

The Five Secrets of Project Scheduling

By Michelle Colodzin, PMP, PMI-SP, MCTS, MS Project Black Belt
MetaVista Consulting Group

This document is intended for project schedulers, project managers, members of a project management office (PMO) and those interested in learning more about the factors that contribute to good project scheduling. It assumes a basic knowledge of the activities involved with and common pitfalls of project scheduling.

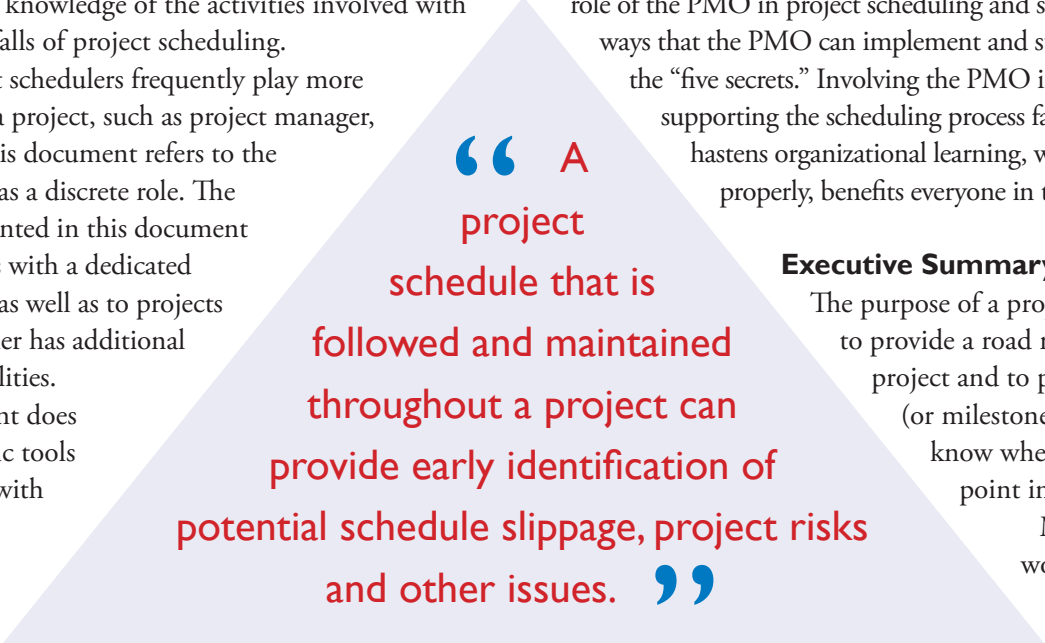
While project schedulers frequently play more than one role on a project, such as project manager, team lead, etc., this document refers to the project scheduler as a discrete role. The information presented in this document applies to projects with a dedicated project scheduler as well as to projects where the scheduler has additional project responsibilities.

This document does not discuss specific tools or go into depth with regard to project management methodology such as that discussed in the Project Management Institute's *A Guide to the Project Management Body of Knowledge (PMBOK® Guide)*—Fourth edition (Project Management Institute [PMI], 2008). It is intended to provide an overview of the scheduling process and offers specific suggestions for improving project schedules and the process of project scheduling.

This document defines five factors—or “secrets”—which, when consistently implemented together, result in project schedules that are more likely to be used and maintained throughout the life of a project. A project schedule that is followed and maintained throughout a project can provide early identification of potential schedule slippage, project risks and other issues. Identifying problems, risks and issues early significantly increases the likelihood of completing a project

on time and within budget and scope, which is often defined as project success.

For those currently part of a PMO or who are considering establishing a PMO, this document provides insight into the role of the PMO in project scheduling and suggests specific ways that the PMO can implement and support use of the “five secrets.” Involving the PMO in defining and supporting the scheduling process facilitates and hastens organizational learning, which, when done properly, benefits everyone in the organization.



“ A project schedule that is followed and maintained throughout a project can provide early identification of potential schedule slippage, project risks and other issues. ”

Executive Summary

The purpose of a project schedule is to provide a road map through the project and to provide sign posts (or milestones) so that we know where we are at any point in time.

Most of us have worked on projects where the project schedule is created during

the planning phase and is then largely abandoned once the project moves into the execution phase. Often, these project schedules are focused on the individual and groups of tasks and activities necessary to complete the project. They tend to be thought of and created as a checklist of tasks with associated timelines, resources and costs to be used and tracked during the execution of a project. This focus on activities during the creation of the schedule overlooks the fact that projects do not exist just to perform activities, they exist to produce specific products.

For small projects, it may be sufficient and appropriate to create these activities-based checklist-style schedules, but for the majority of us who work on larger and more complex projects, a simple checklist is insufficient. On a larger project, developing a schedule by focusing primarily on the tasks and

activities to be performed often makes it difficult to identify the key milestones and to know whether we're on track. Use of such a schedule can make it difficult to anticipate problems, and this often results in the occurrence of unexpected and unplanned events, which can eventually lead to project failure.

