.1.1 Develop Human Resources Plan (9.1)	8.1.2 Acquire Project Team (9.2) 8.1.3 Develop Project Team (9.3) 8.1.4 Manage Project Team (9.4)		
9.0 Manage Quality		9.1.3.P2 Plan Quality (8.1)	9.1.3.P3 Perform Quality Assurance (8.2)	9.1.3.P4 Perform Quality Control (8.3)	
10.0 Manage Metrics					
90.0 Close Project					90.0 Close Project (4.7)
TenStep Extension – Project Procurement		1.1.3.1 Plan Procurements (12.1)	1.1.3.2 Conduct Procurements (12.2)	3.1A.3.P7 Administer Procurements (12.3)	90.0 Close Procurements (12.4)

A6.2 Comparison of the TenStep Process to PRINCE2®

(A6.2.P1)

PRINCE2® is a project management methodology that was created for use by the government of the United Kingdom. It is used in the private sector as well and it has become popular in many European nations. While the TenStep Project Management Process is divided into ten steps, PRINCE2® is broken down into eight processes. Of these eight processes, three (Starting up a Project, Initiating a Project, and Planning) deal with planning the project. Both Starting up a Project and Initiating a Project occur at the beginning of the PRINCE2® methodology, but Planning is an ongoing process throughout the life of the project. By contrast, the TenStep process devotes the first two of its ten steps to planning the project (1.0 Define the Work and 2.0 Build the Schedule and Budget), although the project is re-planned on an ongoing basis as a part of the 3.0 Manage the Schedule and Budget step.

The remaining eight steps of the TenStep methodology are devoted to managing the execution of the project. PRINCE2® devotes three remaining processes to executing the project.

PRINCE2's® Directing a Project process is performed by the Project Board and does not deal with the daily activities of the project manager. All of the TenStep methodology focuses on the activities of the project manager.

Although PRINCE2® and the TenStep process are both project management methodologies, PRINCE2® contains some content that the TenStep process considers to be part of the project life cycle. This content is not available as part of the TenStep Project Management Process, but it is included in the LifecycleStep Project Life Cycle Process (www.LifecycleStep.com).

The PRINCE2® and the TenStep Project Management Process have many differences in terms of focus, layout and content. However, much of the material covered in PRINCE2® is also covered by the TenStep process. The chart below features a general overview of the PRINCE2® processes and sub-processes on the left, and the column on the right shows where these processes fit into the TenStep process.

PRINCE2®	TenStep Project Management Process
Starting up a Project (SU)	
SU1 – Appointing a Project Board Executive and a Project Manager	1.0 Define the Work - addresses forming a steering committee (the TenStep methodology equivalent of a “Project Board”). The TenStep process assumes that the project manager is already in place.
SU2 – Designing a Project Management Team	1.0 Define the Work
SU3 – Appointing a Project Management Team	The project team is typically assigned upon completion of 1.0 Define the Work and 2.0 Build the Schedule and Budget.

SU4 – Preparing a Project Brief	The Project Brief contains a Project Charter produced in 1.0 Define the Work. The Brief also contains a Business Case, which is considered to be part of the project approval process, and outside the scope of the TenStep process. (This is covered in the PortfolioStep framework: www.PortfolioStep.com). The Project Brief also contains a Quality Management Plan, which is created early in the project as a part of the 9.0 Manage Quality step.
SU5 – Defining Project Approach	1.0 Define the Work
SU6 – Planning an Initiation Stage	Not needed in the TenStep process. Starting a project and “Initiating” a project are not considered separate steps.
Initiating a Project (IP)	
IP1 – Planning Quality	1.0 Define the Work – creating the Quality Management Plan 9.0 Manage Quality
IP2 – Planning a Project	1.0 Define the Work 2.0 Build the Schedule and Budget
IP3 – Refining the Business Case and Risks	1.0 Define the Work (Risks) 7.0 Manage Risk The Business Case is validated at the end of each major milestone.
IP4 – Setting up Project Controls	1.0 Define the Work 6.0 Manage Communication
IP5 – Setting up Project Files	1.0 Define the Work 5.0 Manage Communication
IP6 – Assembling a Project Initiation Document (PID)	In the TenStep process, all of the base documents of the PID are created at the beginning of the project in the 1.0 Define the Work and 2.0 Build the Schedule and Budget - including the Project Charter, the Project Schedule, Quality Management Plan and Communication Management Plan.
Directing a Project (DP)	This process focuses on the activities of the “Project Board.” In the TenStep Project Management Process, the sponsor and steering committee perform these functions.
DP1 – Authorizing Initiation	This process does not exist in the TenStep process. It is assumed to have already been completed. This idea is covered in the PortfolioStep product (www.PortfolioStep.com).
DP2 – Authorizing a Project	This occurs at the end of 1.0 Define the Work.

