CHAPTER

10

Setting Up a Project Budget

Projects cost money. Whether you're planning a small department retreat or building a new airport, the project's budget will be a key factor in the planning and managing decisions you make.

The budget is a benchmark—a line in the sand that project costs should not overstep. Initially, the cost of your project is the total of all your forecasted costs for scheduled tasks and their assigned resources. Once the project begins and you start tracking progress on tasks, Project adjusts these forecasts to reflect actual and remaining work and costs. One of your jobs as project manager is to make sure project costs don't exceed your allocated budget.

This chapter starts with a brief introduction to some methods that organizations use to develop project budgets. You'll focus on setting up your project so Project calculates costs appropriately—for example, identifying resource costs as well as any additional costs associated with tasks. With this cost and budget information in place, you can analyze whether your project is within budget or in need of belt-tightening.

This chapter also explains how to look at project costs from different points of view, depending on the level of detail you want. You'll learn how to compare project costs against your budget using the budget resource feature. And in case Project gives you bad (but realistic) news that costs are outrunning the budget, this chapter provides specific cost-cutting measures you can pull from your project manager's arsenal. Finally, you'll learn how to set up accounting codes at the task or resource level so that your project costs can work with your organization's financial systems.

TIP This chapter focuses primarily on costs and budgeting during the planning stage, although some of the techniques discussed here work just as well during project execution. Other chapters delve into detail on monitoring project costs after your project is under way. For example, Chapter 12 describes setting a *baseline*, which is the snapshot of the approved project plan. Chapter 13 talks about entering progress information, or *actuals*, into your project. And Chapter 14 describes how to evaluate project performance and the techniques you can use to bring a project back on track.

Putting a Price Tag on Your Project

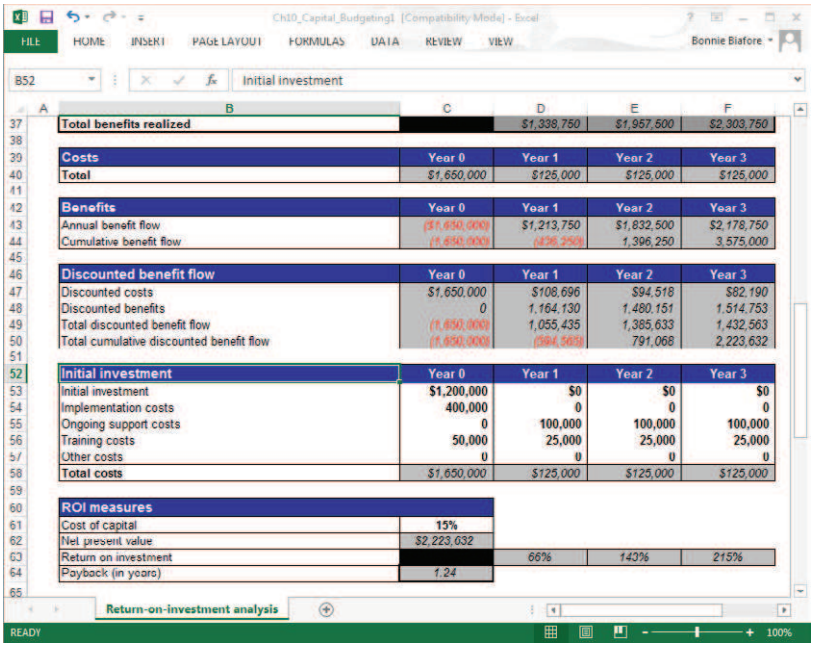
It's the old chicken-and-egg scenario—which comes first, the project's budget or its cost estimates? Either way, your organization wants to know how much the project will cost. Or, looking at it from the other direction, what's the maximum this project *should* cost to get the financial benefit the organization requires?

The financial benefit comes down to whether the project is worth the effort. How much money will the project make or how much will it save? What will it cost to get that result? For example, suppose your boss has an idea for a new product. The bean counters think it could earn more than $3,000,000 over the product's life cycle. The company has to decide how much it's willing to spend on the development project and how much profit it needs to earn to make the project worthwhile. As the project manager, you're expected to provide cost estimates based on the agreed-upon project scope. The hard part is making your project cost estimate agree with the budget the company has in mind.

One approach to calculating the price tag is to develop your schedule, assign resources to tasks, and let Project calculate the resulting costs. You can then use that cost figure as you go, hat in hand, to present the budget. The powers that be often reduce that number, although they also set aside contingency funds and management reserve (page 168) as insurance.

Another method for setting the project budget is *capital budgeting*, which is a set of financial calculations that help determine a project's potential rate of return, return on investment, and payback period (page 11). Capital budgeting can also show the impact of not taking on *other* projects while the organization's resources are busy with the current project. Thus, capital budgeting analysis can help an organization determine whether a project is in line with its financial and other strategic goals—with the result of a go/no-go decision for that project.

For an example, you can download an Excel capital-budgeting template from Microsoft Office Online (*http://tinyurl.com/ROIWorksheet*). Enter your data, and the spreadsheet calculates the rate of return on an investment, the net present value of the investment, and the payback period, as shown in Figure 10-1.