Creating schedules that can act like road maps that guide the team and can warn project managers before they veer off track requires a focus on deliverables and a consistent level of detail. Maintaining such a schedule requires a clearly defined process and a disciplined approach to keeping it current.

This document is intended for project managers, project schedulers and PMO staff who either create and manage project schedules or support those who do. It describes five secrets of project scheduling that, if followed, will help start you down the road to developing and managing project schedules that enable and support good project management practices and contribute significantly to project success.

The five secrets of project scheduling are:

1. Create deliverables-based project schedules
2. Establish and maintain the appropriate level of detail
3. Implement a regular status update and reporting process
4. Review and adjust the schedule regularly
5. Create and follow project scheduling standards

As you can see, these secrets are not new concepts. They are presented here together to provide a context and methodology for creating good project schedules. The following sections of this document are designed to help project schedulers, project managers and PMO staff to think differently about the schedules they create or support and suggest some best practices for incorporating these five secrets into the processes followed within their organizations.

The first step to building a good project schedule is to establish what defines a good schedule. A simple definition, and the one used throughout this document, is a schedule that accurately models the work of the project and which maintains a consistent and appropriate level of detail. Schedules that meet these criteria are more likely to provide accurate information about the project status, issues and risks and are much more easily maintained than schedules that do not meet these criteria.

Smaller, shorter-term projects require a much simpler and smaller project schedule than longer, more complex projects. While this is very obvious to anyone who has created even a few project schedules, it does not provide enough information to tell us anything about what a simple or complex project schedule should contain nor what level of detail is most appropriate. The remainder of this document provides the additional information required to help you understand the various factors, or "secrets," that contribute to a good project

schedule, how to apply these secrets to your schedules and how to build an organization that establishes, promotes and supports good scheduling practices on a long-term basis.

Secret #1:

Create Deliverables-Based Project Schedules

As project schedulers and project managers, we're well aware that deliverables are tangible products produced by a project. All projects have deliverables—for example, documentation, physical computer hardware installed and operational, applications correctly configured and accessible by users, etc. During project execution, the project team performs many activities in order to produce the project deliverables. Activities consist of one or more tasks, such as gathering system requirements, installing hardware, installing and configuring software, testing system access and functionality, etc.

Project schedules can be divided into two types, activities-based and deliverables-based. In my experience, the majority of project schedules are activities-based, meaning that they are developed from the mindset of "what activities and tasks need to be completed during the course of this project?" While it is important to carefully consider this question, it should not be the driving force behind the structure and organization of a schedule. Instead, a good project schedule should be built and organized around the deliverables that the project is meant to produce.

There are two steps to creating a deliverables-based project schedule:

1. Identify all deliverables and their "owners"
2. Build a deliverables-based work breakdown structure (WBS)

Identify Deliverables and Deliverable "Owners"

Most of us understand the importance of identifying and documenting all of the deliverables to be produced by our projects before work on the project begins. It's no different when creating a project schedule. Before a schedule can be drafted, the scope, and deliverables required to complete that scope, must be clearly identified and documented. So the first step to creating a good project schedule is to sit down and document all of the deliverables to be produced by the project. This should be done by the project manager since he or she has ultimate responsibility for producing the deliverables.

One step that is sometimes overlooked when creating the list of deliverables is to identify one primary owner for each deliverable at the time that the deliverables are identified. If the project has not yet been fully staffed, then a position or title, such as "Infrastructure Team Lead," may be used instead of an individual's name. Doing this early in the project life cycle can prevent disagreement regarding who is responsible for creating or managing the creation of a particular deliverable.

There are many ways to identify deliverables and their owners. My preference is for the project scheduler to facilitate a session with the project manager, appropriate team leads and key stakeholders to define and document the deliverables to be produced, the inputs required for each deliverable and the form each deliverable will take. Including key stakeholders in this process helps to gain buy-in for what will be produced by the person or organization that is to receive the product.

During this session, the role of the project scheduler is to facilitate a discussion whereby the specific deliverables, their inputs and outputs are documented and mapped by clearly identifying those outputs (i.e., deliverables) that are inputs to other deliverables. The process is complete when everyone agrees that all deliverables are documented and each deliverable's required input(s) and output format(s) are acceptable.

One method for capturing this information is to create a network diagram. This can be done by hanging a large piece of paper on a wall and having the leads write each of their deliverables on separate "sticky" notes and hanging the notes on the paper. The team should then move the notes around and draw lines/arrows to signify the dependencies among the deliverables.

The figure below shows one way that deliverable and dependency information can be captured and documented.

As you can see in the above figure, each deliverable is listed with a single primary owner. It is important to note that while many teams or individuals may be involved in the completion of the deliverable, it is critical that a single responsible party be assigned who will drive and track the required input(s), the status of the work, ensure that the deliverable takes the agreed upon format and is completed within the scheduled timeframe and budget.