DP3 – Authorizing a Stage or Exception Plan	This process does not exist in the TenStep process. Project phases and stages are a part of the LifecycleStep product (www.LifecycleStep.com). Each phase in LifecycleStep ends with a phase review, including validating Business Case to continue to the next phase.
DP4 – Giving Ad-Hoc Direction	This process is ongoing throughout the TenStep Project Management Process, with special emphasis placed in 6.0 Manage Communication.
DP5 – Confirming Project Closure	25.0 Project Termination
Controlling a Stage (CS)	
CS1 – Authorizing a Work Package	3.0 Manage the Schedule and Budget
CS2 – Assessing Progress	3.0 Manage the Schedule and Budget 9.0 Manage Quality
CS3 – Capturing Project Issues	4.0 Manage Issues
CS4 – Examining Project Issues	4.0 Manage Issues
CS5 – Reviewing Stage Status	6.0 Manage Communication (status)
CS6 – Reporting Highlights	6.0 Manage Communication
CS7 – Taking Corrective Action	3.0 Manage the Schedule and Budget 4.0 Manage Issues 5.0 Manage Change 40.0 Rescuing Troubled Projects
CS8 – Escalating Project Issues	3.0 Manage the Schedule and Budget 4.0 Manage Issues
CS9 – Receiving Completed Work Package	3.0 Manage the Schedule and Budget Also part of the LifecycleStep product (www.LifecycleStep.com)
Managing Product Delivery (MP)	
MP1 – Accepting a Work Package	3.0 Manage the Schedule and Budget. Also part of the LifecycleStep product (www.LifecycleStep.com).
MP2 – Executing a Work Package	3.0 Manage the Schedule and Budget 6.0 Manage Communication 7.0 Manage Risks 9.0 Manage Quality
MP3 - Delivering a Work Package	3.0 Manage the Schedule and Budget. Also part of the LifecycleStep product (www.LifecycleStep.com).
Managing Stage Boundaries (SB)	

SB1 – Planning a Stage	Generally covered in 2.0 Build the Schedule and Budget and 3.0 Manage the Schedule and Budget. Project phases and stages are a part the LifecycleStep product (www.LifecycleStep.com). Each phase in LifecycleStep ends with a Phase review, including validating Business Case to continue to the next phase.
SB2 – Updating a Project Plan	3.0 Manage the Schedule and Budget
SB3 – Updating a Project Business Case	Generally covered at the end of each phase in the LifecycleStep product (www.LifecycleStep.com).
SB4 – Updating the Risk Log	7.0 Manage Risks
SB5 – Reporting Stage End	6.0 Manage Communication Generally covered at the end of each phase in the LifecycleStep product (www.LifecycleStep.com).
SB6 – Producing an Exception Plan	3.0 Manage the Schedule and Budget for updated schedule 7.0 Manage Risks - for updated Risk Management Plan 9.0 Manage Quality - for updated Quality Management Plan, etc.
Closing a Project (CP)	
CP1 – Decommissioning a Project	90.0 Close Project
CP2 – Identifying Follow-on Actions	90.0 Close Project
CP3 – Project Evaluation Review	90.0 Close Project
Planning (PL)	
PL1 – Designing a Plan	2.0 Build the Schedule and Budget
PL2 – Defining and Analyzing Products	1.0 Define the Work The TenStep process considers the Analysis Phase to be a part of the project life cycle. It is covered in depth in our LifecycleStep product (www.LifecycleStep.com).
PL3 – Identifying Activities and Dependencies	2.0 Build the Schedule and Budget
PL4 – Estimating	2.0 Build the Schedule and Budget
PL5 – Scheduling	2.0 Build the Schedule and Budget
PL6 – Analyzing Risks	1.0 Define the Work 7.0 Manage Risk
PL7 – Completing a Plan	1.0 Define the Work 2.0 Build the Schedule and Budget 3.0 Manage the Schedule

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A6.3 Comparison of the TenStep Process to Six Sigma

Six Sigma Overview (A6.3.P1)

Six Sigma refers to a philosophy, goal, or methodology used to reduce waste and improve the quality, cost and time performance of any business. Sigma is a Greek letter used to indicate the amount of variation or defect level in a product. (A defect is defined as anything that causes customer dissatisfaction or strays from accepted tolerances.) A typical company today might be performing at the three sigma level, meaning they are experiencing one defect out of 16 opportunities. This would equate to about 67,000 defects per million opportunities. A better company might be at the four sigma level or one defect per 160 opportunities. Not bad, but still over 6,000 errors per million. A performance level of Six Sigma is equal to 3.4 defects per million opportunities - not perfect, but pretty close.