Ch10_Capital_Budgeting1 [Compatibility Mode] - Excel

FILE HOME INSERT PAGE LAYOUT FORMULAS DATA REVIEW VIEW Bonnie Blafore

B52 Initial investment

	A	B	C	D	E	F
37		**Total benefits realized**		$1,338,750	$1,957,500	$2,303,750
38						
39		**Costs**	**Year 0**	**Year 1**	**Year 2**	**Year 3**
40		Total	$1,650,000	$125,000	$125,000	$125,000
41						
42		**Benefits**	**Year 0**	**Year 1**	**Year 2**	**Year 3**
43		Annual benefit flow	($1,650,000)	$1,213,750	$1,832,500	$2,178,750
44		Cumulative benefit flow	($1,650,000)	($436,250)	1,396,250	3,575,000
45						
46		**Discounted benefit flow**	**Year 0**	**Year 1**	**Year 2**	**Year 3**
47		Discounted costs	$1,650,000	$108,696	$94,518	$82,190
48		Discounted benefits	0	1,164,130	1,480,151	1,514,753
49		Total discounted benefit flow	($1,650,000)	1,055,435	1,385,633	1,432,563
50		Total cumulative discounted benefit flow	($1,650,000)	($594,565)	791,068	2,223,632
51						
52		**Initial investment**	**Year 0**	**Year 1**	**Year 2**	**Year 3**
53		Initial investment	$1,200,000	$0	$0	$0
54		Implementation costs	400,000	0	0	0
55		Ongoing support costs	0	100,000	100,000	100,000
56		Training costs	50,000	25,000	25,000	25,000
57		Other costs	0	0	0	0
58		**Total costs**	$1,650,000	$125,000	$125,000	$125,000
59						
60		**ROI measures**				
61		Cost of capital	15%			
62		Net present value	$2,223,632			
63		Return on investment		66%	140%	215%
64		Payback (in years)	1.24			
65						

Return-on-investment analysis

READY 100%

FIGURE 10-1

Capital-budgeting analysis shows the financial benefit of a project based on your estimated costs and can also determine the highest project cost that still achieves those financial benefits. When you plug your numbers into this Excel capital-budgeting spreadsheet, it shows you the project's return on investment, the years required to pay back the investment, and much more.

You can use Project to develop cost estimates to feed into the capital-budgeting spreadsheet. In Project, if you specify costs for your project resources and then assign resources to tasks, the program can give you a total cost estimate for the project. You can look at this cost estimate from different angles—total costs for a resource, total costs for a phase, costs for different time periods, and even costs for an individual task.

When you feed your project's cost estimates into the capital-budgeting analysis, you can see whether the project is even feasible. For example, suppose the capital-budgeting analysis shows that the project is worth doing as long as the cost doesn't exceed $50,000. If your project cost estimate sits steadfastly at $200,000, chances are good that the project won't fly, because trimming 75 percent from the estimate isn't likely.

Project budgeting is an iterative process. The project's customer may have a ballpark number in mind, but you can give the budget a basis in reality with your project cost estimate. Explanations and negotiations may ensue, along with further analysis, until finally you obtain a realistic project budget figure that everyone is willing to accept.

Remember that you need to do everything in your power to not exceed that budget once the project gets under way. If you overshoot the budget, you may have to pay dearly, in unpopular schedule adjustments, reduced scope, cost overruns—not to mention your own reputation. In the end, people say two things about successful projects: "It came in on time and under budget."

Reviewing Cost Information

Suppose the project's customer makes it very clear that the maximum price tag for the fundraising event project is $150,000, and she hints more than once that less than $120,000 would be even better. Now that you've entered tasks, resources, and any associated costs in Project, it's time to see what the event is likely to cost.

In this section, you'll learn how to review total planned costs for all project tasks. By extension, you get a handy forecast of your overall project costs. You'll also learn how to review planned costs for tasks, resources, and assignments, so you can analyze costs at whatever level of granularity you need.

Seeing Overall Project Costs

When you first compare your project plan's performance against the budget, start with a quick bottom-line snapshot. A single number for your project's planned cost tells you whether you need to delve into cost containment or whether you can sit back and relax. This section shows a few ways to come up with that top-level number.

Remember the old garbage in/garbage out maxim? Your total project cost forecast is only as reliable as the information you provide. At this stage of the game, many costs and durations are merely estimates. Still, because these estimates affect your budget, it pays to be as accurate as possible. To forecast the project's total cost reliably, make sure you have the following information in your project plan:

- Costs, including hourly rates and per-use costs, for all work resources assigned to tasks
- Costs for all material resources assigned to tasks
- Costs for all cost resources assigned to tasks
- Any additional fixed costs for tasks
- All resource assignments for tasks

VIEWING THE TOTAL PROJECT COST IN THE PROJECT SUMMARY TASK

The project summary task is a great place to spot the total planned project cost, because it rolls up the totals for all tasks and you can keep it visible in the first row of the project task list. To use the project summary task to see rolled-up cost values, follow these steps:

1. **With a task-oriented view like the Gantt Chart visible, head to the Gantt Chart Tools | Format tab's Show/Hide section and turn on the Project Summary Task checkbox.**

   A new row appears at the very top of the table in most views. A project summary node also appears in Network Diagram view. The project summary task rolls up the column values in the current table. For example, in the Entry table (the typical table shown in Gantt Chart view), you can see the total duration, the start date, and the finish date for the entire project.

   For columns that don't roll up, like the Predecessor and Resource Names columns, the corresponding project summary cells remain blank.

2. **Apply the Cost table by clicking the View tab. In the Data section, click the Tables button and then, from the drop-down list, choose Cost.**

   The project summary task displays the total cost of the project in its Total Cost cell. It also shows rolled-up values for Baseline Cost, Cost Variance, Actual Cost, and Remaining Cost in other columns.

   Values in the Fixed Cost column don't roll up into the Fixed Cost field for outline summary tasks or the project summary task. There's a reason for this behavior: so you can enter a fixed cost for a project phase or the project as a whole. (The box on page 268 tells you whether it makes sense to use Project's Fixed Cost field and, if so, where fixed costs you enter there show up in your overall project costs.)