For smaller projects, the project manager may play this role for all deliverables; however, on larger projects the project

manager should delegate this role to ensure there is a single focal point for each deliverable to be produced.

Build a Deliverables-Based WBS

Now that you have a list of deliverables and owners and you know how these deliverables interrelate, it's time to define how they will be represented in the project schedule.

The structure of a project schedule is analogous to an outline for a book or paper. Just as an outline documents the major topics and their organizational structure, the WBS of a project should define the major focus areas and their associated deliverables. The exercise above produces the information required to draft an initial WBS. The WBS should be organized in such a way as to ensure that each deliverable is included at the same level in the WBS. In some instances each deliverable should be listed at WBS Level 1, in other instances it may make more sense to organize the WBS by project team or area at WBS Level 1 and then list all deliverables owned by each team/area at WBS Level 2 (or whichever level is appropriate for the project.)

In our example, the information from the network diagram depicted above was organized by project area. All deliverables related to the creation and support of the underlying infrastructure are grouped together, the deliverables related to the applications are grouped together and so on. As the WBS is fleshed out, the detail tasks are inserted underneath their associated deliverable.

Figure 2 shows an example of a simple deliverables-based WBS that was created from the information previously collected.

Regardless of the WBS level of the deliverables, it is critical that all deliverables appear at the same WBS level and that all detail tasks and activities listed below each deliverable directly relate to the completion of that deliverable. Failing to do so will make it difficult to monitor the progress of all

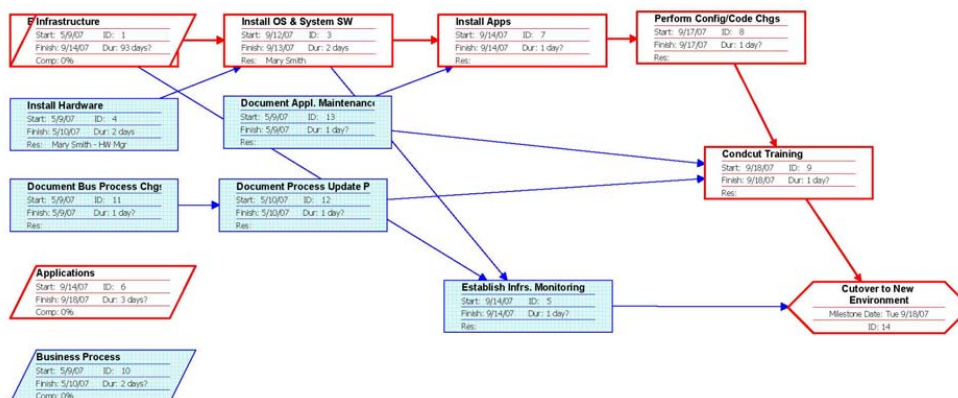


Figure 1: Example of a deliverable-based network diagram

deliverables and will negatively affect reporting capabilities.

Taking the WBS we've just created, the final step in building the foundation or framework of our schedule is to enter the information into a scheduling tool. Figure 3 shows the simple schedule framework that resulted from the WBS and the network diagram we created in the previous steps.

When reviewing the figure, take note of the following:

- All deliverables are at the same WBS level (Level 2 in this case)
- Each deliverable has a single owner assigned
- Completion of all deliverables associated with a project area (e.g., infrastructure, applications) is marked by a milestone. These milestones appear at the same WBS level as the deliverables.
- The dependencies from the network diagram are included as links between tasks (i.e., predecessors/successors.)

As the project manager or team lead(s) add detail tasks underneath each deliverable, they should also add a milestone marking the completion of the deliverable and ensure that it is linked to the appropriate detail task(s). This is shown in Figure 3 on the first deliverable in each project area: Install Hardware (WBS 1.1), Install Applications (WBS 2.1) and Document Business Process Changes (WBS 3.1)

Secret #2:

Determine the Appropriate Level of Detail
Determine the Appropriate Level of Detail for Each Project Schedule

The best project schedules are those that contain all of the required information and nothing more. Since each project is unique, there is no single level of detail that is appropriate for all projects or project schedules. Therefore the level of detail required for a particular project must be defined prior to the start of scheduling.

The level of detail required should be defined as a range of acceptable task durations and/or work effort. In addition, the type of acceptable tasks must also be defined. For example, will administrative activities such as project team meetings, time tracking, resource leveling, people management, etc. be included in the schedule? If so, will they be tracked for each deliverable or will they be called out under their own project area? If not, will this time be accounted for by reducing resource availability or will an administrative project be used?