In general, Six Sigma is a philosophy that provides companies with a series of processes and statistical tools that lead to both increased profitability and quality - whether a company produces durable goods or services. Six Sigma is a long-term process that is intended to cause continuous improvement. These improvements cannot be accomplished by restructuring the company or simply spending a lot of money. Instead, Six Sigma quality requires perseverance, focus and dedication.

A Six Sigma level of quality can be achieved through an ongoing combination of structured and systematic projects. Projects are categorized as:

- Transactional business process projects that extend across an organization
- Traditional quality improvement projects that solve chronic problems that span multiple functions within an organization

A company, organization or project that tries to achieve a Six Sigma level of quality should focus on the design of products, services, or processes. Six Sigma principles can be applied to many areas, including manufacturing, administrative and customer service. Six Sigma techniques help lower variability, which reduces the number of defects and the operating costs while increasing effective capacity. Six Sigma techniques can also be used to improve other areas, such as customer loyalty, which also helps the company's bottom line.

TenStep Project Management Process Overview (A6.3.P2)

Project management refers to the definition and planning, and then the subsequent management, control, and conclusion of a project. It is important to recognize that all projects need some level of project management. The larger and more complex the project, the greater the need for a formal, standard, structured process. Smaller projects still need a structured process, but it does not need to be as elaborate or as complex. Obviously there is a cost to the effort associated with project management, but there are many benefits that are obtained as well. These benefits far outweigh the costs.

Not surprisingly, the TenStep Project Management Process is divided into ten steps – the first two for definition and planning, and the next eight for managing and controlling the work. These steps are as follows:

1.0 Define the Work. The project manager spends the time defining the work to ensure that the project team and the customer have common perceptions of the project deliverables, benefits and purpose.

2.0 Build the Schedule and Budget. The schedule is a vital tool to ensure that the project team knows what they need to do.

3.0 Manage the Schedule and Budget. The schedule should be kept up-to-date and should always tell you how much work is remaining.

4.0 Manage Issues. Many problems come and are resolved quickly. However, an 'issue' arises when a problem impedes the progress of the project and cannot be resolved by the project manager and project team without outside help.

5.0 Manage Change. Scope is the way that you describe the boundaries of the project. The purpose of scope change management is to ensure that the sponsor (or his designate) approves any changes made to this initial scope agreement.

6.0 Manage Communication. Properly communicating on a project is a critical success factor for managing the expectations of the customer and the stakeholders.

7.0 Manage Risk. Risk refers to future conditions or circumstances that exist outside of the control of the project team that will have an adverse impact on the project if they occur. Successful project managers try to resolve potential problems before they occur.

8.0 Manage Human Resources. Generally, the larger the project, the more human resources are required, and the more rigor the project manager must have in acquiring, developing and managing the project team.

9.0 Manage Quality. The purpose of the quality management step is to first understand the actual expectations of the customer in terms of quality, and then put a proactive plan and process in place to meet those expectations.

10.0 Manage Metrics. Metrics are used to gather quantitative data for decision making, and can tell you whether you are meeting expectations.

Comparison (A6.3.P3)

The TenStep process is used to manage projects of all shapes and sizes. One of the basic "steps" is the process of managing quality. Quality initiatives can be established for individual projects and for entire organizations. Six Sigma is an organizational philosophy specifically focused on quality, so in that respect it overlaps with one portion of the TenStep process.

Generally, Six Sigma and the TenStep Project Management Process are complementary processes. Running projects with a Six Sigma level of quality requires a standard project management process. The TenStep process would fill this need. Likewise, one of the ten aspects of the TenStep Project Management Process is to manage to an acceptable level of quality. Six Sigma could provide the overall foundation for this quality management step. Therefore, a company can implement the TenStep process as its overall project

management process. The same company can also implement Six Sigma as its overall quality philosophy.

In summary, companies do not need to choose between implementing TenStep and Six Sigma. These two methodologies do not compete in the same space and they do not fill the same basic needs. Instead, companies can use both methodologies in a complementary manner – the TenStep process for project management and Six Sigma for the overall quality philosophy.

A6.4 Comparison of the TenStep Process to Agile Software Development

(A6.4.P1)

In recent years, a number of ideas have been published on ways to make the software development process simpler, easier to implement and more responsive to client needs. Extreme programming, Scrum and crystal methodologies are a couple examples. Seventeen people who have been at the forefront of this thinking met in Utah on February 11, 12 and 13, 2001 to find common ideas on software development. The result was a manifesto for a set of development principles and philosophies that are copied below.