TIP If you spend most of your time in Gantt Chart view and its sidekick, the Entry table, consider adding the Cost column to the Entry table. Right-click one of the table's column headers, and then, on the shortcut menu, choose Insert Column. In the field name drop-down list that appears, choose Cost.

FREQUENTLY ASKED QUESTION

Fixed Costs or Cost Resources

Should I ever use the Fixed Cost field instead of a cost resource?

Cost resources have several advantages over the Fixed Cost field. You can assign multiple cost resources to a single task (page 248), making different types of costs easier to see and track; and you can assign the same cost resource to multiple tasks, even if they have different cost amounts. In addition, if you use budget resources to compare budgeted and planned costs, budget resources take cost resources into account, but they *don't* take values in the Fixed Cost field into account.

A fixed-cost contract is one situation in which the Fixed Cost field might make sense. (A fixed-cost contract means someone commits to delivering a chunk of work for a set price, so you don't have to track work hours or assign resources to a task for such a contract.) If you want to include that cost in your budget comparisons (page 273), a Cost resource still makes sense. You create a cost resource for fixed-price contracts, assign the cost resource to the corresponding task, and fill in the contract cost.

However, if you don't use budget resources to evaluate your project price, you can forgo cost resource assignments and simply fill in the Fixed Cost field with the contracted amount.

1. To assign a value to the Fixed Cost field, display Gantt Chart view or another task-oriented view.
2. In the View tab's Data section, click the Tables button, and then choose Cost from the drop-down menu.
3. In the Fixed Cost cell for the task, fill in the value of the fixed-cost contract.
4. If necessary, select the Fixed Cost Accrual field for the task, and then select Prorated, Start, or End to indicate when the cost should be incurred during the task duration. The typical accrual for fixed costs is Prorated, which means the fixed cost is divided into equal portions across the task's duration—perfect if you make several payments over the course of the contract.

Project adds the value in the Fixed Cost field to the Total Cost field, so it represents work, material, cost-resource costs, and any fixed costs.

Entering a fixed cost for a summary task is helpful when a cost corresponds to a project *phase* rather than an individual task. You add fixed costs to a summary task the same way you add them to regular tasks. Project doesn't roll up the Fixed Cost field to summary tasks, so you can fill in a value in a summary task's Fixed Cost field.

TIP The Fixed Cost field is just a value; it doesn't describe what the cost is for. You can add a note to a task (page 156) to identify the source of the fixed cost.

VIEWING THE TOTAL PROJECT COST IN PROJECT STATISTICS

To get to the single number that indicates your project's total costs, use the Project Statistics dialog box as follows:

1. **In the Project tab's Properties section, click Project Information.**

   The Project Information dialog box appears.

2. **At the bottom of the dialog box, click the Statistics button.**

   The Project Statistics dialog box appears, as shown in Figure 10-2.

3. **In the Cost column, review the value in the Current field, which is the forecasted cost for the project as currently planned.**

   After you set a baseline (page 375) the Baseline fields are also filled in. And when you start tracking status (page 391), the Actual and Remaining fields have values, too.

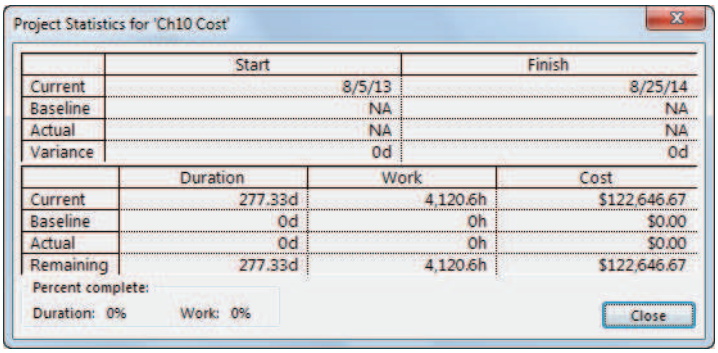


FIGURE 10-2
The Project Statistics dialog box includes bottom-line project information that lets you and others gauge the most important aspects of the project as a whole: when the project starts, when it's scheduled to finish, how much work is involved, and how much it's forecast to cost.

NOTE You can get overall project cost information in a report, too. On the Report tab, click the Dashboards button, and then choose Cost Overview. The Cost Overview report shows the total cost for the project, the remaining cost, and details about the costs of individual tasks. For more about generating reports, see Chapter 16.

Seeing Costs for Tasks, Resources, and Assignments

Now that you've seen the big picture of forecasted costs, you're probably champing at the bit to learn how to find task costs when all resources are assigned and where to look for the total cost of one resource's assignments. This section shows how to break costs down to individual assignments—that is, how much it costs for one particular resource working on one particular task. Use one of the following methods to drill down into costs:

- **Total cost for a task.** First apply the Cost table to a task view (View→Tables→Cost), and then, in the Total Cost column, check the value. Or insert the Cost column into any task view (right-click a column heading in the table and choose Insert Column), and then check the Cost value for the task. In both cases, the Cost value is the scheduled (planned) cost for the task, including all assigned resources (work, material, and cost) and any fixed costs. See Chapter 14 (page 429) to learn the difference between baseline, scheduled, and actual values.

NOTE Depending on the table you display, you may see the Total Cost or the Cost column. However, both columns show the same information. The Cost table simply uses "Total Cost" as the column heading.