One rule for defining a standard level of detail for a schedule that can be useful is the "1%–10% Rule" developed by Eric Uytewaal, PMP, in his book *Dynamic Scheduling with Microsoft® Office Project*. The "1%–10% Rule" states that the

SIMPLE WBS EXAMPLE

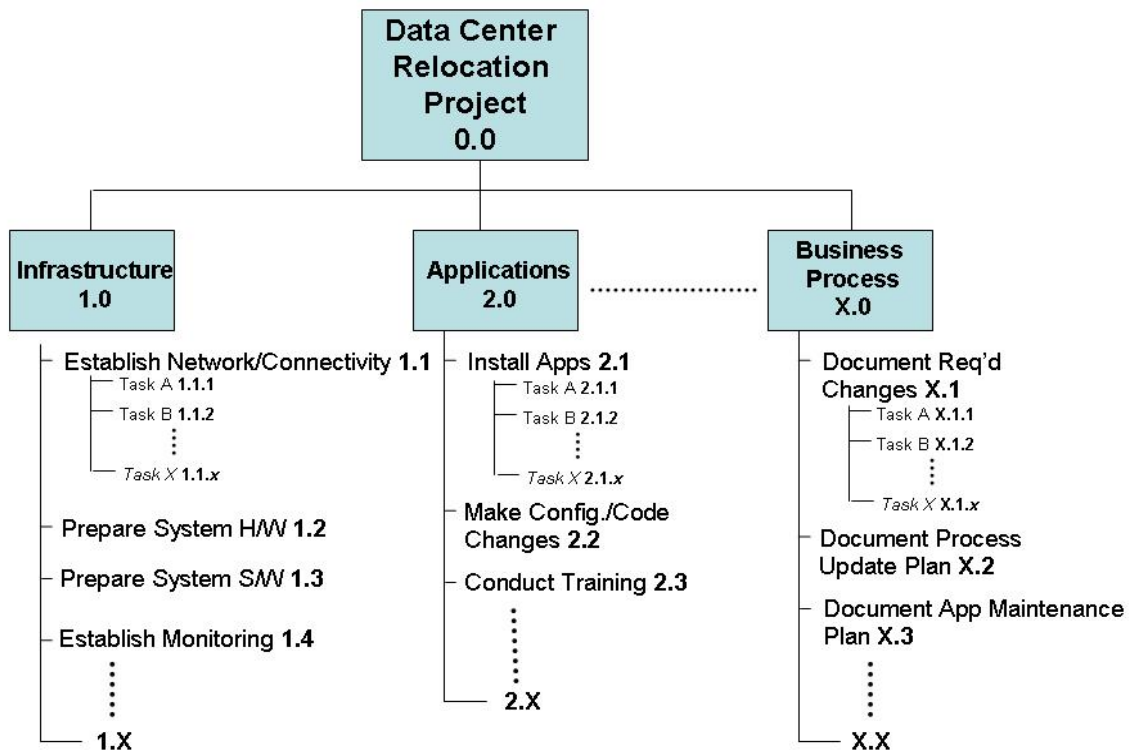


Figure 2: Example of a simple deliverables-based WBS

duration of any detail task should be between 1% and 10% of the total project duration. For example, if the project duration is expected to be 100 days, then all detail tasks should have a duration of between 1 and 10 days. This rule can also be applied to work estimates, although it can be difficult to determine the total estimated work until the schedule is fully developed. Therefore, I recommend using duration as the driving factor when using this rule.

Another way to define the level of detail is to put an upper and lower limit on the number of work hours a task may have—in other words, define an acceptable work package size. The size of the work package should be large enough to be measurable while staying small enough to manage. If the work package is too small, the schedule can become unnecessarily large and cluttered, making it difficult to manage. If the work package is too large, it can be difficult to accurately track the progress of tasks making it harder to identify risks or issues early on.

A good rule of thumb for defining the work package size is to keep task duration and/or work effort within one to two reporting cycles. If your project produces status reports weekly, then the work package should be between one and two weeks in duration and/or 40 to 80 hours of effort.

Regardless of the rule(s) selected to define the appropriate level of detail for a project schedule, the key is in consistently

following the selected rule(s.) Project schedules having varying levels of detail tend to be more difficult to status and report on because key information can be easily overlooked when it is buried too deeply in the WBS and/or doesn't reflect a measurable result. In addition, project schedules that do not follow consistent rules for defining the appropriate level of detail can become unnecessarily long, taking on the role of a checklist instead of a schedule. This puts them at high risk for being abandoned during project execution.

Ensure That All Tasks Entered Into the Schedule Meet the Established Criteria

Now that a deliverables-based WBS has been developed and the acceptable level of detail defined, the next step seems to be the easiest: build out the details of the schedule. However, this can be the most difficult part of developing a good project schedule. Many schedulers either know the work well enough to build the detailed information themselves or they gather a list of tasks and activities from the project manager and/or project team leads.