While the majority of the philosophy deals with the actual software development process, a few points touch on project management. In general, the TenStep Project Management Process compliments this development process nicely in most areas. In other areas, there is a divergence of opinion. You can read the Agile Manifesto below, along with author comments as to how it relates to the TenStep process.

<p>The Manifesto for Agile Software Development</p> <p>Seventeen anarchists agree:</p> <p>We are uncovering better ways of developing software by doing it and helping others do it. Through this work we have come to value:</p>	<p>TenStep Project Management Process</p>
<p><i>Individuals and interactions</i> over processes and tools.</p> <p><i>Working software</i> over comprehensive documentation.</p> <p><i>Customer collaboration</i> over contract negotiation.</p> <p><i>Responding to change</i> over following a plan.</p>	<p>The experience of the author is that projects executed in an organization have a much better chance of success with a flexible and scalable set of consistent processes. If these processes have been utilized successfully before, there is a greater likelihood that yours will be successful as well.</p> <p>We consider the TenStep Process to be very "light" but it does represent the minimum requirements to successfully manage projects. Most (but not all) of the philosophies of the TenStep process will support Agile development.</p>
<p>That is, while we value the items on the right, we value the items on the left more.</p> <p>We follow the following principles:</p>	
<p>Our highest priority is to satisfy the customer through early and continuous</p>	<p>The Agile philosophy promotes iterative development, with early requirements</p>

<p>delivery of valuable software.</p>	<p>followed by working code, followed by more requirements and more code. This is fine, but iterative development is not the best approach for all software projects. Where it can be implemented, it should be tried.</p>
<p>Welcome changing requirements, even late in development. Agile processes harness change for the customer's competitive advantage.</p>	<p>Under general iterative development, requirements do not need to be locked down early. However, even with traditional iterative development, at some point, the requirements need to be locked down for the sake of delivering something. At that point, scope change management comes into play.</p> <p>In Agile, development requirements can change at any point. The thought is that the client can continue to make changes, as long as they prioritize these changes in the appropriate iteration. For example, if the client asked for three reports and later wants a fourth, the fourth report can be added to the requirements list with no problem. At some point, the client will need to prioritize this new report and when they do, the new report will be written. If the client's budget is open ended, then there is no formal scope change process – whatever the client wants and prioritizes, will be delivered. If the client is on a fixed budget, then prioritizing one change to complete will, in essence, mean that some other piece of work will not get done. In this scenario, the client is enforcing scope change management by ensuring that only changes that are of the highest priority get prioritized while others do not.</p> <p>The TenStep approach states that when business changes happen, the project team must be prepared to respond. However, requirements changes have consequences in terms of budget and delivery dates and these must be approved by the sponsor. If the team does this, they are practicing scope change management.</p>
<p>Deliver working software frequently, from a couple of weeks to a couple of months, with a preference to the shorter</p>	<p>The TenStep process recommends that large projects be broken down into a series of smaller ones, each of which can be delivered</p>

<p>timescale.</p>	<p>more quickly and repetitively. Not all projects have this flexibility, but the preference is toward smaller projects when possible.</p> <p>Agile processes can take the short delivery cycle to an extreme. Some extreme programming projects deliver on very short cycles of even every week. Although this can be tough to manage, there is nothing inherently wrong with this.</p>
<p>Business people and developers work together daily throughout the project.</p>	<p>This is the best approach to staying in touch with the customers needs.</p>
<p>Build projects around motivated individuals. Give them the environment and support they need, and trust them to get the job done.</p>	<p>Sometimes very motivated people get into trouble delivering projects on time (Deming recognized this a half century ago). They can focus too much on the development details and not enough on managing to a budget and deadline. If motivated people always got their projects done on time, there would be a higher percentage of successful projects. Sometimes you need to place motivated people into a more structured environment where they can be successful. The author believes the best approach is to build projects around motivated people, and then make sure they have the right tools, processes and skills to get the job done.</p>
<p>The most efficient and effective method of conveying information to and within a development team is face-to-face conversation.</p>	<p>There is no question that personal communication is best in many circumstances. However, there are times when other communication media are fine; for instance, email may be fine when sending status updates to 20 people. Some relevant documentation also needs to be written down – if the information is needed when all the original developers are gone. This documentation should be for important information only.</p>
<p>Working software is the primary measure of progress.</p>	<p>In iterative development, having working software at the end of each iteration is a good measure of progress. However, not all projects can be done using iterative development; for instance, package implementations. So on most projects, you can continue to monitor the plan by major</p>