- **Total cost for a resource.** Display Resource Sheet view (View→Resource Sheet), and then insert the Cost column somewhere in the table (right-click a column heading in the table and choose Insert Column). The Cost value for a given resource is the total cost for the resource for all its assigned tasks, based on the standard rate, overtime rate, cost/use, or other specified resource cost. This technique is perfect when you want to see how much you're spending for a specific work resource, such as a contractor, or a specific cost resource, such as travel or training. You can also see the cost for a resource in Resource Usage view in the resource's summary row, as shown in Figure 10-3.

TIP If you insert the Cost column in the table in Resource Sheet view, you can sort resources by how much you pay for them over the life of the project. In the View tab's Data section, click Sort, and then choose "by Cost." To revert to the original order, click Sort→"by ID."

- **Cost for assignments.** If you want to see the cost of the assignments associated with a task or a resource, display Task Usage view or Resource Usage view, respectively. As usual, you can either apply the Cost table or insert the Cost column in the Usage table (or whatever table you want to use), as shown in Figure 10-3.

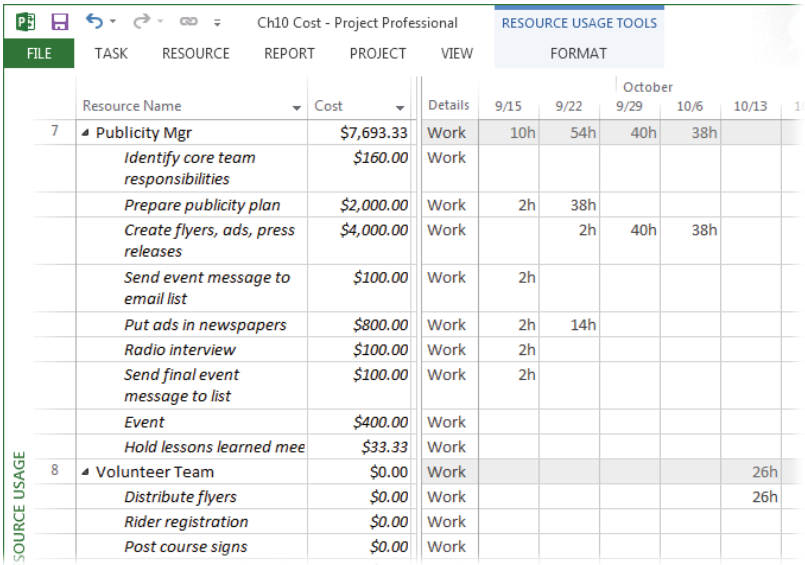


FIGURE 10-3
In Resource Usage view, the Cost field in a task-assignment row represents the cost for that individual assignment. The cost in a resource-name row represents all assignment costs rolled up to give you a total for all tasks assigned to that resource.

In Task Usage view, the cost in a resource-name row represents the cost for that individual assignment—what it costs to have that resource assigned to that task. The cost in a task-name row represents all assignment costs rolled up to give you a total for that task.

TIP You can transfer cost information from your Project file to an Excel file for further analysis (page 549). Whether you copy and paste fields from Project into Excel or export Project information into an Excel spreadsheet, you can apply formulas, crunch numbers, and create whiz-bang charts and graphs until the cows (or stakeholders) come home.

Adding Custom Budget Information

The Cost field is great while you're in the planning phase and want to forecast what the project might cost. In this section, you'll learn how to create your very own type of cost field. You may want to do this if you have specialized cost or budget information you'd like to see in your project, like budget targets for key tasks and phases. To create a custom cost field for these types of figures, follow these steps:

1. **Decide whether you want to add the custom field to the table in the current view, and then, depending on what you decide, use the appropriate method of opening the Custom Fields dialog box.**

   The steps for opening the dialog box differ depending on whether you want to add the custom field to the current table:

   - To create a custom cost field *without* adding it to the table, in the Project tab's Properties section, click Custom Fields.
   - To insert a custom cost field into the table, right-click a heading in the table and choose Insert Column on the shortcut menu. In the field name drop-down list, choose a field name, such as Cost2. Then right-click the new column and, on the shortcut menu, choose Custom Fields.

   Either way, the Custom Fields dialog box appears.

2. **At the top of the dialog box, select the Task option if you want to create a custom cost field that you can use in task-oriented views, or select the Resource option if the new field is for resource-oriented views.**

   A task-cost field represents just task costs, while a resource-cost field works only with resource costs. If you opened the Custom Field dialog box using the method described in step 1 for adding the custom field to the table, then Project automatically selects the Task or Resource option here, depending on whether a task or resource view is visible. If, on the other hand, you opened the Custom Fields dialog box via the Project tab, the program automatically selects the Task option, so you have to choose the Resource option if that's what you'd like to create.

3. **In the Type box at the top of the Custom Fields dialog box, select Cost, and then in the Fields box below that, select one of the Cost fields that isn't already in use.**

   The Field box lists all the custom cost fields—Cost1 through Cost10—along with any aliases you define for them (which you'll learn about in the next step), as shown in Figure 10-4.

4. **Optionally, click the Rename button to give the custom field a new name so you can easily tell what it's for.**

   You don't *have* to rename custom fields, but it's a good idea. The name you assign to a custom field (called an *alias*) appears as the column title when you insert the field into a table. The alias and built-in name both appear together in other places. For example, if you rename the Cost2 field to "Approved Cost Target," then the field appears in field name drop-down menus as "Approved Cost Target (Cost2)" as well as "Cost2 (Approved Cost Target)."

5. **In the Custom Fields dialog box, click OK.**

   The cost field is ready for you to use in tables. If you haven't already added the custom cost field to the table, to insert it, simply right-click a column heading in the table, choose Insert Column, and then pick the name of your new custom field. The box on page 273 explains ways you can make cost fields do tricks with values.

