

Project management best practices

Project management processes and techniques are used to coordinate resources to achieve predictable results. All projects need some level of project management. The question is whether the project will be managed reactively or proactively—ad-hoc or in a structured, disciplined manner. Consider these questions:

- All technology migrations encounter unexpected problems, also known as issues. Do you resolve the problems proactively using a predefined process, or do you hesitate when the problems arise—not knowing exactly who to seek or how to resolve them?
- Infrastructure projects, such as a migration from Microsoft Exchange 5.5 to Exchange 2000, can touch everyone. There is always some cloud of uncertainty or a risk that events will not occur as they are planned. Do you proactively manage the risks to resolve them before they happen, or do you wait until the problems arise and deal with the consequences?
- There can be many stakeholders in technology migrations, each of whom may have benefits they would like to see fulfilled by this project. Are you going to manage scope aggressively and proactively or wait until you are hopelessly over budget and past your deadline before you realize that you're doing work that was not in your original project scope?

Studies prove that most projects, especially large ones, do not end successfully. Given the odds, you might think that companies would be happy to just have their project finish with some degree of success. However, in spite of the odds, organizations also expect projects to be completed faster, cheaper, and with higher quality. The only way that these objectives can be met is through the use of effective project management processes and techniques. Consider the size, complexity, and other characteristics of your project, and build the right project management processes to effectively manage and control your project.

There's a common saying among project managers: Plan the work and work the plan. In essence, that is the key to successful project management. You must first plan out the project and then monitor and control the execution of the program work. What follows is a step-by-step best practices guide, which uses a migration from Microsoft Exchange 5.5 to Exchange 2000 as an example.

Planning

It's hard to overestimate the importance of proper planning for a project such as an Exchange migration. In general, project failures can most often be traced back to deficiencies in the planning process. There are three major deliverables from the project planning process—the project definition, the workplan, and the project management procedures.



Project definition



Best practice: Plan the work by utilizing a project definition document.

There is a tendency for IT infrastructure projects to shortchange the planning process, with an emphasis on jumping right in and beginning the work. This is a mistake. The time spent properly planning the migration will result in reduced cost and duration and increased quality over the life of the project. The project definition is the primary deliverable from the planning process and describes all aspects of the project at a high level. Once approved by the customer and relevant stakeholders, it becomes the basis for the work to be performed. The project definition should include the following:

- **Project overview**—Why is the Exchange migration taking place? What are the business drivers? What are the business benefits?
- **Objectives**—What will be accomplished by the migration? What do you hope to achieve?
- **Scope**—What features of Exchange 2000 will be implemented (i.e., e-mail, chat, instant messaging, conferencing)? Which departments will be converted? What is specifically out of scope?
- **Assumptions and risks**—What events are you taking for granted (assumptions), and what events are you concerned about? Will the right hardware and infrastructure be in place? Do you have enough storage and network capacity?
- **Approach**—How will the migration project unfold and proceed?
- **Organization**—Show the significant roles on the project. Identifying the project manager is easy, but who is the sponsor? It might be the CIO for a project like this. Who is on the project team? Are any of the stakeholders represented?
- **Signature page**—Ask the sponsor and key stakeholders to approve this document, signifying that they agree on what is planned.
- **Initial effort, cost, and duration estimates**—These should start as best-guess estimates and then be revised, if necessary, when the workplan is completed.

Project workplan

After the project definition has been prepared, the workplan can be created. The workplan provides the step-by-step instructions for constructing project deliverables and managing the project. You should use a prior workplan from a similar migration effort as a model, if one exists. If not, build one the old-fashioned way by utilizing a work-breakdown structure and network diagram.



Best practice: Create a planning horizon.

Create a detailed workplan, including assigning resources and estimating the work as far out as you feel comfortable. This is your planning horizon. Past the planning horizon, lay out the project at a higher level, reflecting the increased level of uncertainty. The planning horizon will move forward as the project progresses. High-level activities that were initially vague need to be defined in more detail as their time frame gets closer.

Project management procedures



Best practice: Define project management procedures up front.