It is very easy to simply enter this information into a scheduling tool and say the schedule is complete. In following this pattern, schedulers may lose sight of the role they play within the project—to ensure that the schedule provides valuable project information while keeping maintenance

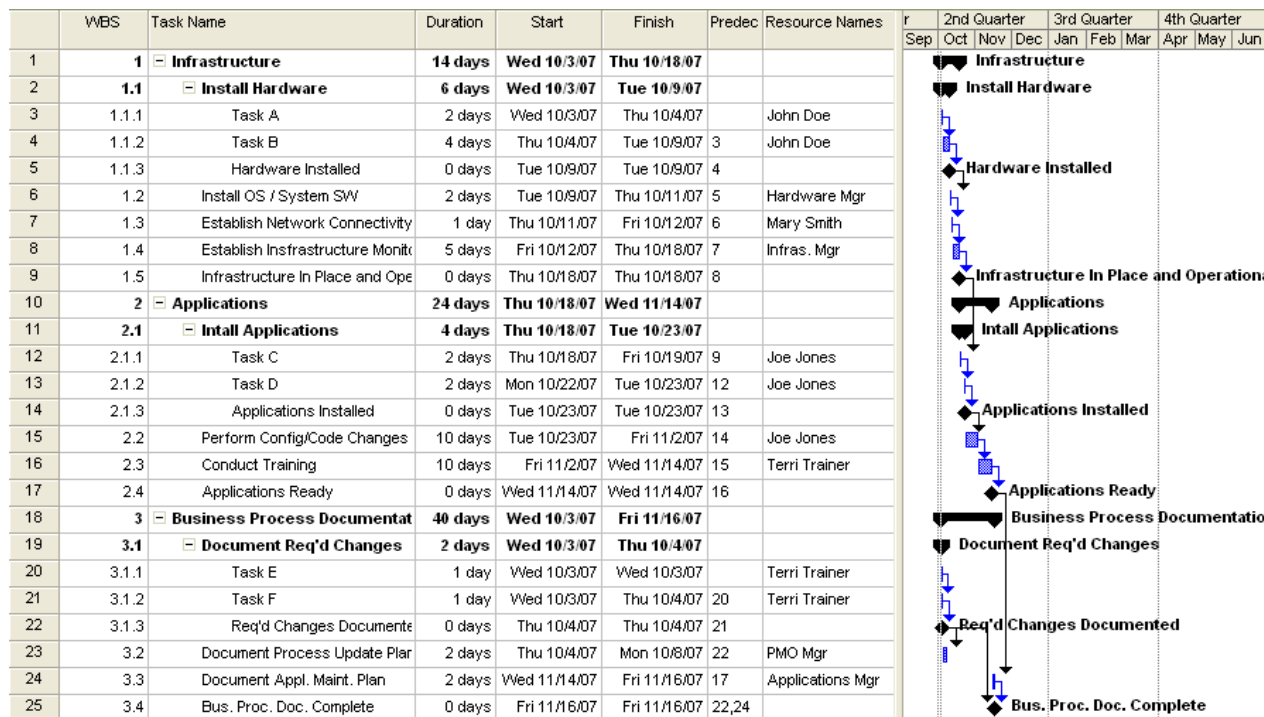


Figure 3: Simple deliverables-based project schedule framework

requirements to a minimum. This is particularly true when the project scheduler plays more than one role on the project—such as project manager or team lead.

To ensure that the schedule built will be realistic and maintainable, the scheduler must take responsibility for evaluating all tasks that are submitted to or created by them before entering them into the project schedule. While many of us see this as extra work that eats up valuable time we could be using to get the “real” work done, it is in fact, one of the most important activities in project schedule development.

Time spent properly evaluating, editing and/or combining detail tasks in a project schedule will not only reduce the time required to manage the schedule, but it can be the key to prompt identification of potential schedule slippage, issues and/or risks so that there is sufficient time to avoid or mitigate them.

To determine whether a task should be included in a project schedule, the scheduler should ask the following questions:

1. Does this task directly contribute to the completion of one or more specific deliverables?
2. Is the task at an appropriate level of detail?
3. Does this task have at least one named or generic resource assigned?
4. Does this task have at least one predecessor and/or one successor?

Only when the answer to all of these questions is yes, should the task be added to the project schedule. If the scheduler does not know the answer to one of these questions or if information is missing, the scheduler must take responsibility for following up with the owner of the deliverable to which this task is related to obtain the missing information.

Once all information is entered into the plan, resources must be leveled to ensure that the timeline is realistic and that resources will be available when required.

Building a project schedule in this manner will help ensure that the result will be a schedule that produces:

- A complete and unbroken critical path
- Detailed tasks that are relevant to specific deliverables
- A realistic timeline
- A schedule that is easier to maintain
- Consistent and relevant status reports

Secret #3:

Implement A Regular Schedule Status Update And Reporting Process

As we all know, building a good project schedule is not enough to ensure project success. The schedule must be updated, maintained and adjusted based on events throughout the project execution phase. In order to maintain a realistic and useful project schedule, it must be updated on a regular basis and adjusted as events warrant.