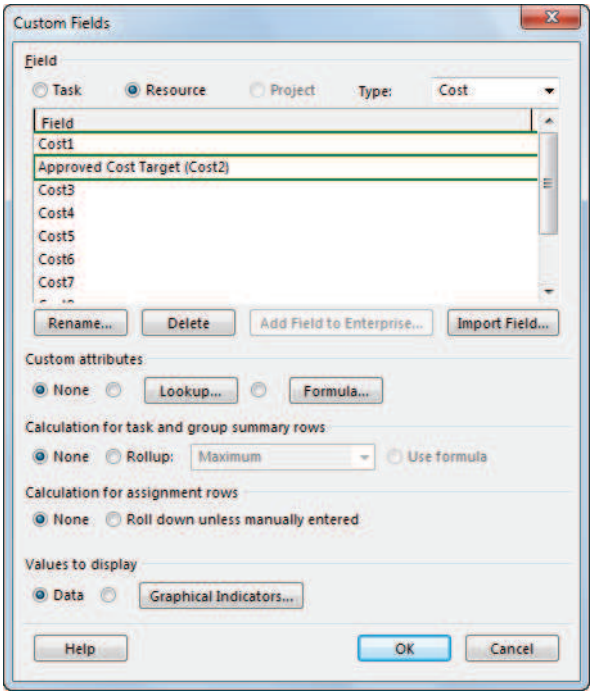


FIGURE 10-4

Although Project doesn't force you to rename custom fields, in the Custom Fields dialog box, an alias is your only indication that a field is spoken for. To rename the custom cost field something like Approved Cost Target, select the task, and then click Rename.

POWER USERS' CLINIC

Programming Your Custom Cost Fields

Custom fields can do more than go by a different name. You can tell them to calculate values in certain ways or provide hints about valid values. The section "Customizing a Field" on page 664 provides the details, but here's a quick overview of what you can do:

1. **Calculate values with formulas.** You can create a formula to calculate the contents of other fields and display the result in a custom cost field—for example, the variance between the planned cost and the target cost.
2. **Provide values with lookup tables.** You can create a lookup table (page 666) with a list of cost values to choose from when entering values in a custom cost field.
3. **Roll up values.** You can tell Project how it should roll up values in a custom cost field into task- or group-summary rows—for example, by taking the maximum amount of the group, averaging the amounts, or adding together all the amounts in the group.
4. **Roll down values.** You can specify whether Project should distribute the value in a custom cost field in the time-phased portion of assignment rows in a usage-oriented view.

Comparing Costs to Your Budget

Suppose your project plan has budget targets for different cost categories: $90,000 for labor costs, $2,500 for travel expenses, and $500 for permits. Using Project's *budget resource* feature, you can define your budget for different cost categories. You can then group resources to compare your budgeted costs with your planned costs. That way, you can view your travel budget of $2,500 side by side with your planned costs of, say, $3,700, and immediately see that your next goal is to find a way to trim those travel costs. The box on page 274 describes another method for tracking project costs based on your organization's accounting system.

Budget resources are great for comparing budgeted costs against the planned costs for *cost* resources. Budgeted costs for *work* and *material* resources, however, are a different story. For labor and equipment costs (work resources), you can enter only budgeted work amounts, not costs. So instead of a labor budget of $10,000, you have to enter an overall work amount like 200 hours. Knowing what amount of work to enter can be tricky when different work resources have different cost rates. Similarly, for material resources, you have to extrapolate a budgeted work amount based on the quantity of materials you need. The box on page 280 provides a workaround for this situation.

COMPARING COSTS TO YOUR BUDGET

This section describes how to set up budget resources that you can compare with your planned costs and work. It's a five-step process:

1. **Create and designate budget resources.**
2. **Assign those budget resources to the project summary task.**
3. **Enter budgeted cost and work amounts for budget resources.**
4. **Associate work, material, and cost resources with their budget types.**
5. **Group resources to compare budgeted costs and work alongside the planned values.**

The whole process isn't quite as bad as it sounds. If your project is highly cost driven, then budget resources may give you the budget-performance information you need. Take budget resources for a test drive to see if they help.

After you've done the first four steps, everything is in place for you to compare budget values and planned values (step 5) as you monitor and adjust your project plan to keep it in line with the budget. To make comparing values even easier, you can create a custom view (page 592) with the columns and grouping you want. Then for step 5, all you have to do is display your custom view.

POWER USERS' CLINIC

Assigning Accounting Codes

Sometimes it takes more than a handful of chocolate-covered peanuts to keep the accountants happy. Project data that maps to the organization's accounting codes may be just the ticket. Fortunately, it's easy to include accounting codes in Project, whether it's just a simple account number or a hierarchical structure of multilevel codes. Either way, you can enter accounting codes that map to resources, tasks, or project phases. For the full scoop on setting up a flat or multilevel list of codes, see page 675.

First, create a custom accounting-code field, and then add a column for it to the table of your choice (right-click a table heading and then choose Insert Column). Remember, you can add a task field only to task-oriented views and tables. Likewise, you can add a resource field only to resource-oriented views and tables. With the new column in place, enter the appropriate accounting codes for your tasks or resources.

After you've applied the accounting codes, you can sort, group, and filter information by accounting code, as described in Chapter 21. You can also create reports that use the accounting codes. For more information about generating reports, see Chapter 16.

