

# Building a Team for Your Project

**W**ithout people, projects wouldn't start and certainly wouldn't finish. To keep projects running smoothly in between the start and finish, you need the right people, and *they* need to know the parts they play. Otherwise, collaboration and communication is like a rousing rendition of Abbott and Costello's "Who's On First?"

You can start building your project team once you've identified the project tasks. You analyze the work and identify the skills and other resources required. Then you're ready to look for resources that are both suitable and available. Whether you add generic resources or real people to your Project file, you can assign them to tasks so Project can calculate the schedule and the cost.

In this chapter, you'll learn the difference between Project's work, material, and cost resources, and when to use each one. People are almost always a project's most important resource, and when this book says "resource," that usually means "person." However, projects also rely on help from nonhuman team members, such as equipment, materials, and training. In Project, *work resources* represent anything you assign by time—people, a conference room you reserve by the hour, a paper shredder you rent by the day, and so on. *Material resources* come in other units, like gallons of sports drinks or cubic yards of gravel. *Cost resources* (introduced in Project 2007) cover expenses that aren't work or material, like travel or fees.

In this chapter, you'll learn how to identify and organize your resources (which may involve help from another program). Then you'll get down to the nitty-gritty of adding resources in Project and filling in fields for availability, costs, and so on. You'll learn how to set up generic resources if you don't know who your team members are just yet. Finally, you'll see how to add even more detail to your resources.

## ■ Identifying Project Resources

For small projects and tight-knit organizations, a list of skills might be enough to identify Bob and Jan as the people you need. But in most cases, *some* resource planning is needed before you start working on resources in Project. Early on, you identify which groups are involved in the project, which portions of the project they participate in, and the level to which they're engaged in goings-on. After you identify the project work and estimate what it will take to complete it, you identify the skills you need to get it done—and other resources, such as materials, equipment, and money. Part of resource planning is figuring out how many resources you need and when you need them. Then you can begin to line up specific people to staff your project. At long last, a project organization chart shows who reports to whom on your project, so everyone knows whom to ask to resolve resource issues. This section introduces each aspect of resource planning.

### Who's Responsible for What

Just as too many cooks spoil the broth, too many groups claiming responsibility for the same work is a recipe for disaster. Turf wars waste time and money because tasks get weighed down with extraneous requirements from fringe groups. Far more dangerous is when *no one* takes responsibility for work, because the work doesn't get done, or isn't done on time and within budget. The project's *responsibility matrix* (sometimes called the *responsibility assignment matrix* or *RACI matrix*, which gets its name from the four levels of responsibility described in the box on page 197) prevents these gaffes by spelling out who's in charge, who's responsible for performing work, who can offer opinions, and who simply needs to know something about some part of the project, like which strategy you're going to use. It's a great tool for settling those "I thought somebody else was doing that" arguments.

The responsibility matrix is a compact document that identifies groups and their responsibilities. The list of project stakeholders is a great place to start identifying groups involved in the project, such as departments, business units, or even external groups like third-party vendors and subcontractors. Knowing what those stakeholders want out of the project can provide hints about their level of involvement—do they have to approve decisions, do they do the work, or do they just need to be told what's going on?

#### NOTE

Because the responsibility matrix comes early in project planning, it doesn't identify every person assigned to a project.

You review the responsibility matrix with stakeholders to sort out the following items:

- **Who's in charge?** You've probably seen those cop movies where the local police and the FBI eye each other warily and grouse about the other group doing everything wrong. The responsibility matrix helps you dispel ownership disagreements *before* you need urgent and crucial decisions.

- **Is any work orphaned?** Like the pop-fly ball that drops to the ground as the third baseman and shortstop stare at each other, project work can fall between the cracks. If you notice work without an owner in the responsibility matrix, you can track down stakeholders until someone accepts responsibility.
- **How do groups interact?** Most of the time, groups have to work together to get things done. The responsibility matrix identifies the level of involvement each group has for each part of a project, so groups know what they have to do *and* what they can expect from others. Clarifying involvement is important when groups all belong to the same organization, but it's *essential* when a project uses contractors, partners, and outsourcing vendors. No doubt you've experienced a tech-support nightmare: You call a company and get bounced from group to group, retelling your plight each time. A responsibility matrix can show who's on the hook until the issue is resolved.

## TOOLS OF THE TRADE

### Levels of Responsibility

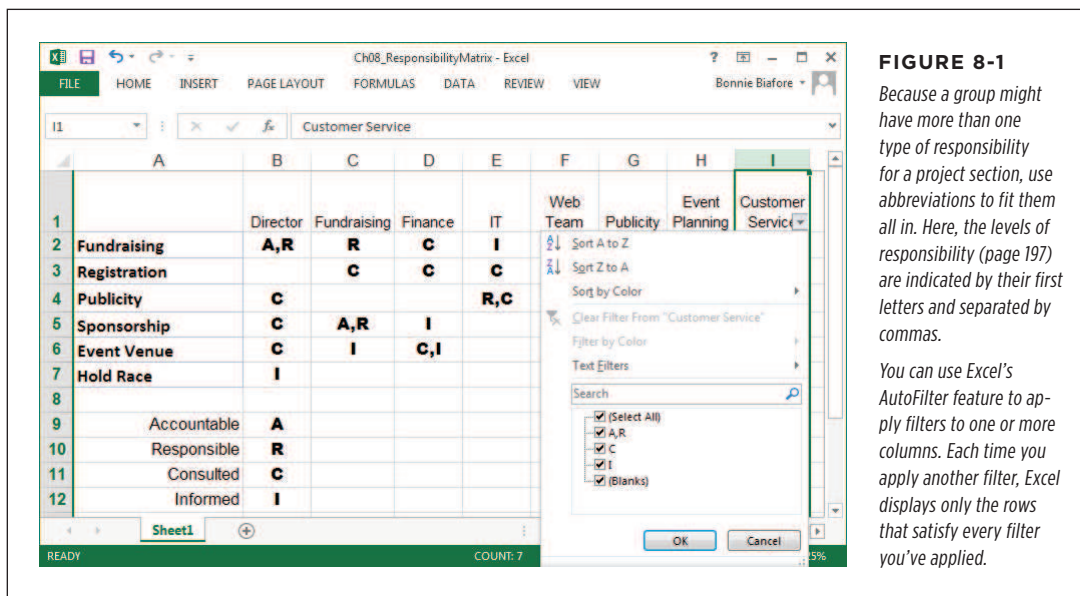
A responsibility matrix shows levels of responsibility, from the group that's in charge to those who just need to know what's going on. Here are the levels you'll find in most responsibility matrices:

- **Accountable** means a group can make decisions, delegate work, and approve deliverables or other groups' decisions. For example, if a director is accountable for a major fundraising project, she decides whom to hire, delegates work to subcontractors, and supervises and approves work. For any given portion of a project, only one group is accountable.
- **Responsible** represents the people who perform the work for a section of the project. For example, the catering subcontractor is responsible for preparing the food, delivering it to the event, and serving it to attendees.
- **Consulted** indicates that the group participates in discussions about a topic or a decision but isn't accountable for the outcome. The event manager might consult with the caterer about where to put the food tent, but the event manager is still accountable for the results of the chosen solution.
- **Informed** means the group receives information. The publicity manager needs to know about event details so she can prepare press releases and advertising for the event.

## ■ CREATING A RESPONSIBILITY MATRIX IN EXCEL

Project doesn't have a built-in responsibility matrix, but Microsoft Excel makes an ideal tool for creating one, since an Excel worksheet is nothing more than a matrix of cells. As stated above, a responsibility matrix links groups to major sections of a project. Because project sections usually outnumber the groups involved, the groups usually go in the columns and the project sections in the rows, as shown in Figure 8-1.

## IDENTIFYING PROJECT RESOURCES



Don't worry if your Excel skills are rusty—a responsibility matrix relies mainly on plain old spreadsheet columns and rows. Creating a responsibility matrix in Excel requires only a few simple steps. First, create a blank Excel workbook (File→New→Blank workbook), and then do the following:

- 1. In the cells in the worksheet's first row, enter headings for each group.**

After you add the groups, you can select those cells and press Ctrl+B to bold the headings so they're easier to see.

- 2. In the cells in the first column, add the names of the project sections.**

When you type a section's name and press Enter, Excel selects the cell in the next row immediately below the one you just filled in, so you're ready to enter the next project section.

- 3. For each cell at the intersection of a group column and project section row, fill in all the levels of responsibility the group has for that part of the project.**

Groups can have more than one type of responsibility, so some cells might contain more than one entry. You may be both *accountable* for the family vacation (paying the bill, for instance) and *responsible* for making the reservations. Your teenagers are *consulted* on the destination (to reduce complaining), and are also *responsible* for packing their gear. On the other hand, your neighbors are *informed* that you'll be away and that they should keep an eye on your house.