	milestones to ensure you are on schedule.
Agile processes promote sustainable development. The sponsors, developers and users should be able to maintain a constant pace indefinitely.	Agile development stresses a 40-hour workweek and a pace that can be maintained indefinitely. Of course, with proper planning and management, this is the best approach.
Continuous attention to technical excellence and good design enhances agility.	Technical excellence and solid up-front design decisions are essential to making Agile processes work.
Simplicity—the art of maximizing the amount of work not done—is essential.	Agreed. Software developers and customers should focus on delivering the core requirements first. This "maximizes the work not done." It also allows software to be delivered more quickly. The TenStep Process follows this simplicity model as well. Projects should be managed according to the size and complexity of the work, with a view that all project management should result in value.
The best architectures, requirements and designs emerge from self-organizing teams.	If every team were high-performing and technically superior, this point would be easier to agree with. However, project teams are not mature enough and do not have the right skill level to develop the best designs and architectures. It is important that the right people be chosen for these Agile projects.
At regular intervals, the team reflects on how to become more effective, then tunes and adjusts its behavior accordingly.	Agreed. Teams should constantly strive to understand their strengths and weaknesses and how the processes can be improved. The TenStep process also believes these recommended changes should be surfaced to the organization so that the improvement ideas can be leveraged by the entire staff.
—Kent Beck, Mike Beedle, Arie van Bennekum, Alistair Cockburn, Ward Cunningham, Martin Fowler, James Grenning, Jim Highsmith, Andrew Hunt, Ron Jeffries, Jon Kern, Brian Marick, Robert C. Martin, Steve Mellor, Ken Schwaber, Jeff Sutherland, Dave Thomas www.agileAlliance.org	

A6.5 Comparison of the TenStep Process to ISO 10006

The TenStep Project Management Process is ISO 10006 Compliant (and more)!
(A6.5.P1)

The International Organization for Standardization (ISO) is a specialized international agency that promotes the development of precise standards to help ensure that products, services, and materials throughout the member nations remain consistent. This standardization helps to facilitate the international exchange of goods and services and to develop cooperation in intellectual, scientific, technological, and economic activity. The results of ISO technical work are published as international standards. The hope is that if a company uses processes that result in the achievement of an ISO certification, the products produced by that process will meet some minimum standards of all countries in the area of relevance.

The international standards for project management are reflected in ISO 10006, and they are similar in nature to the PMBOK® Guide from the Project Management Institute (although the ISO standards are much less comprehensive). The ISO 10006 document itself is written at a very high level. The processes/clauses represented in the table below are described in only 20 pages. The TenStep Project Management Process actually is much more comprehensive and complete than the ISO 10006 standard.

The following chart describes the ISO standard at a high level, and is taken from the ISO 10006 standard document. The last column on the chart shows where each clause is covered in the TenStep Project Management Process.

Note that the ISO 10006 standard has some additional subclauses and sub-subclauses that provide more perspective and guidance from an organization perspective. However, the table below represents the ISO 10006 processes specifically relating to projects and comes from the ISO 10006 Annex A - Flowchart of Processes in Projects. (Most of the ISO 10006 organization-level clauses are covered in the PortfolioStep Portfolio Management Framework (www.PortfolioStep.com) and the PMOStep Project Management Office Framework (www.PMOStep.com)).

From ISO 10006					TenStep Project Management Process
Clause	Subclause	Sub-subclause	Process	Process Description	
5 Management responsibility	5.2 Strategic process	5.2	Strategic	A direction-setting process which includes planning the establishment and implementing the quality	1.0 Define the Work 9.0 Management Quality (Quality Management Plan)

				management system based on the application of the quality management principles.	
6 Resource Management	6.1 Resource-related processes	6.1.2	Resource planning	Identifying, estimating, scheduling and allocating all relevant resources.	1.0 Define the Work 2.0 Build Schedule and Budget
		6.1.3	Resource control	Comparing actual usage against resource needs and taking action if needed.	3.0 Manage Schedule and Budget
	6.2 Personnel-related processes	6.2.2	Establishment of project organizational structure	Defining a project organizational structure tailored to suit the project needs, including identifying roles in the project and defining authority and responsibility.	1.0 Define the Work
		6.2.3	Allocation of personnel	Selecting and assigning sufficient personnel with appropriate competence to suit the project needs.	1.0 Define the Work 8.0 Manage Human Resources
		6.2.4	Team	Developing individual and	1.0 Define the Work