Step 1: Create and Designate Budget Resources

Creating budget resources is the first step in the budget-resource process. These resources should correspond with the budget line items you want to track in your project (for example, line items that the accounting department uses). You can make them as broad or as detailed as you want, from Labor Budget, Materials Budget, and Travel Budget to Employees, Vendors, Contractors, Equipment Rental, Publications, Lodging, Airfare, Mileage, and Meals.

Budget resources apply to a project as a whole—you can't assign them to tasks, as you do regular resources. Here's how to create budget resources:

1. **In the Resource Sheet (View→Resource Sheet), in a blank Resource Name cell, type the name of a budget resource.**

   It's a good idea to use names that differentiate budget resources from regular resources, as shown in Figure 10-5, so you can more easily pick the right fields for your budget comparisons. For example, if your budget line items are numbered to match your accounting department's account numbers, you could include those line-item numbers in your budget-resource names, such as 8020 TRAVEL.

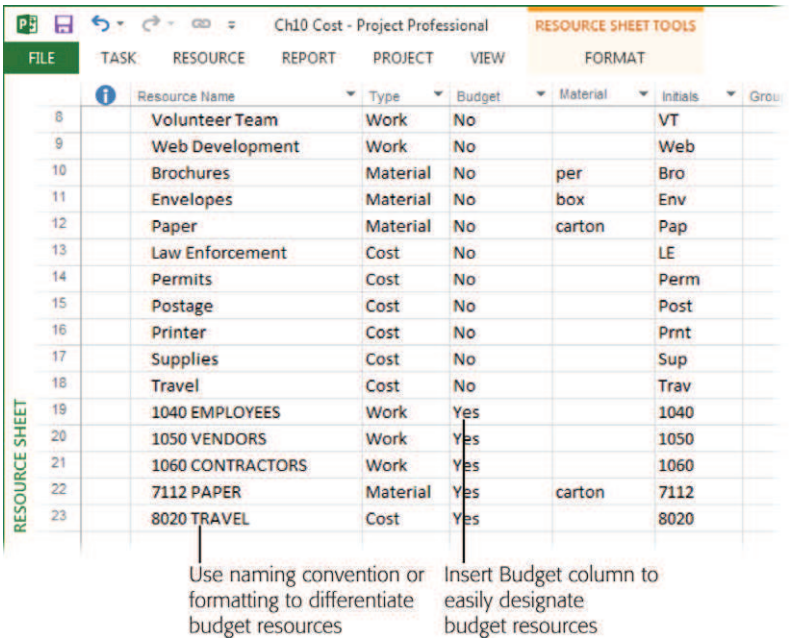


FIGURE 10-5

Name budget resources so they're easy to identify. For example, you could start their names with the word "Budget" (such as Budget-Travel), put them in all caps (TRAVEL BUDGET), or start their names with the corresponding budget account number (8020 TRAVEL). One advantage to starting them with numbers is that budget resources appear together at the top of a resource list that's sorted alphabetically from A to Z, which is helpful because they're summary numbers.

2. **In the Type field, choose Work, Material, or Cost, depending on the type of cost.**

   For example, a budget resource named 8020 TRAVEL would be a cost resource, while a budget resource named 1040 EMPLOYEES would likely be a work resource.

   For a material budget resource, in the Material Label field, type the unit of measurement, like *cubic yards* or *boxes*. To specify your target budget for material, you enter the number of units you use based on the unit of measurement, so you need to create a separate budget resource for each material resource you want to track against the budget.

You can lump different types of labor together under a single labor budget item (regular employees, contractors, and so on). However, since labor costs often represent a big chunk of the budget, you might want to create a separate budget resource for each resource category whose budget you want to track, such as employees, contractors, and vendors.

TIP If you want to express your labor budget in dollars rather than hours, then identify the budget resources for it as a cost resource rather than a work resource. The box on page 280 explains how to account for different labor rates.

3. **Double-click the ID cell of the new budget resource to open the Resource Information dialog box.**

   You can also open this dialog box by selecting the budget resource and then, in the Resource tab's Properties section, clicking Information.

4. **On the dialog box's General tab, turn on the Budget checkbox, as shown in Figure 10-6, and then click OK.**

   Turning on this checkbox means you can assign this resource only to the project summary task, making it, in effect, a kind of project summary resource.

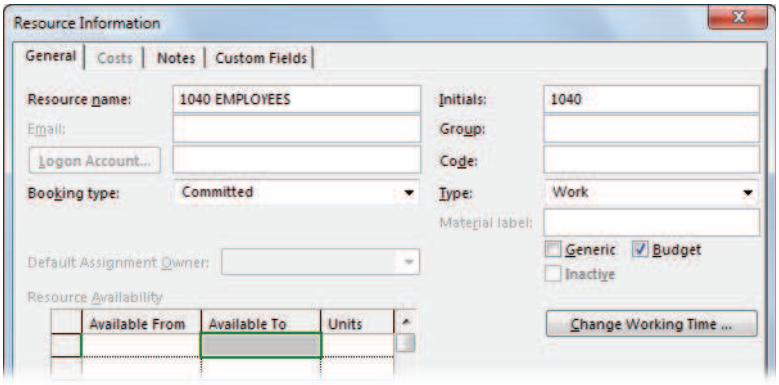


FIGURE 10-6
The Budget checkbox lives on the General tab. It's grayed out in the Multiple Resource Information dialog box (which opens when you select several resources and then press Shift+F2), so you have to set up budget resources one at a time. Other fields that relate to work or material resources, like Email and "Material label," are grayed out.

5. **Repeat steps 1–4 to create additional budget resources.**

   The box on page 278 describes a shortcut for creating several budget resources at once.