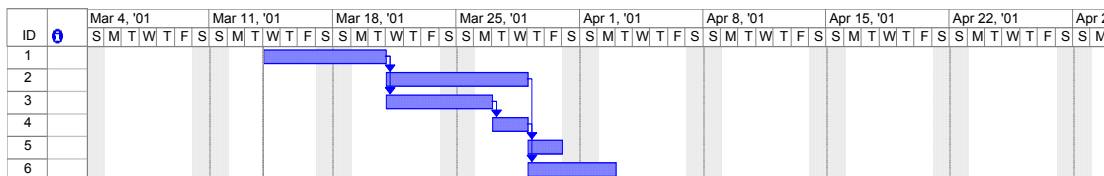
The project management procedures outline the resources that will be used to manage the project. It will include sections on how the team will manage issues, scope change, risk, quality, communication, and so on. It is important to be able to manage the project rigorously and proactively and to ensure that the project team and all stakeholders have a common understanding of how the project will be managed. If common procedures have already been established for your organization, utilize them on your project.

Manage and control

Once the project has been planned sufficiently, execution of the work can begin. In theory, since you already have agreement on your project definition and since your workplan and project management procedures are in place, the only challenge is to execute your plans and processes correctly. Of course, no project ever proceeds entirely as it was estimated and planned. The challenge is having the rigor and discipline needed to apply your project management skills correctly and proactively.

Manage the workplan

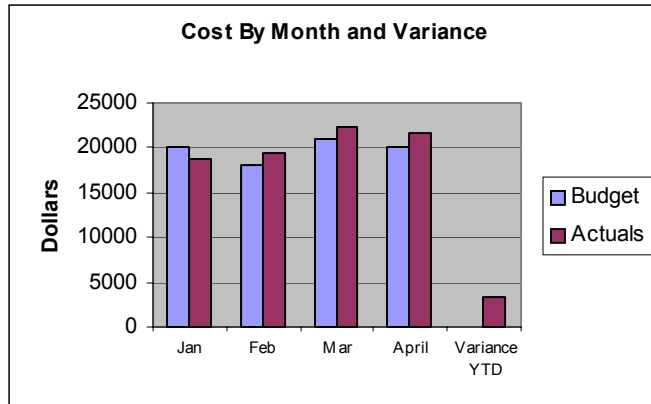
Review the workplan on a regular basis to determine how you are progressing in terms of schedule and budget. If your migration effort is small, this may need to be weekly. For larger migration projects, the frequency might be every two weeks.



- Monitor the schedule.** Identify activities that have been completed during the previous time period and update the workplan to show they are finished. Determine whether there are any other activities that should be completed but have not been. After the workplan has been updated, determine if the project will be completed within the original effort, cost, and duration. If not,

determine the critical path and look for ways to accelerate these activities to get you back on track.

- Monitor the budget.** Look at the amount of money your project has actually consumed and determine whether your actual spending is more than originally estimated based on the work that has been completed. If so, be proactive. Either work with the team to determine how the remaining work will be completed to hit your original budget or else raise a risk that you may exceed your allocated budget.



Best practice: Look for warning signs.

Look for other signs that the project may be in trouble. These could include the following:

- A small variance in schedule or budget starts to get bigger, especially early in the project. There is a tendency to think you can make it up, but this is a warning. If the tendencies are not corrected quickly, the impact will be unrecoverable.
- You discover that activities you think have already been completed are still being worked on. Users whom you think have been migrated are still not.
- You need to rely on unscheduled overtime to hit the deadlines, especially early in the project.
- Team morale starts to decline.
- Deliverable quality or service quality starts to deteriorate. For instance, users start to complain that their converted e-mail folders are not working correctly.
- Quality-control steps, testing activities, and project management time starts to be cut back from the original schedule. This migration project can affect everyone in your organization. Don't cut back on the activities that ensure the work is done correctly.

If these situations occur, raise visibility through risk management, and put together a plan to proactively ensure that the project stays on track. If you cannot successfully manage through the problems, raise an issue.