The project scheduler is responsible for determining what information to gather, how often the information

will be collected and the method for collecting and validating the information. The methods used will depend upon the reporting requirements, frequency of reporting, availability of automated vs. manual tools and the geographic location of the team members responsible for providing the data.

At a minimum, schedulers should collect actual and remaining work and/or duration, actual start and actual finish dates. Without this information, the schedule cannot be properly maintained. It is often tempting to collect the percentage of complete data for each task instead of actual and remaining work/duration; however, the percentage of complete information is subjective and does not provide any information about when the task will be finished nor whether additional effort and/or resources may be required to complete the task on time.

The first step in developing a regular update and reporting process is to work with the project manager and key stakeholders to determine the reporting requirements and expectations. The following is a list of minimal reporting requirements that applies to most projects:

- **Executive Overview**—Overview of project status at a high level. This report frequently shows the actual status of key milestones and deliverables compared against the baseline schedule.
- **Variance Reports (Duration, Start, Finish and/or Work Variance)**—Specific tasks, activities and/or deliverables that are running behind (or ahead) of schedule, are taking significantly longer (or shorter) than expected and/or are requiring significantly more (or less) work than anticipated. The level of detail of this report is normally dictated by the audience receiving it.

“ In order to maintain a realistic and useful project schedule, it must be updated on a regular basis and adjusted as events warrant. ”

- **“Look-ahead”** —A listing of deliverables and associated tasks either currently active or becoming active in a specific “look-ahead” window (number of days, weeks, months, etc.)
- **Resource Utilization** —The number of hours each resource is scheduled to work during the next period (e.g., week, month, quarter) This is often used in conjunction with the “look-ahead” report to ensure resources are available to complete the work assigned in a given time period while maintaining a realistic workload.
- **Schedule Issues/Risks** —A listing/description and status of current or anticipated issues or risks related to the project schedule. This report should include the tasks associated with each risk or issue.
- Others as required or deemed appropriate for the project.

The project scheduler needs a thorough understanding of the reporting requirements before defining the status information to be gathered and the sources for this information. In addition, it is important to understand the various recipients of the information in order to define the appropriate level of detail for each of the reports. Some reports may have management versions with high-level information and team versions containing more detailed information.

As each report is generated and distributed, the project scheduler and/or project manager should analyze the reports and identify possible problem areas. For each problem, the project scheduler should review the affected area(s) of the schedule and identify potential resolutions or mitigation strategies. This information should be carefully documented and provided to the project manager and/or appropriate stakeholders. Since not all project schedulers have the same degree of expertise or experience in schedule analysis, the project manager should work with the project scheduler to identify and document the reporting and analysis expectations and then determine whether the responsibility for schedule analysis should lie with the scheduler, a schedule analyst or a combination of the two.

Secret #4:

Review and Adjust the Schedule Regularly

The importance of establishing and following a consistent status update, reporting and analysis process throughout the life of a project cannot be overstated. However, it is equally important to recognize that even the best-planned projects experience unexpected or unplanned events that could significantly impact the schedule. Therefore, to ensure that the schedule remains relevant and accurate throughout the project, it is critical to have a process for making and

controlling changes to the schedule as events warrant.

For larger projects, a formal schedule change control process should be implemented in order to maintain tight control over the project schedule. For smaller projects, this change control process might be more informal. All schedule change control processes should have the following in common:

1. A clearly defined set of, usually minor, changes that may be made without going through the change control process (e.g., adding or modifying resource assignments, task names)
2. A finite set of people who are authorized to approve significant changes to the project schedule (i.e., a schedule change control board)
3. All significant changes to the project schedule must be well documented as to the reason(s) and the expected outcome of the change
4. A lessons-learned capture process and repository
5. An archive of earlier versions of the project schedule to show the evolution of the schedule and to retain historical information

The schedule change control process should be tightly linked with the project’s overall change control process. When project changes are approved through the project’s change control process they must trigger the schedule change control process to ensure that all changes to the project are promptly and accurately reflected in the schedule.

Even when no major changes occur on the project, the schedule must be reviewed periodically to ensure that it is still valid. The interval between schedule review and update cycles should be determined primarily by the project length. Projects with shorter durations should be reviewed and updated more frequently than larger, longer-duration projects, although other factors, such as project criticality, should also be considered.

Projects lasting longer than one year may define the schedule review cycle by a specific time interval and/or as key project milestones are reached. For example, such a project may be reviewed and updated quarterly, at the end of each project phase and/ or as key milestones are reached. Regardless of the review cycle interval, the review and update process should involve the project manager, team leads and key stakeholders. As was done in the initial identification of the deliverables, the project scheduler should facilitate a working session where the schedule for each deliverable is reviewed and updated as required.