Step 2: Assign Budget Resources to the Project Summary Task

With your budget resources created, you're now ready to assign them to your project. A budget resource is meant to convey the total amount allocated to a budget category for an entire project, which is why you assign budget resources to the project summary task, not to individual tasks. In fact, a budget resource can't be assigned to anything *except* the project summary task.

In a task-oriented view like Gantt Chart, if you can't see the project summary task (the one at the top of the view's table in row 0), choose Gantt Chart Tools | Format. In the tab's Show/Hide section, turn on the Project Summary Task checkbox. Then assign budget resources to your project summary task by following these steps:

1. **Select the project summary task, and then in the Resource tab's Assignments section, click Assign Resources.**

   The Assign Resources dialog box appears. If your resource list is long, your budget-resource naming convention comes in handy. For example, by starting all the budget-resource names with a number, as shown in Figure 10-7, budget resources are grouped together at the top of the resource list.

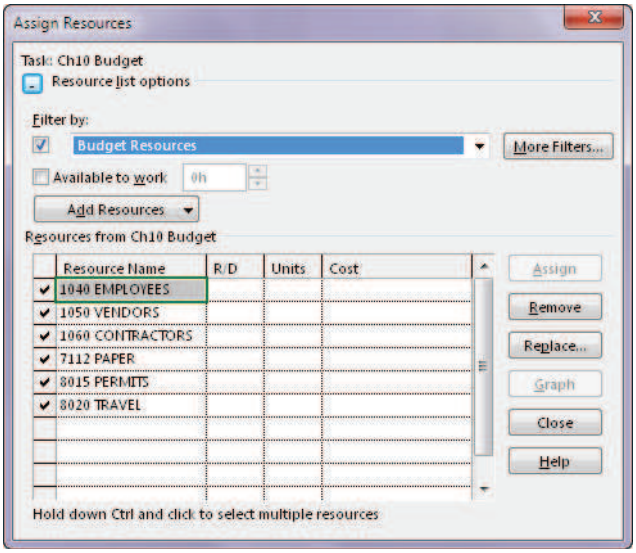


FIGURE 10-7

To display only budget resources in the Assign Resources dialog box, expand the "Resource list options" section by clicking the + button (here, the button has a – sign on it because the section is already expanded). Next, turn on the "Filter by" checkbox, and then, in the drop-down list, choose Budget Resources.

2. **Ctrl-click each of the budget resources you want to assign, and then click Assign.**

   Budget resources are the only kind of resource you can assign to the project summary task. So if you select one resource and the Assign button is grayed out, then the resource you selected isn't a budget resource. Perhaps you gave the resource a budget-resource name but forgot to turn on its Budget checkbox in the Resource Information dialog box (see step 4 on page 276).

3. **Repeat the previous step for any additional budget resources you want to assign to the project summary task.**

   When you're done, you can close the Assign Resource dialog box if you want to see more of the screen.

WORKAROUND WORKSHOP

Creating Several Budget Resources at Once

Most project managers create their budget resources in one fell swoop. Even so, the Multiple Resource Information dialog box doesn't let you turn on the Budget checkbox for all selected resources. Since you have lots of important things to do, here's a shortcut for designating several budget resources at once: Add the Budget column to Resource Sheet view, and then change the value there. Here are the steps:

1. In Resource Sheet view (View→Resource Sheet), right-click the column heading next to where you want to add the Budget column, and then choose Insert Column.
2. In the "Field name" drop-down list, choose Budget. Project inserts the Budget column to the left of the selected column and (usually) displays the value No in it.
3. Select the cell for the first budget resource and, in the Budget field's drop-down list, choose Yes. If budget resources are grouped together, position the pointer over the fill handle in the bottom-left corner of the Budget cell. When the pointer changes to a +, copy "Yes" into the other Budget cells by dragging over them.
4. When you're done, hide the column by right-clicking the Budget column's heading and then choosing Hide Column.

Step 3: Enter Budget Cost and Work Values

With budget resources assigned to the project summary task, you're ready to add budget cost amounts for cost resources, budget work amounts for work resources, and the total number of units for material resources. These budget values are the targets against which you'll compare project costs and work as you monitor project progress.

You can enter budget amounts either as a project total or as incremental totals by time period. This section explains how to do both.

ENTERING BUDGET TOTALS FOR THE PROJECT

If time isn't a factor in your budget, you can add budget cost and work amounts to the entire project. Here are the steps:

1. **Display Task Usage view (in the View tab's Task Views section, choose Task Usage).**

   Task Usage view is ideal for entering budget values because the project summary task sits at the very top with its assigned budget resources below it like fawning admirers, as shown in Figure 10-8.

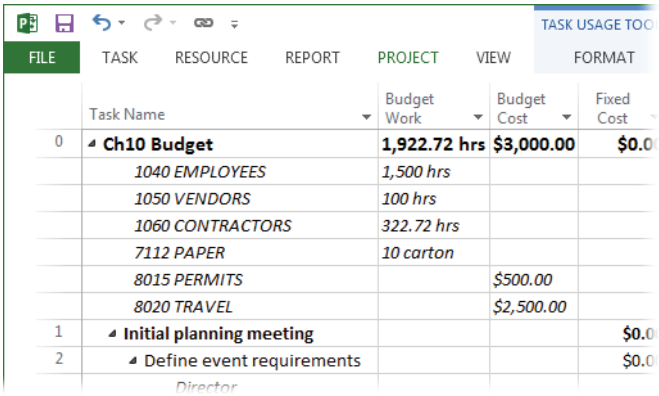


FIGURE 10-8

In Task Usage view, the Budget Work column in the project summary row (row 0) sums up the hours or days for all the budget resources for work. If you want to see separate totals for each budget resource, so you can see quantities for material resources, use Resource Usage view instead.