**NOTE** Remember, a responsibility matrix is a high-level overview—it documents major sections of a project, not each individual task, and groups involved, not individuals. Later on, as you create resources to represent your project team in Project, you can use the Group resource field (page 225) to categorize resources.

### ■ FILTERING A RESPONSIBILITY MATRIX IN EXCEL

For huge projects, you can filter the Excel responsibility matrix worksheet to see only the sections that a particular group works on. Suppose you've decided to ditch a subpar subcontractor, and you want to know how that subcontractor is involved in the project so you can get the replacement up to speed ASAP. Here's how to filter an Excel responsibility matrix to find a group's involvement:

1. **With the responsibility matrix file open in Excel, click the column heading for the group in question, such as the label “C” above Fundraising in Figure 8-1.**

If you plan to filter the responsibility matrix group by group, then select all the groups by dragging across the cells that contain the group headings or Excel's letter headings.

2. **To apply Excel's AutoFilter feature to the selected columns, head to the Data tab's Sort & Filter section and click Filter, or head to the Home tab's Editing section and click Sort & Filter→Filter.**

A small down-pointing arrow appears in the selected columns.

3. **To display the drop-down menu of filters you can apply, shown in Figure 8-1, click the arrow in the heading cell for the group you want to look at first.**

The drop-down menu suggests several filters based on the data in the column. However, you can create a custom filter by choosing Text Filters→Custom Filter and, in the Custom AutoFilter dialog box, specifying the *filter tests* (criteria).

4. **To display all the rows that contain any level of responsibility for the group, at the bottom of the drop-down menu, turn off the “(Blanks)” checkbox, and then click OK.**

Excel hides any rows that have an empty cell for that group. The remaining rows contain at least one responsibility level for the group.

5. **To remove the filter, click the down arrow in the group's heading cell, turn on the “(Select All)” checkbox, and then click OK.**

All the rows in the worksheet reappear. Repeat steps 3–5 to look at a different group.

To turn off AutoFilter completely, head to the Data tab's Sort & Filter section and click Filter.

## Resource Planning

When your project requires a large team, you need a formal process for managing resources. That's where a resource plan comes into play. Your resource plan is where you document your resource-related processes: how you'll bring team members on board, manage them, and then release them from the project when their assignments are over.

Another big part of the resource plan is a staffing plan. After you identify the project work and estimate the effort required to complete that work, you can plan the types and numbers of resources you'll need and when you'll need them. Here are the elements you develop for a staffing plan:

- **Skills matrix.** You identify the skills needed to perform each task. The skills matrix gives you an idea of the types and quantities of people you need.
- **Other resource requirements.** You also identify other resources the project needs, such as materials, facilities, equipment, and money.
- **Initial procurement plan.** Early in project planning, you map out where you plan to obtain project resources—for example, assigning in-house resources, hiring contractors, or using vendor resources.
- **Resource schedules.** As you develop your project schedule, the timing of when you need different resources begins to come into focus. At the same time, you might learn more about when people are available, which could require adjustments to your schedule. If the schedule doesn't meet the target finish date or runs over budget, you have to revise your plan until it meets all the objectives. For that reason, the final staffing plan might take several iterations.
- **Training requirements.** People don't always have all the skills or knowledge your project needs. In that case, you have to identify the training you must provide, because that may add costs to your project and affect when work can occur.
- **Release plans.** In addition to identifying when you need resources for your project, you also need to spell out when they'll be finished and released to their managers for their next assignments.
- **Human resource processes.** Your HR department might have processes in place for compensation, regulatory compliance, rewards, and so on. However, your staffing plan should include any resource processes specific to your project.

Once the schedule and cost are where they need to be, you can provide your draft resource plan to line managers, vendors, and so on, and ask them to commit the resources they manage. (The box on page 201 provides some tips for obtaining and retaining resources.) After that, you'll probably adjust your project plan and staffing plan to include the people assigned to your project, when they're available, and the training they require.

## REALITY CHECK

**Getting and Holding onto Resources**

In this downsized, competitive world, there are never enough resources to go around. Looking for resources with the right skills or characteristics just increases the challenge. Some resources are scarce due to their unusual combination of skills—like a web developer with a financial background who also speaks Japanese. Other resources are scarce because everyone needs them—like a bulldozer after a seven-foot snowstorm.

To complicate matters, projects don't have resources to call their own. People assigned to projects usually work for other departments, vendors, the customer, and so on. The perfect person for the job might sit across from you, but rather than going straight to her and asking if she can work on your project, the approach that works more consistently is to give work-package and assignment information to the people in charge of the resources you covet, and let *them* pick the right

ones based on skills and availability. Providing thorough descriptions and having a realistic schedule help you build good relationships with these resource managers. The time that this relationship-building takes is worth it—especially if you need favors later on.

Resourcing efforts aren't complete when you've finished assigning resources. You have to keep the resources on the project, and that means keeping workloads as consistent as you can (page 327). If resources sit idle, you're likely to lose them to other projects; or worse, the resources may get laid off. On the other end of the scale, pushing people to work long hours incurs overtime costs, increases errors, and generates rework. With a reputation as a bad project manager, you'll have trouble finding people for future projects.

**Who Reports to Whom**

As you identify the people who work on your project, you can start building a *project organization chart*, which shows the chain of command within your project (not your organization as a whole). Just like a regular org chart, a project organization chart helps people figure out whom to ask if an issue needs escalating, a decision needs deciding, or any other situation requires higher authority.

The project organization chart is especially important for projects with all sorts of partners—internal, external, third party, outsourced, and so on—because it identifies the go-to person when a decision is needed. Does the project sponsor have the final say, or is it an external customer who's picking up the check? If you'd like to clarify these relationships in a chart, you can create one in Microsoft Word, although Microsoft Visio is the better tool. The Visio Organization Chart template works for companies and projects alike, and this section shows you how to use it.

**NOTE**

In Microsoft Project, you can associate resources to groups with the Group resource field (page 225) and use outline codes (page 675) to link resources to an organizational structure. However, creating a project organization chart is best left to Microsoft Visio—or whatever tool your organization uses to document the companywide hierarchy.

### ■ CREATING A PROJECT ORGANIZATION CHART IN MICROSOFT VISIO

With Visio, you can build a project organization chart using the Organization Chart template. In Visio, click File→New→Organization Chart→Create. This template contains shapes that create reporting relationships when you drop them onto manager shapes on a drawing. Even better, this template offers an Org Chart tab that includes an Import command for importing resource information from Excel and other sources like databases.

#### NOTE

In most organizations, people report to functional managers. Then, when these people work on projects, they end up with two bosses—the functional manager, and their supervisor within the project. A project organization chart *isn't* the place to track both sets of bosses. Rely on the companywide org chart or the corporate HR system to track functional managers.

## ■ Understanding Project's Resource Types

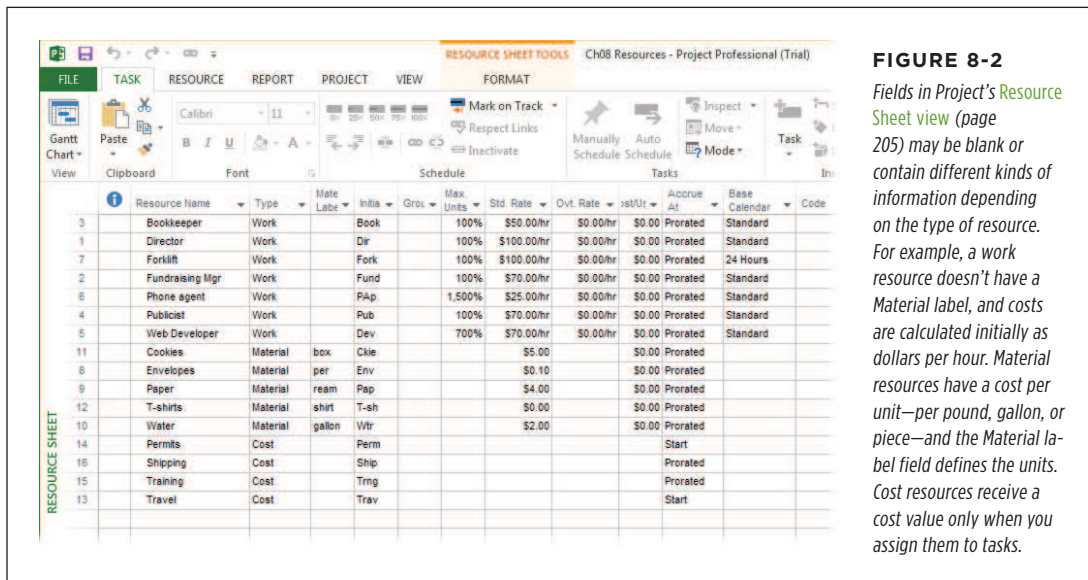
Microsoft Project offers three types of resources for projects, each with its own purpose and idiosyncrasies. Here are the various types, what each one represents, and how it can affect your project (the box on page 204 describes different ways resources of *all* types can affect projects):

- **Work.** Time is what distinguishes work resources from other resource types in Project. For example, people and equipment are work resources, because you track their participation by the amount of time they spend on the project. Whether you're assigning people to direct traffic or renting equipment for an event, your project's tasks depend on when those work resources are available, how much time they have, and how much they cost for a period of time, as shown in Figure 8-2.