As schedule updates are made, the project scheduler should identify and note any resulting subsequent changes. When a change in the schedule for one deliverable negatively affects the schedule of another deliverable, the project

manager and the owners of the affected deliverables should determine if there is a way to mitigate the schedule impact by adding resources, moving resources from lower priority work, performing work in parallel, and so on.

As resources are reassigned and/or the schedule of one or more deliverables is modified, the impact on related deliverables must be assessed. This process is repeated for all deliverables until the schedule becomes stable (i.e., no further changes are required and the effects of all changes have been analyzed and agreed upon).

In this way, the entire schedule is thoroughly reviewed and all updates are agreed upon by the project manager, team leads and stakeholders. Once agreed upon, the updated schedule should be baselined so that progress may be tracked against the newly updated schedule. Most scheduling tools allow the use of multiple baselines so that previous baseline data is not lost. While this process can require several hours or, in the case of large projects, several days, it is key to preventing the schedule from becoming outdated, providing erroneous or irrelevant information or being abandoned all together.

Secret #5:

Create and Follow Scheduling Standards

As we can see from the previous four “secrets,” building and maintaining a good project schedule can be a complex and time-consuming activity. The use of scheduling standards can significantly reduce the time required and eliminate some of the complexity involved in developing a realistic and maintainable project schedule. In addition, scheduling standards help ensure consistency when schedules are created by multiple schedulers and/ or project managers. This is particularly important when a PMO is responsible for overseeing and/or supporting many projects simultaneously, since it helps ensure that the information reported out of the various schedules represents similar information that can be easily compared.

What is a Scheduling Standard?

In 2007, PMI released its *Practice Standard for Scheduling*. This standard is described on PMI’s website as providing “a quantifiable means for assessing the maturity of a scheduling model and transforms the project time management section (Chapter 6) of the *PMBOK® Guide* (PMI, 2008) into “an actionable and objective measurement process for project scheduling.” The *Practice Standard for Scheduling* provides comprehensive and specific information for project managers and schedulers and is an excellent resource.

In the context of this document, however, scheduling standards are considered to be specific guidelines for creating and maintaining project schedules within a single or multiple

related organizations. These standards may include the use of a deliverables-based WBS, a standard work-package size, specific reporting cycles and processes, a schedule change control process, and so on.

Scheduling standards are created or adopted by an organization which then champions, supports and monitors their use within the schedules developed for projects within their sphere of influence or control. It is a good practice to base specific scheduling standards on an industry-accepted document such as the PMI standard and/or industry-accepted best practices.

As discussed previously in this document, scheduling standards are important for several reasons:

- They contribute to the development of realistic and manageable project schedules
- They help ensure consistency in the structure and level of detail across project schedules
- They help ensure that the information reported can be more easily compared and leveraged
- They help ensure consistency in schedule-related processes (such as reporting and change control)

Why Use a Scheduling Standard?

Adherence to scheduling standards can help an organization increase its project success rate and become more efficient in the following ways:

1. Following standards can reduce the time required to create and maintain project schedules by defining up front the schedule’s structure and level of detail
2. Standard processes help facilitate the ongoing capture and application of lessons learned
3. The processes defined to ensure adherence to standards contribute greatly to an environment where project managers, project schedulers and other stakeholders receive consistent, trusted information which can be used to continually improve the process of project scheduling and overall project management across the organization
4. They help ensure project success by making it easier to identify potential problems in advance

While standards are clearly a positive way to help organizations increase their overall project success rate, it is important to keep in mind that standards alone cannot guarantee a good project schedule nor project success. In addition, specific standards are not always applicable in every situation. Organizations developing and implementing scheduling standards should take care to create an environment where project schedulers and other stakeholders are encouraged to evaluate their situation and determine

whether strict adherence to a specific standard is the most appropriate action for a given situation. In the event that a standard is not followed, the reason for the exception should be clearly documented.

This does not mean that project schedulers should feel that they can make arbitrary decisions as to whether they want to follow the standards. It does mean that those in authority in such an organization should never lose sight of the fact that they have hired their project managers and project schedulers for their knowledge and expertise. These experts should be encouraged and rewarded for evaluating each situation and making the best decision given the circumstance. In this way, the organization will create a foundation that will offer the best chance for consistency in project success while fostering an environment of learning, personal and organizational growth and continual improvement.

Using the Five Secrets of Project Scheduling

The information presented thus far is valuable even when used by one scheduler working independently.

However, to realize the full

value of implementing these secrets, an organization needs to provide a central repository of standards, tools and templates available to all schedulers. Failing to do so forces each scheduler to “reinvent the wheel” each time a new schedule is developed. This is clearly inefficient and fails to capture the value of the combined knowledge and experience that are present in larger organizations.