			development	team skills and ability to enhance project performance.	8.0 Manage Human Resources
7 Product realization	7.2 Interdependency-related processes	7.2.2	Project initiation and project management plan development	Evaluating customers' and other interested parties' requirements, preparing a project management plan and initiating other processes.	1.0 Define the Work
		7.2.3	Interaction management	Managing interactions during the project.	3.0 Manage Schedule and Budget 6.0 Manage Communication
		7.2.4	Change management	Anticipating change and managing it across all processes.	3.0 Manage Schedule and Budget 5.0 Manage Change
		7.2.5	Process and project closure	Closing processes and obtaining feedback.	3.0 Manage Schedule and Budget (Project Termination)
	7.3 Scope-related processes	7.3.2	Concept development	Defining the broad outlines of what the project product will do.	1.0 Define the Work
		7.3.3	Scope development and control	Documenting the characteristics of the project product in	10.0 Manage Metrics

				measurable terms and controlling them.	
		7.3.4	Definition of activities	Identifying and documenting activities and steps required to achieve the project objectives.	2.0 Build the Schedule and Budget
		7.3.5	Control of activities	Controlling the actual work carried out in the project.	3.0 Manage the Schedule and Budget
	7.4 Time-related processes	7.4.2	Planning of activity dependencies	Identifying inter-relationships and the logical interactions and dependencies among project activities.	2.0 Build the Schedule and Budget
		7.4.3	Estimation of duration	Estimating the duration of each activity in connection with the specific conditions and the resources required.	2.0 Build the Schedule and Budget
		7.4.4	Schedule development	Interrelating the project time objectives, activity dependencies and their durations as the framework for developing general and	3.0 Manage Schedule and Budget

				detailed schedules.	
		7.4.5	Schedule control	Controlling the realization of the project activities, for confirming the proposed schedule or for taking adequate actions for recovering from delays.	3.0 Manage the Schedule and Budget
	7.5 Cost-related processes	7.5.2	Cost estimation	Developing cost estimates for the project	2.0 Build the Schedule and Budget
		7.5.3	Budgeting	Using results from cost estimation to produce the project budget.	2.0 Build the Schedule and Budget
		7.5.4	Cost control	Controlling costs and deviations from the project budget.	3.0 Manage the Schedule and Budget
	7.6 Communication-related processes	7.6.2	Communication planning	Planning the information and communication systems of the project.	1.0 Define the Work 6.0 Manage Communication
		7.6.3	Information management	Making necessary information available to project organization members and other	6.0 Manage Communication

				interested parties.	
		7.6.4	Communication control	Controlling communication in accordance with the planned communication system.	6.0 Manage Communication
	7.7 Risk-related processes	7.7.2	Risk identification	Determining risks in the project.	1.0 Define the Work 7.0 Manage Risk
		7.7.3	Risk assessment	Evaluating the probability of occurrence of risk events and the impact of risk events on the project.	1.0 Define the Work 7.0 Manage Risk
		7.7.4	Risk treatment	Developing plans for responding to risk.	1.0 Define the Work 7.0 Manage Risk
		7.7.5	Risk control	Implementing and updating the risk plans.	7.0 Manage Risk
	7.8 Purchasing-related processes	7.8.2	Purchasing planning and control	Identifying and controlling what is to be purchased and when.	1.0 Define the Work
		7.8.3	Documentation of purchasing requirements	Compiling commercial conditions and technical requirements.	1.0 Define the Work
		7.8.4	Supplier evaluation	Evaluating and determining which suppliers and	1.0 Define the Work

				subcontractors should be invited to supply products.	
		7.8.5	Contracting	Issuing invitations to tender, tendering evaluation, negotiation, preparation and placing of the subcontract.	1.0 Define the Work
		7.8.6	Contract control	Ensuring that subcontractors' performances meet contractual requirements.	3.0 Manage Schedule and Budget
8 Measurement, analysis and improvement	8.1 Improvement-related processes	8.1	Improvement	Gives guidance on how the originating and project organizations should learn from projects.	9.0 Manage Quality 10.0 Manage Metrics
	8.2 Measurement and analysis	8.2	Measurement and analysis	Gives guidance on the measurement, collection and validation of data for continual improvement.	9.0 Manage Quality 10.0 Manage Metrics
	8.3 Continual improvement	8.3.1	Continual improvement by the originating organization	The steps the originating organization should take for continual improvement of the project	9.0 Manage Quality 10.0 Manage Metrics

				process.	
		8.3.2	Continual improvement by the project organization	The information that the project organization should supply to the originating organization to enable continual improvement.	9.0 Manage Quality 10.0 Manage Metrics
Not specifically covered in ISO 10006					4.0 Manage Issues
Not covered adequately in ISO 10006					5.0 Manage Change
Not covered adequately in ISO 10006					6.0 Manage Communication
Not covered adequately in ISO 10006					9.0 Manage Quality

The above model is copyrighted to ISO 2003.