#### TIP

Because you usually don't want people's salaries in the public eye, you can fill in pay rates with the *averaged burdened cost* (an employee's hourly wages or salary, plus benefits, taxes, equipment, and so on, which you can get from your HR department) for someone in a given role.





**NOTE** Regardless of whether you only know the skills required for tasks or you have the specific names of warm bodies, you can create resources in Project to assign to tasks. See page 222 to learn how to use generic resources to act as placeholders until you identify real resources.

- **Material.** Materials are supplies that are consumed during the course of a project. Suppose you have a task to stuff envelopes to send to potential sponsors. That task requires envelopes and printed materials, as well as people to stuff the envelopes. You assign the people based on the time it will take, but you assign material resources by the quantity you need: 10,000 envelopes, for instance. Because materials aren't measured by time, they affect only the cost of your project (based on the quantities you need and the cost per unit). Materials affect dates or duration only when you have to wait for them to become available. For example, you can't begin setting up tents until they're delivered.
- **Cost.** Cost resources came on the scene in Project 2007, and they represent *only* costs—not time, not quantities. These resources are perfect for ancillary costs that aren't directly associated with the people, equipment, and materials you assign to tasks. For example, expenses such as travel or fees increase the project's price tag, but they aren't associated with work or material resources.

The advantage of this resource type is that you can track different types of costs separately. For instance, you might set up cost resources for travel, building permits, rental expenses, and shipping, as illustrated in Figure 8-2. You can then assign those cost resources to each task they apply to (page 248), and then total what you spend on different types of costs for the entire project (page 249). A kickoff meeting might have, say, \$20,000 in travel costs and \$5,000 in communications costs for the people who attend in person and via videoconference. And the change control board might have \$1,000 in travel costs and \$2,000 for videoconferencing. When you see the \$21,000 for travel vs. \$7,000 for videoconferencing, you might consider changing your approach to meetings.

#### UP TO SPEED

### How Resources Affect Project Schedules

For a quick-and-dirty project schedule, all you need are tasks, estimated task durations, and links between the tasks. Project shows a start date and a finish date for the project, but how do you know whether these dates are any good without resources assigned to do the work? And as you begin the work, how can you tell whether the project is proceeding according to plan?

Assigning resources to tasks in Project provides the information you need to answer these questions. Resource assignments help you manage the project in several ways:

- **Defining the project's schedule.** Because you can specify when resources work and how much they're available (page 213), your project schedule is more accurate, since it calculates task durations based on when resources work.
  - **Managing resources.** Resource assignments tell you whether resources have too much work or too little. As you plan the project, you can balance people's workloads to make the schedule more realistic (and make team members happier). In addition, you can play what-if
- games with time versus money. For example, you might decide to use less-expensive resources when the budget is more important than the finish date.
  - **Preventing ownership problems.** Resource assignments also ensure that someone is working on every project task. At the same time, assignments can prevent overly enthusiastic team members from sticking their noses into someone else's work.
  - **Tracking progress.** By updating your schedule with the actual progress people make, you can see whether or not the project is on track. This information is indispensable later on when you want to evaluate your estimating prowess and do better the next time.
  - **Tracking spending.** When you track the costs of work, material, and cost resources, you can not only estimate the budget for the project (page 266), but also see actual costs as the project progresses.

## ■ Adding Resources to Your Project File

Before you can play matchmaker between project tasks and resources, you have to tell Project about the resources you're using. You can get started by filling in a few basic fields, such as the resource names and types. (The box on page 205 explains what you can do if you don't *know* resource names.) As you identify detailed information, such as work schedules, availability, and costs, you can add that information to Project, as described in other sections in this chapter. In turn, Project uses that information to more accurately calculate your project schedule and price tag.

Project offers two methods for entering resource data directly. The Resource Sheet is ideal for specifying values for every resource—you can either copy and paste values, or simply drag values (even into several cells at once). Or, if you have resource information stored in a company directory or other database, importing information into Project makes short work of data entry. This section explains each approach.

## TOOLS OF THE TRADE

### When to Tell Microsoft Project About the Team

Some project managers identify required skills and resources as they define project work packages. Others focus on completing the work breakdown structure, and *then* go back to identify the required resources. Either way, project managers typically start out by identifying work resources as skillsets (crane operator, financial analyst with nonprofit expertise, or JavaScript developer) and major equipment (computer server, forklift, or printing press). That's because you can't identify specific resources until you know the required skills and the specific task dates.

Fortunately, Microsoft Project can handle this iterative approach. *Generic resources* (page 222) act as placeholders for the skillsets and people you need. (Of course, if you have only a few employees, you can add all their names to Project, so they're fair game for task assignments.)

For example, say you don't know the number of people you need for a task. In that situation, you can assign generic resources to tasks in Project to get an estimate of task durations. If the schedule is too long or too costly, you can make changes, perhaps adding resources to shorten duration, or assume lower pay rates to reduce cost. When you're satisfied with the schedule and resource requirements, you have the information you need to hit up the management team for specific resources. Then, as you obtain specific people or equipment, you can replace the generic resources with the resources that represent the warm bodies you're allocated (page 320). You can also filter your project for tasks with generic resources assigned to see where you have holes in your team.

### Adding Resources in Resource Sheet View

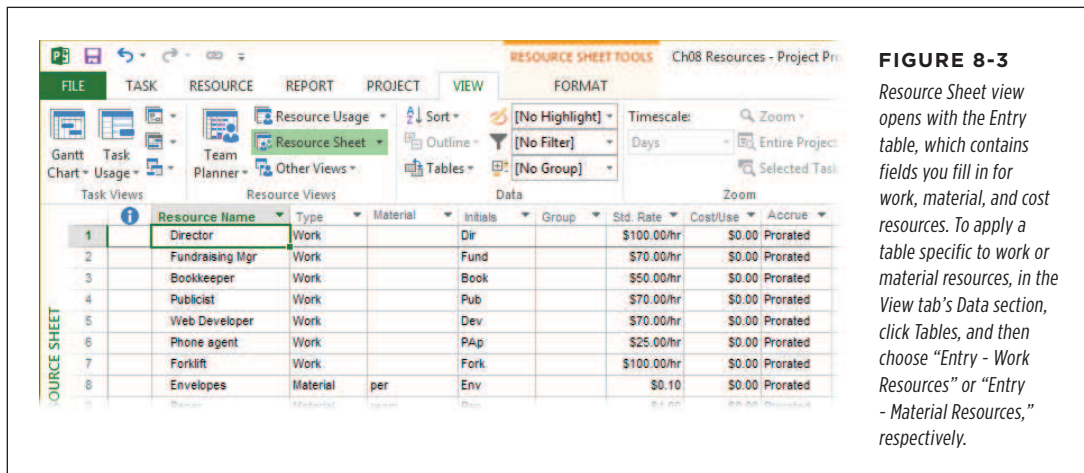
Resource Sheet view is a quick way to get resources' names, ranks, and serial numbers into Project. In fact, you can specify most information about resources simply by adding columns to the table (page 633) and filling in the additional cells. (For resources that require more detail, like variable cost rates or availability, you have to use the Resource Information dialog box described on page 216.)

Adding resources in Resource Sheet view is similar to adding task information in the Gantt Chart's table area. Here's how to enter the essential 411 for resources:

#### 1. In the View tab's Resource Views section, click Resource Sheet.

The Resource Sheet (Figure 8-3) lists all existing resources in the Entry table, which initially contains fields for both work, material, and cost resources.

## ADDING RESOURCES TO YOUR PROJECT FILE



**FIGURE 8-3**

Resource Sheet view opens with the Entry table, which contains fields you fill in for work, material, and cost resources. To apply a table specific to work or material resources, in the View tab's Data section, click Tables, and then choose "Entry - Work Resources" or "Entry - Material Resources," respectively.