Over the past decade or so, the PMO has become more common and more important in many project-based organizations. Most PMOs are developed as the focal point for supporting, monitoring and in some cases managing many simultaneous projects taking place in a variety of parts of the organization. Some companies have a single PMO with responsibility for all project activities, while other companies have a PMO in each of their various business units or functional areas. In either case, the PMO is generally responsible for overseeing and supporting project managers and project schedulers and in some cases other project staff and stakeholders.

This centralized approach to project management and oversight provides organizations with a concentration of project

management and project scheduling expertise that is not easily found elsewhere. This is the perfect environment for developing and implementing project scheduling processes, standards, tools and training programs. It also provides a single point for the collection and documentation of best practices, lessons learned and continuing research.

To ensure that an organization takes full advantage of the project scheduling expertise within their PMO, an executive must actively sponsor a project scheduling group or assign at least one project scheduling manager who is responsible for evaluating and improving project schedules and project scheduling practices throughout the organization. This scheduling manager must be granted the authority to define/adopt scheduling standards and enforce their use.

The primary objective of the PMO’s project scheduling manager and scheduling team should be to identify and implement standards, tools, templates and training programs that are made available to all project managers and schedulers throughout the organization.

As the PMO grows in maturity and resources, it

may also take on the responsibility for the project scheduling function. This has several advantages over simply providing the tools and guidance to schedulers from other groups:

- It enables the PMO to control the specific qualifications of its project schedulers such as required training, certifications, experience and demonstrated knowledge of the PMO’s specific standards, best practices and tools.
- It allows the PMO to grow existing staff into higher-level scheduling positions, thus getting a greater return on their human resource investments.
- It enhances the PMO’s ability to foster a positive environment where schedulers are encouraged to evaluate each situation and make exceptions where appropriate (of course, all exceptions should be carefully documented) and contribute to the growth of expertise for both the schedulers individually and the organization as a whole.
- It makes it easier to broadly implement lessons learned and accelerates continuous improvement.
- It enhances employee retention by offering career advancement opportunities and a positive working environment.

When an organization recognizes the relationship of good project schedules and scheduling practices to the project success rate, it has taken the first step to increasing its own project success rate. By implementing scheduling standards, providing schedule templates and training project schedulers, the PMO can act as a key catalyst to improving the quality of project schedules across an organization. This can give an organization a strategic advantage in today's competitive marketplace, where higher project success rates often differentiate the successful organizations from those that continue to struggle.

Conclusion

As mentioned previously, these secrets are not new concepts. As we've seen, each secret makes its own contribution to better project schedules and increased project success rates across an organization.

The best way to take advantage of these secrets is to ensure that each is followed every time you create a new schedule. This will help ensure that your schedules contain the right components, are easy to use and easy to maintain. Schedules with these qualities are much more likely to be used and updated throughout the life of the project. Additionally, reports generated from such schedules are more likely to provide the information necessary for early identification of risks and issues.

However, it can be difficult to use the secrets of project scheduling to their fullest without the support and structure offered by a PMO or similar centralized organization. Even the best project schedulers and project managers cannot build everything from scratch at one time. When establishing a PMO or implementing the ideas described here for the first time, start small and focus on the strengths of the organization. Develop a small set of scheduling standards and simple processes, tools and templates. Capture lessons learned and build a repository where schedulers and project managers can document their experiences, store schedules that worked well and build and share new processes, tools and templates.

As the organization matures and schedulers become more experienced, the PMO can expand into training project managers in how to build and use a good project schedule. When sufficient resources exist, the PMO might

take on responsibility for scheduling all projects. Centralizing schedulers and scheduling helps ensure that standards and processes are followed consistently and offers better visibility into what is working well and where improvements are needed.

Lastly, it is important to keep in mind that while standards and processes are critically important for scheduling consistency, not all standards or processes are the best solution in all situations. At times, deviation from an established process or standard might be best under certain circumstances. Good project schedulers are aware that scheduling is as much art as science and that each situation must be evaluated individually. In cases where a deviation from standards makes sense, the reasons should be clearly documented and communicated to those affected.

As project schedulers, it is up to us to work with PMO management to help them understand the importance of these "five secrets" and to take the lead in developing the standards, processes and templates that will provide the foundation from which the organization can begin building and managing better project schedules.

References

- Project Management Institute. (2007). *Practice standard for scheduling*. Newtown Square, PA: Project Management Institute.
- Project Management Institute. (2008). *A guide to the project management body of knowledge (PMBOK® guide)* (4th ed.). Newtown Square, PA: Project Management Institute.

About the Author

Ms. Michelle Colodzin has over eighteen years' experience in IT program and project management in both the public and private sectors. She established and managed the global IT Mergers and Acquisitions Program for both Hewlett-Packard and Agilent Technologies, where she was responsible for incorporating newly acquired companies into the existing IT infrastructure and business systems of these companies. More recently, Ms. Colodzin managed several simultaneous data center consolidation and relocation projects, and she is presently engaged in the PMO of one of the largest initiatives currently underway in California.