A90 Glossary

Activity - For the purposes of the TenStep Project Management Process®, an activity is the smallest unit of work identified on the project schedule. (In other methodologies, an activity may be broken down even further into tasks.)

Assumption - There may be external circumstances or events that must occur for the project to be successful. If you believe such an event is likely to happen, then it would be an assumption (contrast with the definition of a risk). If an event is within the control of the project team, such as having testing complete by a certain date, it is not an assumption. It is part of the approach. If an event has a 100% chance of occurring, it is not an assumption, since there is not 'likelihood' or risk involved. It is just a fact. Examples of assumptions might be that 'budgets and resources will be available when needed ...' or 'the new software release will be available for use by the time the Construct Phase begins'. This is a simple definition for an assumption. For a more precise definition and further information see 7.1.3 Manage Risks / Assumptions.

Client - The person or group that is the direct beneficiary of a project or service. They are the people for whom the project is being undertaken (indirect beneficiaries are probably stakeholders). If the persons or group are internal within your company, the TenStep process refers to them as "clients". If they are external, the TenStep process refers to them as "customers".

Constraints – Constraints are limitations that are outside the control of the project team and need to be managed around. They are not necessarily problems. They are not risks since they are 100% likely to occur (risks have a probability of occurrence but less than 100%). However, the project manager should be aware of constraints because they refer to limitations that the project must execute within. Date constraints, for instance, imply that certain events (perhaps the end of the project) must occur by certain dates. Resources are almost always a constraint since they are not available in an unlimited supply. For instance, once your project budget is set, it becomes a constraint that the project must live within.

Critical Path – This is the sequence of activities that must be completed on schedule for the entire project to be completed on schedule. It is the longest duration path through the schedule. If an activity on the critical path is delayed by one day, the entire project will be delayed by one day (unless another activity on the critical path can be accelerated by one day).

Critical Success Factor - A critical success factor is any event that must occur for the project to meet its goals and objectives.

Customer - The person or group that is the direct beneficiary of a project or service. They are the people for whom the project is being undertaken (indirect beneficiaries are probably stakeholders). If the persons or group are internal within your company, the TenStep process refers to them as "clients". If they are external, the TenStep process refers to them as "customers".

Deliverable - A deliverable is any tangible outcome that is produced by the project. These can be documents, plans, computer systems, buildings, aircraft, etc. Internal deliverables are produced as a consequence of executing the project, and are usually

only needed by the project team. External deliverables are those that are created for clients and stakeholders.

Functional Manager - The functional manager is the person that you report to within your functional organization. Typically, he is the person that does your performance review. The project manager may also be a functional manager, but he does not have to be. If your project manager is different from your functional manager, your organization is probably utilizing matrix management.

Gantt chart - A Gantt chart is a bar chart that depicts activities as blocks over time. The beginning and end of the block correspond to the beginning and end-date of the activity.

Issue - An issue is a major problem that will impede the progress of the project and cannot be resolved by the project manager and project team without outside help.

Life Cycle - This term refers to the process used to build and support the deliverables produced by the project. (Since a project has a start-date and end-date, the long-term support of a solution is performed after the project is completed.) For software development, the entire life cycle might consist of planning, analysis, design, construct/test, implementation and support.

Milestone - A milestone is a scheduling event that signifies the completion of a major deliverable or a set of related deliverables. A milestone, by definition, has duration of zero and no effort. There is no work associated with a milestone. It is a flag in the schedule to signify that some other work has completed. Usually a milestone is used as a project checkpoint to validate how the project is progressing and revalidate the remaining work. They are also used as high-level snapshots for management to validate the progress of the project. In many cases there is a decision that needs to be made at a milestone. Milestones are not based on the calendar. They are usually based on the completion of one or more deliverables.

Objective - A concrete statement describing what the project is trying to achieve. The objective should be written at a low level, so that it can be evaluated at the conclusion of a project to see whether it was achieved or not. A well-worded objective will be **Specific, Measurable, Attainable/Achievable, Realistic and Timebound (SMART)**. See 1.3.1 Define the Work / Goals and Objectives for more information.

Program - A program is the umbrella structure established to manage a series of related projects. The program does not produce any project deliverables; the project teams produce them all. The purpose of the program is to provide overall direction and guidance, make sure the related projects are communicating effectively, provide a central point of contact and focus for the client and the project teams and determine how individual projects should be defined to ensure all the work gets completed successfully.