### 2. In the first Resource Name cell, type the name of a resource.

To make resources easy to find later on, follow a standard naming convention. Commas and brackets are verboten in resource names, so consider something like "Smith J" for people. For generic resources, the job description (like Web Developer) works well. Similarly, a brief description is fine for equipment and materials.

### 3. To save the resource and move to the next row, press Enter.

Project saves the resource (and automatically assigns it the Work resource type, because that's the most common type) and moves to the Resource Name cell in the next row, so you can type the next resource name. The fastest way to create lots of resources is to type a name and press Enter until you've created and named all your resources. Then you can specify other values, if necessary.

### 4. For each material and cost resource in the list, click its Type cell and type **m** for material or **c** for cost. Or click the down arrow on the right side of the cell, and then, in the drop-down list, choose Material or Cost.

When you choose Material or Cost, Project removes values in columns that don't apply to that type of resource (like the Std. Rate field for a Cost resource).

**TIP** If all your material or cost resources are grouped together, you can change the Type cell for the first resource in the group. Then position the pointer over the fill handle (the small square in the cell's lower-right corner), and drag to copy that value to the other cells.

**5. Change other values—such as Initials or Max. Units—by clicking a cell and then entering the value.**

You'll learn how to fill in other resource cells in the remaining sections of this chapter. The box on page 208 shows you how to sort resources to help make them easy to spot.

**TIP** Say you type a resource name that doesn't exist in the current project file into a Resource Name cell in the Resource Sheet or into an assignment in the Task Form. Project is happy to automatically add a new resource with default values for you. At times, this behavior is a tremendous timesaver, because you can simply type a resource name in the Task Form or in a Resource Name cell without having to detour to the Resource Sheet to create the resource. However, if a typo sneaks in, your project can acquire resources that don't actually exist.

Fortunately, you can make Project notify you when it creates a new resource as it assigns the resource to a task: A message box opens and tells you the resource doesn't exist in the resource pool. If you want to add it, click Yes. If the resource represents a typo so you don't want to add it, click No. To tell Project to do this, choose File→Options. On the left side of the Project Options dialog box, click Advanced. In the "General options for this project" drop-down list, choose the project you want to work on (or select All New Projects), and then turn off the "Automatically add new resources and tasks" checkbox. Doing so also tells the program to notify you in a similar fashion when it creates a *task* if you type a *task name* that doesn't exist while assigning a resource to a task, for example, in a new row in Resource Usage view.

## Adding Resources from Excel

Getting resource information from an Excel workbook into Project is easy. For simple resource lists, you can copy and paste values from Excel into your Project file. Alternatively, if you want to import several resources fields, the Microsoft Project Plan Import Export Template, which comes with Excel, might be even easier. This template maps columns in an Excel worksheet to Project resource fields so information slides into the right slots almost effortlessly. (The only catch is that both Excel and Project have to be installed on the same computer for the template to appear in Excel. Page 140 tells you how to locate this template if you don't see it in Backstage view's template list.) In this section, you'll learn both methods for getting resource info from Excel into Project.

## WORKAROUND WORKSHOP

### Sorting Resources by Names and More

After an invigorating session of resource creation, your Resource Sheet might be a hodgepodge of resources in no particular order. An unsorted list not only makes it hard to see what resources you've got, but it also increases the likelihood of inadvertently duplicating them.

Removing duplicate resources prevents confusion and scheduling problems. If you accidentally create two or more resources with the same name, such as John Smith and john smith, Project considers those resources separate entities. So if you assign some tasks to one resource and other tasks to its doppelganger, your schedule will be wrong. For example, tasks might look like they can run simultaneously and workloads might seem reasonable—but in reality, those tasks might have to run in sequence, or you might have double-booked a resource. Sorting your resource list by name places duplicate names next to each other, so you can delete the duplicates and assign the remaining ones to the correct tasks.

Project makes it easy to sort your resource list by name: Simply click the down arrow to the right of the Resource Name column heading and then, in the drop-down menu, choose "Sort A to Z" or "Sort Z to A." If you want to sort the list by more than one field, here's what you do:

1. In Resource Sheet view (View→Resource Sheet), head to the View tab's Data section and click Sort→Sort By.

2. In the Sort dialog box's "Sort by" box, choose the field you want to use to sort the resources, and then select the Ascending or Descending option. For example, choose Type to separate each type of resource. (Project selects the Ascending option automatically, which is perfect for alphabetical order.)
3. In the "Then by" box, choose the next field to sort by, such as Name. Then pick the Ascending or Descending option, if necessary.
4. If you want to sort by another field, then in the *second* "Then by" box, choose the final sort field.
5. To make this order permanent, turn on the "Permanently renumber resources" checkbox. With this setting turned on, when you complete the sort, Project reassigns the ID numbers that uniquely identify the resources.
6. Click Sort to rearrange the resources.
7. If you chose to renumber the resources permanently (step 5), you should tell Project *not* to renumber resources the next time you sort (in case there is a next time), since that would mess up the numbering scheme for all the resources you've already assigned. To do that, simply reopen the Sort dialog box, click Reset to turn off the "Permanently renumber resources" checkbox, and then click Cancel to close the dialog box without resorting the list.

### ■ COPYING AND PASTING RESOURCE DATA

Suppose the HR department sent you an Excel workbook containing a list of resources. You can paste values from that spreadsheet directly into the table in Project's Resource Sheet view. Here's how:

1. **In the Excel workbook that contains resource information, select the cells that you want to paste into Project, and then press Ctrl+C (or, on the Home tab, click Copy).**

For example, if the resource names are in the first column, you can select just the cells in that column. If you want to copy several columns of data from Excel, such as names and standard pay rates, be sure that the data in the Excel worksheet is in the same columns as the columns in the Resource Sheet table.

For example, in the Resource Sheet Entry table, the Standard Rate field is in the seventh column, so you want your pay-rate data in the seventh column in the Excel worksheet.

2. **Switch over to Project and, if necessary, display the Resource Sheet by clicking View→Resource Sheet.**

Resource Sheet view is one big table, so it's easy to copy Excel data into it.

3. **Click the first blank Resource Name cell where you want to paste the tasks, and then press Ctrl+V.**

Project inserts the values into the Resource Sheet table, filling in cells below and to the right of the cell you clicked.

#### ■ IMPORTING RESOURCE DATA USING AN EXCEL TEMPLATE

Although you can import data from *any* Excel workbook, the Microsoft Project Plan Import Export Template is already set up to play well with Project. The template's Resource\_Table worksheet comes with column headings that match Project's resource fields. All you have to do is put your resource values in the appropriate columns. Then, when you import the workbook, the data goes where it belongs in resource records.

Here's how to import resource information from the Microsoft Project Plan Import Export Template spreadsheet into Project:

1. **In Excel, click File→New.**

Backstage view opens to the New page and displays the available templates.

2. **Double-click the Microsoft Project Plan Import Export Template.**

Excel creates a new workbook named ProjPlan1 with separate worksheets for tasks, resources, and assignments.

#### NOTE

This template appears in Excel only if Project is installed on the same computer. (If you want others to fill in the workbook created by this template, send them a copy of it. Or you can create a workbook from the template and add the project's name and the recipient's name to the workbook's filename to help you keep track of things.) If you don't see the template in Excel, see the box on page 140 to learn how to get to it.

3. **At the bottom of the Excel window, click the Resource\_Table tab, shown in Figure 8-4.**

If you're importing only resources, you can ignore the worksheets for tasks and assignments.



## ADDING RESOURCES TO YOUR PROJECT FILE

ID	Name	Initials	Type	Material Label	Group	Email Address	Windows Us	Max Units	Standard Rate	Cost Per Use	Notes
1	Dee Zaster	DZ	Work						60		
3	Everett Hopefil	FH	Work						75		
4	Envelopes	Env	Material	Box					4		

**FIGURE 8-4**

The *Resource\_Table* worksheet contains columns with headings that correspond to resource fields in Project, such as Name and Type. Don't be concerned that the columns aren't in the same order as the columns in the Resource Sheet's Entry table—you'll map the columns during the import process.

4. **Type or paste resource information into the appropriate cells, and then save the Excel workbook when you're done.**

Type information into cells if you don't have an existing file with resource data. If you already have a spreadsheet that contains resource information, you can use it to import your resources—with a few additions to the spreadsheet. Copy and paste the column headings in the Project template file to the corresponding column heading cells in your resource Excel workbook. For example, paste the Name heading into the first cell in the column that contains your resource names. Project imports this data based on the column headings in the template, so make sure your information is in the columns with the correct headings.

5. **To import the resources into Project, switch over to Project.**
6. **In Project, click File→Open, click the location where you saved the Excel workbook (like Computer or [your name] Skydrive), and then click Browse.**

The Open dialog box appears.