Manage scope

After the basics of managing the schedule, managing scope is the most important activity required to control a project. Many project failures are not caused by problems with estimating or team skill sets but by the project team working on major and minor deliverables that were not part of the original project

definition or business requirements. Even if you have good scope-management procedures in place, there are still two major areas of scope-change management that must be understood to be successful: understanding who the customer is and scope creep.

**Best practice: Ensure that the sponsor approves scope-change requests.**

In general, the project sponsor is the person funding the project. For infrastructure projects like an Exchange migration, the sponsor might be the CIO or CFO. While there is usually just one sponsor, a project like the Exchange migration could have many stakeholders, or people who are impacted by the project. Requests for scope changes will most often come from stakeholders—many of whom may be managers in their own right. One manager might want chat services for their area. Another might want an exception to the size limits you have placed on mailboxes. It doesn't matter how important a change is to a stakeholder, they cannot make scope-change decisions, and they cannot give your team the approval to make the change. In proper scope-change management, the sponsor (or their designate) must give the approval, since they are the only ones who can add additional funding to cover the changes and know if the project impact is acceptable.

**Best practice: Guard against scope creep.**

Most project managers know to invoke scope-change management procedures if they are asked to add a major new function or a major new deliverable to their project. However, sometimes the project manager doesn't recognize the small scope changes that get added over time. Scope creep is a term used to define a series of small scope changes that are made to the project without scope-change management procedures being used. With scope creep, a series of small changes—none of which appear to affect the project individually—can accumulate to have a significant overall impact on the project. Many projects fail because of scope creep, and the project manager needs to be diligent in guarding against it.

Manage risk

Risks refer to potential events or circumstances outside the project team's control that will have an adverse impact on the project.

**Best practice: Identify risks up front.**

When the planning work is occurring, the project team should identify all known risks. For each risk, they should also determine the probability that the risk event will occur, as well as the potential impact to the project. Those events identified as high-risk should have specific plans put into place to mitigate them to ensure that they do not, in fact, occur. Medium risks should be evaluated, as well, to see if they should be proactively managed. (Low-level risks may be identified as assumptions. That is, there is potential risk involved, but you are "assuming" that the positive outcome is much more probable.) Some risks are inherent in a project like this that can impact every person in the company. Other risks may include not having the right level of expertise, unfamiliarity with the technology, and problems integrating smoothly with the rest of Windows 2000.

**Best practice: Continue to assess potential risks throughout the project.**

Once the project begins, periodically perform an updated risk assessment to determine if other risks have surfaced that need to be managed.

Manage issues

In spite of your best efforts at risk management, all projects of any size and complexity will have issues arise that need to be dealt with and resolved. If you have not done as good a job managing risks, chances are you will have more issues to deal with than you might have otherwise.



Best practice: Resolve issues as quickly as possible.

Issues are big problems. For instance, the Exchange servers you ordered are not ready and configured on time. Or perhaps the Windows 2000 forest is not set up correctly and needs to be redesigned. The project manager should manage open issues diligently to ensure that they are being resolved. If there is no urgency to resolve the issue or if the issue has been active for some time, then it may not really be an issue. It may be a potential problem (risk), or it may be an action item that needs to be resolved at some later point. Issues, by their nature, must be resolved with a sense of urgency.

Conclusions

A migration from Exchange 5.5 to Exchange 2000 may be very lengthy and costly to your organization. There are always complexities in dealing with newer technology and ensuring that all the pieces integrate together. There are also challenges in implementing infrastructure with as little impact on your customers as possible. All of these challenges can be overcome through a proper mix of planning, monitoring, controlling, and executing. The planning, monitoring, and controlling aspects are where project management processes and techniques are needed. Resist the urge to jump straight into the execution. Proper planning and management of the migration effort will take more time up front but will be more than rewarded with efficiencies and savings throughout the rest of the project. Remember the project management best practices:

- Plan the work by utilizing a project definition document.
- Create a planning horizon.
- Define project management procedures up front.
- Look for other warning signs.
- Ensure that the sponsor approves scope-change requests.
- Guard against scope creep.
- Identify risks up front.
- Continue to assess potential risks throughout the project.
- Resolve issues as quickly as possible.