Program Manager - The person with authority to manage a program. (Note that this is a role. The program manager may also be responsible for one or more of the projects within the program. They would be project manager on those projects as well as overall program manager.) The program manager leads the overall planning and management of the program. All project managers within the program report to the program manager.

Project – Projects are a way to structure work to complete a set of deliverables. A project has a specific start-date and end-date, specific objectives and specific resources assigned to perform the work. A project manager has overall responsibility and authority over a project. When the objectives are met, the project is considered complete. See 1.0.1 What is a Project? for more information.

Project Charter – Before you start a project it is important to know the overall objectives of the project, the scope, the deliverables, risks, assumptions, project organization chart, etc. The Project Charter is the document that holds this relevant information. The project manager is responsible for creating the Project Charter. The document should be approved by the sponsor to signify that the project manager and the sponsor are in agreement on these important aspects of the project.

Project Manager - The person with authority to manage a project. This includes leading the planning and the development of all project deliverables. The project manager is responsible for managing the budget, schedule and Project Management Plan (scope management, issues management, risk management, etc.). See 1.0.2 Role of a Project Manager for more information.

Project Phase - A phase is major logical grouping of work on a project. A phase also represents the completion of a major deliverable or set of related deliverables. On an IS development project logical phases might be planning, analysis, design, construct (including testing) and implementation

Project Team - The project team consists of the full-time and part-time resources assigned to work on the deliverables of the project. They are responsible for

- Understanding the work to be completed
- Planning out the assigned activities in more detail if needed
- Completing assigned work within the budget, timeline and quality expectations
- Informing the project manager of issues, scope changes, risk and quality concerns
- Proactively communicating status and managing expectations

The project team can consist of human resources within one functional organization or it can consist of members from many different functional organizations. A cross-functional team has members from multiple organizations. Having a cross-functional team is usually a sign of your organization utilizing matrix management.

Requirements – Requirements are descriptions of how a product or service should act, appear or perform. Requirements generally refer to the features and functions of the deliverables you are building on your project. Requirements are considered to be a part of project scope. High-level scope is defined in your Project Charter. The requirements form the detailed scope. After your requirements are approved, they can be changed through the scope change management process.

Risk - There may be external circumstances or events that must *not* occur for the project to be successful. If the combination of the probability of the occurrence and the impact to your project is not acceptable to you, it would be a risk. (Contrast with the definition of an assumption.) Identifying something as a risk increases its visibility, and allows a proactive Risk Management Plan to be put into place.

Schedule – The project schedule tells you “how” you will complete the project. The schedule describes the activities required, the sequence of the work, who is assigned to the work, an estimate of how much effort is required, when the work is due, and other information of interest to the project manager. The schedule allows the project manager to identify the work required to complete the project and also allows the project manager to monitor the work to determine if the project is on schedule.

Scope - Scope is the way that you describe the boundaries and deliverables of the project. It defines what the project will deliver and what it will not deliver. For larger projects, it can include the organizations affected, the transactions affected, the data types included, etc. See 5.0.1 Defining Scope for more information.

Service Level Agreement (SLA) - An SLA is an agreement concerning a measurable level of service between the service provider and the service receiver.

Sponsor (Executive Sponsor and Project Sponsor) - The person who has ultimate authority over the project. The executive sponsor provides project funding, resolves issues and scope changes, approves major deliverables and provides high-level direction. He also champions the project within his organization. Depending on the project, and the organizational level of the executive sponsor, he may delegate day-to-day tactical management to a project sponsor. If assigned, the project sponsor represents the executive sponsor on a day-to-day basis, and makes most of the decisions requiring sponsor approval. If the decision is large enough, the project sponsor will take it to the executive sponsor.

Stakeholder - Specific people or groups who have a stake in the outcome of the project. Normally stakeholders are from within the company and could include internal clients, management, employees, administrators, etc. A project may also have external stakeholders, including suppliers, investors, community groups and government organization.

Standard - A standard is a *required* approach for conducting an activity or task, utilizing a product, etc. Many times a standard is a best practice that must be followed to have a better chance of overall success.

Steering Committee - A steering committee is a group of high-level stakeholders that are responsible for providing guidance on overall strategic direction. They do not take the place of a sponsor, but help to spread the strategic input and buy-in to a larger portion of the organization. The steering committee is usually made up of organizational peers, and is a combination of direct clients and indirect stakeholders.

Template - Templates are pre-existing forms that include standard text and spaces to fill-in-the-blanks with standard information. Templates saves time since each person does not have to create the document format on their own. Templates also allow information to be presented in standardized and recognizable formats for the reader.