7. **In the Open dialog box's unlabeled "Files of type" drop-down list, choose "Excel Workbook (\*.xlsx)." Navigate to the folder that contains the Excel workbook with your resource information, and then double-click its filename.**

The Import Wizard appears. On the first screen of the wizard, click Next.

8. **On the "Import Wizard - Map" screen, select the "New map" option and then click Next.**

The "Import Wizard - Import Mode" screen appears.

9. **To import the resources into the active project at the end of the existing resource list, select the "Append the data to the active project" option, and then click Next.**



If you select the “Merge the data into the active project” option instead, Project imports resource information into existing resource records, which is perfect if you want to import updated info about your existing resources. The “As a new project” option is *not* the one you want, because it imports the resources into a brand-new project.

**10. On the “Import Wizard - Map” Options screen, turn on the Resources checkbox, and then click Next.**

The “Import Wizard - Resource Mapping” screen appears. Project automatically chooses Resource\_Table in the “Source worksheet name” box. In the table below that, the Excel fields and the Project fields should match up perfectly. If they don’t, simply choose the correct Excel field to go with a Project field, or vice versa.

**11. Click Finish.**

Project imports the resources to your project file, and they appear in Resource Sheet view.

## Adding Work Resources from Your Email Address Book

Chances are you have resource information for people in Outlook or on a Microsoft Exchange Server. If so, you can import that information into a Project file. (Project needs to be installed on the same computer as Outlook.)

To import resources from an address book, do the following:

**1. With the Resource Sheet visible (View→Resource Sheet), on the Resource tab, click Add Resources.**

A drop-down menu appears with commands for creating and importing resources. (If you’re using a view other than Resource Sheet, the Add Resources command is disabled.)

**2. Choose Address Book.**

The Select Resources dialog box appears. If you see the Choose Profile dialog box instead, then choose the profile name for the email system you want to use. For example, if you have a profile for your business email and one for your personal email, choose the business profile.

**NOTE**

If your organization uses Active Directory to store information, then on the Add Resources drop-down menu, choose Active Directory to import resources from that data source. Then search through the Active Directory for resources instead of browsing as you do with an address book.

**3. In the Select Resources dialog box, choose the resources you want to import, and then click Add at the bottom of the dialog box.**

Ctrl-click to select resources that aren’t adjacent. For adjacent resources, simply click the first resource, and then Shift-click the last one. You can also select resources in batches and then click Add to append each batch to the import list.

**4. When all the resources you want to import appear in the Add box, click OK.**

Project adds the resources to the Resource Sheet. Any information you store in your address book that applies to Project fields transfers over. For example, Project imports email addresses into its own Email Address field.

## ■ Removing Resources from Your Project

If you've created duplicate resources or lost someone to another project, you might want to delete those resources in Project. However, deleting a resource in Project means any assignments you've made are gone as well. That's right—when you delete a resource, you run the risk of orphaning tasks without anyone to perform them. One way to prevent this issue is to replace the resource (page 333) on task assignments before you delete it.

To simplify resource replacements, first filter the task list to show only the tasks to which the resource is assigned; then you can edit each task to replace that resource. To see the tasks to which a resource is assigned, do the following:

- 1. Select a task-oriented view like Gantt Chart and hide the summary tasks (in the Format tab's Show/Hide section, turn off the Summary Tasks checkbox).**

The task list shows only work tasks and milestones.

- 2. In the View tab's Data section, click the Filter drop-down list, and then choose Using Resource.**

The Using Resource dialog box opens with a "Show tasks using" drop-down list.

- 3. In the "Show tasks using" drop-down list, choose the resource you want to delete, and then click OK.**

Project displays any tasks that have that resource assigned.

- 4. To replace the resource with someone else, in the Resource tab's Assignments section, choose Assign Resources. In the table, select the task you want to reassign, and then, in the Assign Resources dialog box, select the resource you want to replace and click Replace. (Page 333 describes replacing resources in detail.)**

You can also make simple replacements in the Resource Names column by clicking each cell and picking a different resource for each task.

- 5. After you finish editing resource assignments, click the Format tab and turn the "Show summary tasks" checkbox back on.**

The task list is back to its full complement of summary tasks, work packages, and milestones.

- 6. In the View tab's Resource Views section, click Resource Sheet.**

Now you're ready to delete the resource.

7. In **Resource Sheet view**, click the row number of the no-longer-available resource, and then press **Delete**. Or right-click anywhere in the resource's row and choose **Delete Resource** from the shortcut menu.

Project removes the resource from the resource list.

## ■ Defining When Work Resources Are Available

You may have already assigned a calendar for your project, as described on page 119, to indicate when work usually takes place. But even if your office is open from 8:00 a.m. to 5:00 p.m., not everybody works the same hours. Creating separate calendars for people whose schedules don't follow the norm tells Project when people are available to work on their assigned tasks. The schedule is more accurate when Project knows about people's vacations, days off, and odd work hours. Project has two ways to specify when resources work, but each method approaches working time differently:

- A **resource calendar** comes in handy for setting aside days off and spelling out specific hours that a resource works—for example, Monday through Thursday from 8:00 a.m. to 7:00 p.m. with an hour at 12:00 p.m. for lunch. You can also use a resource calendar to specify part-time work schedules like Monday through Friday, 8:00 a.m. to 12:00 p.m.
- **Availability**, specified by resource *units*, tells Project what percentage of time the resource is available. For example, most resources work full time during normal working hours. You can alter a resource's units (in the Maximum Units field, which is usually abbreviated to Max. Units) to tell Project that someone works part time, or that a resource is really a three-person team. For example, the folks who work part time could have Max. Units of 60 percent if they work 3 days a week. If you use a resource calendar to define a part-time schedule, then you set Max. Units to 100 percent for the resources who work that schedule. Alternatively, the Max. Units for the three-person team that works on the project full time would be 300 percent.

**NOTE** When it comes to resource availability, Project's terminology is downright confusing. First, resource units are expressed as percentages or decimal values, not time units you'd expect, like hours or days. Units get more confusing when you assign resources to tasks. Assignments have their own Units field, which is the percentage of time the resource is assigned to the task. (See page 233 for a more detailed description of how units and assignment units work together.)

Resource calendars and units apply only to work resources, because these are the only ones assigned by time. You can use a calendar and units separately or together to identify how much a resource works, as described in detail on page 215.

Project automatically sets a resource's maximum units to 100 percent for full time and uses the calendar that applies to the entire project. However, in reality, people aren't productive 100 percent of the time. They check email, attend non-project meetings, and take breaks. Page 216 describes how you can model productive time in Project.

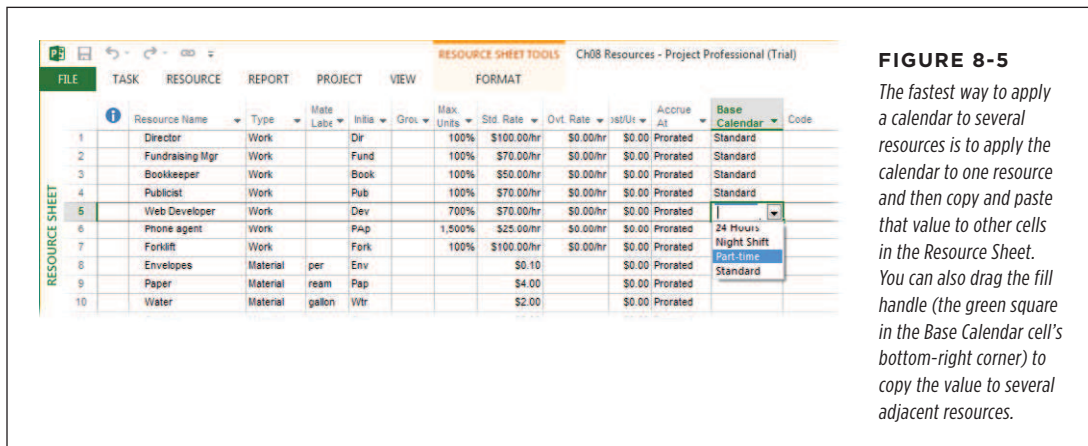
## Specifying a Resource's Work Schedule

If someone doesn't work according to the overall project's calendar, then you can specify a special work schedule by defining a calendar for that resource. Resource calendars come in handy for a variety of special situations like the following:

- Your project spans multiple shifts, and you want to assign people to the shifts that they work.
- Your resources work in different time zones, and you want to assign working times according to their local times.
- A resource will be away from work for an extended period of time—for instance, your star developer is recuperating from carpal-tunnel surgery.
- Your company offers the option to work either 4-day or 5-day work weeks, and you want to assign separate calendars to the people who choose each option.
- Equipment resources often require preventive maintenance, such as a computer server that's shut down for software patch installations once a month.

You can create a custom calendar for an individual resource or apply the same calendar to several resources. (To learn how to create and fine-tune calendars, see Chapter 5.) Here are the different methods for assigning a calendar to a resource:

- **Define a calendar for a resource.** In Resource Sheet view, double-click the resource with the custom work schedule. In the Resource Information dialog box, on the General tab, click Change Working Time. The label at the top of the Change Working Time dialog box reads "Resource calendar for '[resource name].'" Define work weeks and exceptions for that resource (see page 110), and then click OK to save the resource calendar.
- **Apply an existing calendar using the Resource Information dialog box.** Suppose you create a calendar that represents the working time for a group of resources, such as the folks who work the night shift or your part-time contractors. You can apply a shift calendar like this to the people who work that schedule. In Resource Sheet view, double-click the resource to which you want to apply the calendar. In the Resource Information dialog box, on the General tab, click Change Working Time. In the Change Working Time dialog box's "Base calendar" field, choose the calendar you want to apply (for example, a shift calendar like the Night Shift calendar that comes with Project), and then click OK.
- **Apply a calendar in Resource Sheet view.** Click the resource's Base Calendar cell (if the column is narrow, then you may see only the word "Base") and then, in the drop-down list, choose the calendar you want to apply, as shown in Figure 8-5.



## Specifying How Much Your Resources Are Available

Availability is the percentage of time a resource is available during the resource's work schedule, whether it's the standard calendar or a special one. Here's how availability works:

- If the resource doesn't have a special calendar assigned, then Max. Units set to 100 percent represents full time during regular working hours according to the project's calendar.
- If the resource has a resource calendar with Monday through Thursday as 8-hour workdays, then Max. Units set to 100 percent represents all the time the resource works—that is, 32 hours a week.
- If the resource has a Monday-through-Friday 6-hour workday calendar (that's 30 work hours each week), then Max. Units of 50 percent means the resource is available half of the calendar's working time, or 15 hours a week.

**TIP** Units aren't limited to 100 percent or less. In fact, if you have a 15-person customer service team, you can set up one work resource for the entire team and set the maximum units to 1,500 percent.

Resource Sheet view is the fastest way to specify maximum units. Simply click the Max. Units cell for a work resource, type the number for the maximum units, and then press Enter. Project adds "%" automatically.

**NOTE** Project Server uses an administrative project to account for nonproject work time.

#### REALITY CHECK

### Plan for Downtime

No one is productive every minute of every day. Even workaholics spend *some* work time on tasks that aren't a part of your project. An alarming amount of time is spent on unrelated meetings and administrative tasks like filling out health insurance forms. Moreover, the workdays just prior to holiday weekends are renowned for their low productivity. (For more about the importance of building slack time into a schedule, read *Slack* by Tom De Marco [Broadway, 2002]). You can make your Project schedules reflect this downtime:

- **Change the working time for your project.** For example, if experience tells you that 2 hours of every workday are spent on administrative tasks, you can shorten the workdays in your project calendar or resource calendars. This approach can also take into account corporate

holidays and vacation time. One issue with this approach is that the working times you define don't match the start time and end time of your real-world workdays, which might create scheduling issues if a meeting should take place during a time that Project considers nonworking time.

- **Adjust Project's calendar options (page 105) to reflect shorter workdays.** After you change the working time in the project calendar, you need to adjust Project's calendar options to match. In the Project Options dialog box (File→Options→Schedule), you can tell Project that workdays are shorter by changing the values for "Hours per day," "Hours per week," and "Hours per month."

### When Availability Varies

What do you do when availability changes over time? Suppose you're working in Kansas duplicating a few of the geoglyphs found in Peru. Carving the giant lizards takes at least a year with everyone working full time, but the number of people on your team varies with the seasons: You have a dozen helpers during the summer and only four people the rest of the year. To help you figure out how long a project like this would take, the Resource Information dialog box's General tab includes a table for setting varying availability levels.

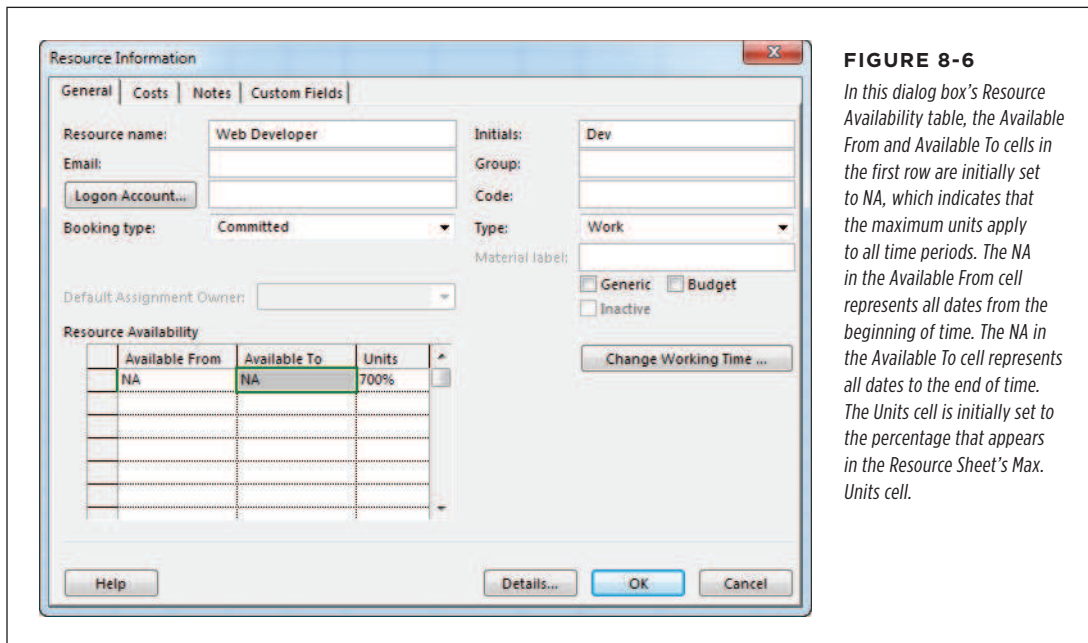
#### NOTE

When the work *calendar* changes over time—for example, a resource switches to 4-day work weeks in the summer—set up different work weeks in a resource calendar (page 111).

Here are the steps for setting up different levels of availability for different time periods:

1. **In Resource Sheet view, double-click the resource you want to edit.**

The Resource Information dialog box opens. In the General tab's lower-left corner, look for the Resource Availability section (Figure 8-6).



2. In the Available From column's first cell, choose the date on which the level of availability begins.

Any time periods you don't explicitly cover use the value from the Resource Sheet's Max. Units cell.

3. In the Available To column's first cell, choose the end date.

The units you specify in the next step will apply to all assignments that occur between the Available From and Available To dates.

4. In the Units cell, type the percentage value for the maximum units (such as 50 for 50 percent), and then press Enter.

If you omit the percentage sign, Project adds it.

5. Repeat steps 2–4 in additional rows to specify levels of availability for other timeframes.

The dates in each row must be later than the dates in previous rows. For example, if the first row specifies the availability from 6/1/2013 to 8/31/2013, then the dates in the second row must be later than 8/31/2013.

## 6. When you finish entering availability, click OK to close the dialog box.

If you look closely at the Resource sheet, you'll notice that the Max. Units for the resource now appear as 0%. To see the resource's availability, you have to select the resource and open the Resource Information dialog box. Because Max. Units of 0 percent are bound to raise questions from others, you might consider adding a note (page 226) to the resource explaining the reason for this unusual value.

From now on, when you assign this resource to tasks, Project uses the availability percentages that apply for the timeframe during which the task occurs.

### POWER USERS' CLINIC

#### Making Resources Available to Multiple Projects

More often than not, the same resources work on more than one project, whether the projects all occur at once or conveniently follow one after the other. You don't have to recreate the same resources for every project file. It's more efficient to create a *resource pool* for the resources you use time and again, and then apply that resource pool to various projects.

When your projects don't occur simultaneously, a resource pool simply saves you the drudgery of defining the same resources over and over. But if you manage several projects at once (page 516) without the benefit of Project Server, a Project resource pool can help you see who's available, who's already booked, or who's overloaded and needs some assistance.

Creating a resource pool is almost identical to creating a regular Project file. In Project, create a new blank project, and then add

(or import) your resources. The difference is that you save the file *after* creating the resources but *before* creating any tasks. To learn how to connect a resource pool to projects and share pooled resources, see page 524.

If your organization manages lots of projects all the time, even a resource pool is unwieldy. Microsoft Enterprise Project Management Solutions provides the tools for mega-project operations. (Project Online is a hosted solution that offers the same capabilities [page xvii].) You can categorize resources by skillsets to locate the right resources, coordinate multiple projects, and view project performance and status for your entire portfolio of projects.

## ■ Defining Costs for Resources

Unless money is no object (yeah, right), you need to keep a close eye on project costs. Labor and materials usually represent the bulk of the cost for a project. When you assign costs to work and material resources, Project calculates project costs as well as the schedule. The cost fields are available in both the Resource Sheet and the Resource Information dialog box, but the Resource Sheet is usually the quickest option. This section describes how to enter costs for all three types of resources.

### Setting Up Work and Material Costs

Work and material resources use the same cost fields, although they don't always represent the same thing. The rate for a work resource is the cost per period of



time, whereas a rate for materials is the cost per unit. Here are the cost fields for resources and what they do:

- **Std. Rate** (Standard Rate) is the typical pay rate for a work resource, the cost per time period for a piece of equipment, or the cost per unit for material. For example, a contractor's pay rate of \$50 per hour shows up as \$50.00/hr. Because work resources are assigned by time, Project automatically adds "/hr" to the number you type. If you pay a contractor a flat rate per month, you can use a different unit of time, for instance, "\$5000/mon."

**TIP** Project includes options for setting the standard rate and overtime rate (discussed in a sec) for resources. Initially, these options are set to \$0.00/hr (\$0 per hour). However, if most of your resources cost the same amount per hour, you can save a few steps when you're creating resources by setting a default standard or overtime rate. Choose File→Options and on the left side of the Project Options dialog box, click Advanced. In the "General options for this project" drop-down list, choose the project for which you want to set default resource rates, and then type values in the "Default standard rate" and "Default overtime rate" boxes.

Material resources are allocated by units other than time, such as gallons of sports drink, reams of paper, or rolls of shipping tape. For material resources, Std. Rate represents the price per unit. How do you enter the unit for a material resource? The unit is whatever you type into the Material Label cell (if the column is narrow, this column's heading just reads "Material"). For example, for paper, the Material Label unit might be ream. When you type \$4.25 in the Std. Rate cell, Project calculates cost as \$4.25 per ream. In reality, Project doesn't care what the unit is. The Material Label field is just there to remind you of the units you're using for a particular material so you assign the correct quantity to tasks. Project simply multiplies the quantity assigned by the material's Std. Rate.

- **Ovt. Rate** (Overtime Rate) applies only to work resources. You don't have to fill in this field unless the person earns a premium for overtime and you specifically assign overtime hours to the resource in Project (page 450). People who work for a salary don't cost extra, so their Ovt. Rate is zero. If someone gets the same hourly rate regardless of how many hours he works, you don't have to bother with overtime. (In that situation, you could create an exception with long hours in the resource's calendar.)

**NOTE** When you assign resources to tasks, Project *doesn't* automatically use the overtime rate for hours assigned beyond the standard workday. To designate overtime hours, you have to modify the resource assignment (page 451) to tell Project to apply the overtime rate.

- **Cost/Use** applies only when you pay an amount each time you use the resource. For example, if you pay a flat \$50 each time the network technician comes on site, then enter 50 in the Cost/Use field. That way, every time you assign the network technician to a task, the task's cost includes the hourly rate for the technician *and* his \$50 appearance fee. Similarly, you can fill in the Cost/Use field with the cost of delivering rental goods to your event.

- **Accrue At** is important only if someone cares *when* money is spent. For example, if cash flow is tight, knowing whether you pay up front, after the work is done, or spread out over time can make or break a budget. The Accrue At cell offers three settings: Start, Prorated, and End. Start means the cost occurs as soon as the task begins—like paying for a package delivered COD. End represents cost that occurs at the end of a task, such as paying your neighbor’s kid when he finishes mowing your lawn. And Prorated spreads the cost over the duration of the task, such as the wages you pay to employees assigned to long tasks.

**NOTE** Project includes several options for specifying currency. To see them, choose File→Options, and then, on the left side of the Project Options dialog box, choose Display. Below the “Currency options for this project” heading, you can specify the currency symbol you want to use, such as \$ for dollars. Type the number of decimal digits you want to see (for example, 2 for cents) in the “Decimal digits” box. Choose the currency in the Currency drop-down list. The Placement setting specifies whether the currency symbol appears before or after the currency value with or without a space between the symbol and the value.

## When Pay Rates Vary

The Resource Information dialog box comes in handy for setting costs when a resource has different pay rates or when rates change over time, like if you hire a hermit who charges \$50 per hour for work performed at his cave, and \$300 per hour for work performed onsite. Here’s how you define different or variable pay rates:

### 1. Double-click the resource you want to edit.

The Resource Information dialog box opens.

**TIP** If you want to make the same changes to *several* resources, select them all and then, on the Resource tab, click Information. The Multiple Resource Information dialog box opens. Any changes you make in the dialog box are applied to all the resources you selected.

### 2. In the Resource Information dialog box, select the Costs tab.

The Costs tab contains a cost-rate table with five tabs of its own, labeled A through E (shown in Figure 8-7) so you can define up to five different pay rates for a resource. (If only Project let you assign names to each table so you could tell what each one is for...) Confusingly, Microsoft calls each tab of this table a “cost-rate table.” The “A (Default)” tab contains the original values that you entered for this resource.

**NOTE** After you define a cost-rate table, you can apply it to a resource assignment. Switch to Task Usage or Resource Usage view (on the Task tab, click the bottom half of the Gantt Chart button, and then choose Task Usage or Resource Usage), and then double-click an assignment (in Task Usage view, that’s a row containing a resource name; in Resource Usage view, that’s a row containing a task name) to open the Assignment Information dialog box. On the General tab, in the “Cost rate table” drop-down list, choose the letter that corresponds to the rate table you want to apply.

3. To set a second pay rate for the resource, click tab B (shown in Figure 8-7) and then, in its first Standard Rate cell, type the second pay rate.

To remind yourself what each pay rate is for, select the dialog box's Notes tab, and then type the kind of work and the pay rate that applies.

Resource Information

General Costs Notes Custom Fields

Resource Name: Publicist

Cost rate tables:

For rates, enter a value or a percentage increase or decrease from the previous rate. For instance, if a resource's Per Use Cost is reduced by 20%, type -20%.

Effective Date	Standard Rate	Overtime Rate	Per Use Cost
--	\$80.00/h	\$0.00/h	\$0.00
Wed 1/1/14	\$90.00/h	\$0.00/h	\$0.00

Cost accrual: Prorated

Help Details... OK Cancel

FIGURE 8-7

If you know the dollar amount of the future rate, type it in the appropriate cell (Standard Rate, Overtime Rate, or Per Use Cost cell). You can also specify a rate change with a percentage. If a consultant tells you rates are going up 10 percent, then type 10% in the Standard Rate field. When you press Enter, Project calculates the new rate and replaces the percentage with the new dollar value.

4. If the pay rate changes over time, select the second cell in the Effective Date column, and then choose the starting date for the new rate.

The pay rate in the first row applies to any assignments that occur before the first effective date. For example, if the hermit is raising rates on January 1 of the next year, choose that date in the second Effective Date cell.

5. Repeat step 4 to define additional pay-rate changes and when they take effect.
6. To set additional pay rates, select the less-than-helpfully-named tab C, D, or E, and then repeat steps 3-5.

For each task that uses this resource and cost rate table, Project now applies the pay rate that's in effect when the task occurs.

## Specifying Cost for Cost Resources

The Cost resource type is perfect for costs that aren't based on time or any sort of material. Unlike the Fixed Cost field that you had to use in pre-2007 versions of Project, more than one cost resource can apply to a task, like travel, videoconferencing costs, and fees. If you look at cost resources in Resource Usage view, you can review

the total cost for each cost resource to see what those categories of costs add up to for the entire project.

To create a cost resource in Resource Sheet view, all you have to do is type its name in the Resource Name cell and then choose Cost in the Type cell. When you press Enter, the standard values for a work resource disappear. The only other fields with values are Initials and Accrue At. To change either the resource's initials or when the cost occurs, click the appropriate cell and then type the new value.

Unlike work and material resources, you *don't* set a cost for a cost resource in the Resource Sheet. Instead, you specify its monetary value when you assign the cost resource to a task (page 248), so the value can vary from task to task.

## ■ Using Generic or Tentative Resources

Building a team for a project is often an iterative process. You might start by identifying the skills required and craft your initial schedule to determine how many people you need with different skillsets. Then, you find out what resources you can get and revise your plan accordingly. Project can handle both resourcing steps.

Generic resources are easy to set up in Project. And if you use Project Professional, you can also *tentatively* add resources to your project, so you can determine whether you really need them without making waves in other projects. This section shows how to create generic resources and designate resources as tentative.

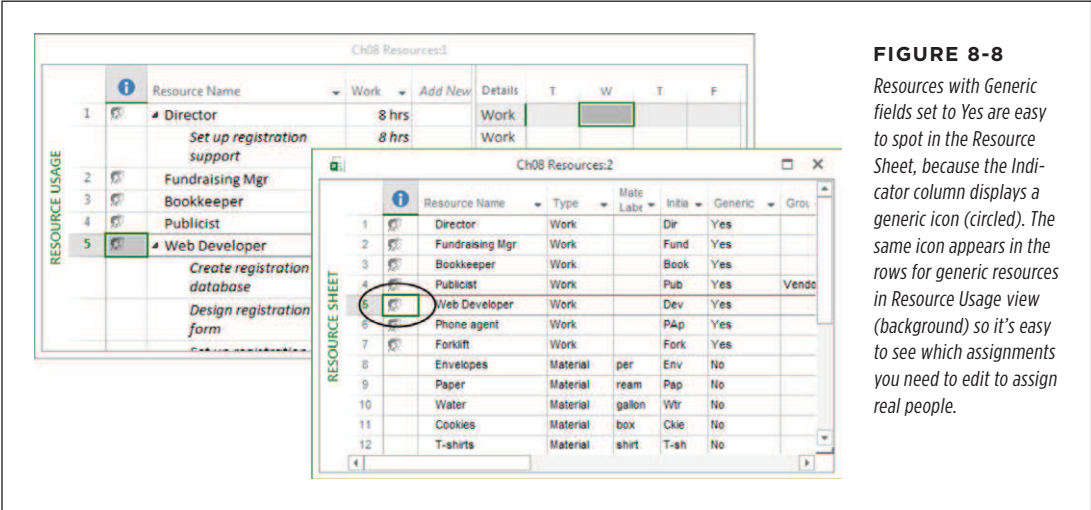
**NOTE** If you look closely at the General tab of the Resource Information dialog box, you'll notice the Budget checkbox. With budget resources (page 274), you can record amounts budgeted for different categories of expenses and compare your project's cost performance to the budget. To designate a resource as a budget resource, turn on the Budget checkbox. In addition to turning on the Budget checkbox, it's a good idea to name the budget resource in a way that indicates its budget status. For example, you can add a prefix like "Budget" or "B-." Chapter 10 (page 273) describes how to use Project's budgeting features.

### Using Generic Resources

The easiest way to create generic resources is to use job descriptions for resource names, such as Publicist or Web Developer. By creating work resources based on skillsets, you can assign those resources to tasks without worrying about overallocating them. If you need to assign a web developer at 300 percent to make the schedule work, you'll know you need at least three developers to finish on time.

Once you start building your real team, you replace the generic resources with real ones. (See page 333 for the full scoop on replacing resources in assignments.) If you have a cast of thousands, finding assignments that are still using generic resources can take time. The Generic field in Project can simplify finding all your placeholder resources. All you do is filter your project (page 643) for assignments that still have generic resources assigned to them and track down real people to fill those slots until your entire project is staffed.

The easiest way to flag resources as generic is by inserting the Generic column into the table in Resource Sheet view. To do so, right-click a column heading and choose Insert Column; type *g* and then choose Generic from the drop-down list. Then, for each generic resource, change the Generic cell to Yes. When you do, the resource’s Indicator column displays an icon of two heads to represent its generic status (Figure 8-8).



### Working with Proposed Resources

Project also includes the Booking Type field, which lets you designate resources as Committed or Proposed. If you don’t share resources with other projects, you don’t have to bother with this field at all. If you do, add this column in Resource Sheet view by right-clicking a column heading, selecting Insert Column, and then choosing Booking Type in the drop-down menu.

This column offers two settings: Committed and Proposed. Project automatically sets new resources to Committed, which means any resource assignment you make reduces the resource’s available hours so you can see the person’s workload (page 239). The Proposed value lets you *tentatively* assign resources to tasks without locking up their time. Suppose you want to work out a project schedule and budget based on resources that aren’t yet officially assigned to your project. Creating them as Proposed means you can calculate dates and costs without taking away any of their available time. When a resource officially becomes yours, you can change its booking type to Committed.

**NOTE**
 When you set a resource that’s stored in a resource pool to Proposed, the resource shows up as Proposed in every project attached to the resource pool, which probably isn’t what you want. So if you’re using a resource pool, assign a generic resource instead, and then assign the real resource later.

## Adding More Resource Information

The resource fields you change most often appear in the table in Resource Sheet view, so you might never have to give up the convenience and familiarity of entering values in table cells. Besides, if you have other resource fields that you always fill in, then you can insert those columns in the resource table (page 633). This section describes additional resource fields you might want to use and how to specify their values.

**TIP** If you don't want to change Resource Sheet view's table, use the Resource Information dialog box instead. It contains all the resource fields you can set, and it's the only easy way to add a few of the more intricate resource settings.

Resource Sheet view (View→Resource Sheet) shows the fields most project managers fill in: name, resource type, initials, and workgroup. In the Resource Information dialog box (Resource→Information), the General tab, shown in Figure 8-9, includes these fields and a few more.

Available From	Available To	Units
NA	NA	100%

**FIGURE 8-9**

If the table in Resource Sheet view doesn't show all the fields you want, then the General tab of the Resource Information dialog box is the next place to look. If you don't work with costs, you might not have to venture beyond the General tab.

## Filling in Other Resource Fields

Here are the additional resource fields (found on the Resource Information dialog box's General tab) that you might want to fill in, along with their uses:

- **Initials.** The usefulness of this field might not be obvious at first. When you view a schedule in the Gantt Chart timescale, displaying the resources assigned to tasks on the task bars is a quick way to see who does what or to spot tasks without resources. Full names take up too much room and cover up task-link lines, especially when several resources work on the same tasks. Fortunately, you can see who's assigned to tasks without the clutter by displaying resources' *initials* instead of names.

Project initially sets the Initials field to the first letter of the resource's name. With all but the tiniest teams, that approach doesn't help. You can change the value in this field to whatever you want, like a person's first and last initial or an abbreviated job description.

- **Group.** This field can represent any type of category you want—departments, subcontractors and vendors, or skillsets. In addition to grouping resources in Resource Sheet view, you can also use the Group field to filter the task list to tasks performed by specific work groups, or group tasks by the type of resource required.
- **Code.** This field provides another way to categorize resources, which you can then use to sort, filter, or group tasks and resources. If your organization assigns job codes, you can enter them in this field and then filter for tasks that require a specific job code. (For more on job codes and what you can do with them, see the box on page 226.)
- **Email.** If you distribute information via email directly from Project, then be sure to enter the person's email address here.

**NOTE** The Resource Information dialog box's Logon Account button applies only if you use Project Server to manage a portfolio of projects. Clicking this button tells Project to fill in the Logon Account box with the person's Windows account information. Then Project uses that info to log into Project Server.

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### Categorizing Resources in Detail

For a project with a cast of thousands, the Resource Information dialog box's Group and Code fields might not be enough to express all the categories you have. For excruciating detail, *resource outline codes* are a better approach. Similar to WBS codes (page 157), resource outline codes are hierarchical identifiers that can reflect the organizational structure of your company or employee skillsets. For example, you might change a custom outline field like Outline Code1 (page 675) to something that represents the job levels within your organization, like "Eng. Net. Sr." for a senior-level network engineer.

To assign a custom outline code to a resource, in the Resource Information dialog box, select the Custom Fields tab. Any resource outline codes that you've set up appear in the list. In the Value cell, type the code for this resource.

Whether you use a resource outline code, the Group field, or the Code field to categorize resources, you can filter the list of resources in the Assign Resources dialog box to find resources that match your desired characteristics (page 235).

### Adding a Note to a Resource

If you want to enter additional information about a resource, head to the Resource Information dialog box. Project calls such additional info *notes*, which can include text, images, and documents. Keep in mind that the information you add to a note is available to *anyone* you share the file with, so don't include anything confidential.

To attach a note to a resource, follow these steps:

1. **In Resource Sheet view, right-click the resource and then choose Notes from the shortcut menu.**

The Resource Information dialog box opens to the Notes tab.

2. **In the Notes box, type or paste the text you want to add.**

To format text, select it and then click the buttons on the toolbar above the Notes box, which let you change the font, set the justification, and create bulleted lists. Click the rightmost button (its icon looks like a landscape) to insert an object from another program (such as a document or a photo).

3. **Click OK.**

A notepad icon appears in the resource's Indicators cell. To see the beginning of the note, position your pointer over this icon. To see the entire note, double-click the Notes icon, and Project opens the Resource Information dialog box to the Notes tab.