2. **Insert the Budget Cost and Budget Work columns into the table.**

   Right-click the column heading next to where you want to insert the Budget Cost column, and then choose Insert Column; in the "Field name" drop-down list, choose Budget Cost. Repeat these steps for the Budget Work column.

3. **Select the Budget Cost or Budget Work cell for an assigned budget resource, and then type the overall project budget value for that resource.**

   For a budget resource that's a *cost* resource, type the budget value in dollars into the Budget Cost cell.

   For a budget resource that's a *work* resource, type the budget value as work (hours or days) in the Budget Work cell. (As mentioned earlier, chances are your budgeted target amount is in dollars, not hours or days. The box on page 280 describes one way to resolve this issue.) The Budget Work cell is also where you type the total number of units (cubic yards, tons, packages, each, and so on) for a budget resource that's a *material* resource.

NOTE If you use Resource Usage view (see Figure 10-9) instead of Task Usage view, select the project summary task assignment under the budget resource, and then type its budget value.

WORKAROUND WORKSHOP

Comparing Budgeted Labor Costs

Project calculates labor costs for work resources (people and equipment) by multiplying rates by hours. However, you can't compare these labor costs to the budgeted costs from the program's budget resource feature. Frustratingly, you can compare only budgeted *work* amounts to the work amounts in tasks—that is, the number of hours, days, and so on.

You can work around this problem by creating a single representative rate for work resources. For example, you could use an average or a weighted average based on how your labor costs are distributed and whether you expect to pay overtime. If you have a labor budget of, say, $75,000, and your average standard rate is $50 per hour, you could divide $75,000 by $50 for a resulting work budget of 1,500 hours.

On the other hand, if you insist on seeing your budgeted labor costs in dollars, not work, a little sleight of hand is in order. Instead of setting up the budget resource that relates to work resources as a work resource itself (like you're supposed to), you can set it up as a *cost* resource instead. Then you can enter the budgeted labor cost and compare it with the rolled-up labor costs from tasks. This trick works equally well for material cost budgets.

ENTERING BUDGET TOTALS BY TIME PERIOD

The budget amounts you enter for a project summary task are the total project amounts for those budget items. Unless you tell it otherwise, Project spreads that budget amount equally over the duration of the project. To divvy up the overall budget amounts into the time periods when you expect them to be spent, you can edit budget amounts in the time-phased portion of a task- or resource-usage view.

Follow these steps to add the Budget Cost and Budget Work rows to the time-phased portion of a usage view:

1. **With Resource Usage view displayed (View→Resource Usage), click the Resource Usage Tools | Format tab. In the tab's Details section, click Add Details.**

   The Detail Styles dialog box appears. Another way to open this dialog box is to right-click the time-phased portion of Resource Usage, and then, on the shortcut menu, choose Detail Styles.

2. **In the "Available fields" box, Ctrl-click Budget Cost and Budget Work, and then click Show.**

   Project moves the Budget Cost and Budget Work fields to the "Show these fields" box, as shown in Figure 10-9.

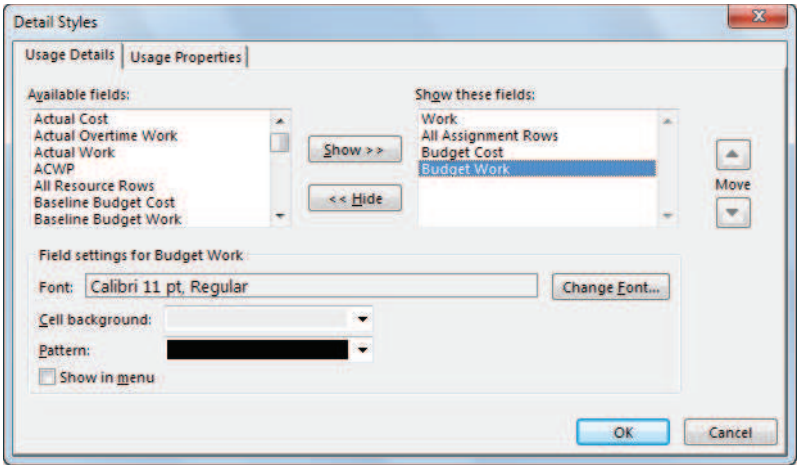


FIGURE 10-9

The order of fields in the "Show these fields" box is the sequence in which Project displays the field's rows. To change this sequence, select a field's name in the "Show these fields" box, and then click the Move buttons until the order is what you want.

3. **Click OK, and then resize the Details column so you can see the new fields.**

   The two fields appear in the time-phased portion of the view, although you can see only part of their names in the Details column. To see their full field names, double-click the right edge of the Details column heading to automatically widen the column to display the longest field name. You can also drag the right edge of the Details column heading further to the right to increase its width.

4. **On the status bar, drag the Zoom slider to display the time period for which you want to enter time-phased budget values. Or adjust the time period in Timeline view, as described on page 620.**

   For example, you can zoom the timescale to show a week, a month, or a quarter at a time. Then you can enter budget amounts per week, per month, or per quarter.

   If you've already entered budget amounts in the table, then those amounts are distributed equally across the project's timespan. You can edit them to the budget values you expect for each time period.

5. **In the cell at the intersection of the row for a budget resource's Budget Cost or Budget Work field and the column for the time period you want, type the budget cost or work amount, as shown in Figure 10-10.**

   You can't edit the Budget Cost and Budget Work cells for nonbudget resource assignments. The box on page 282 tells you where you can enter budget amounts.

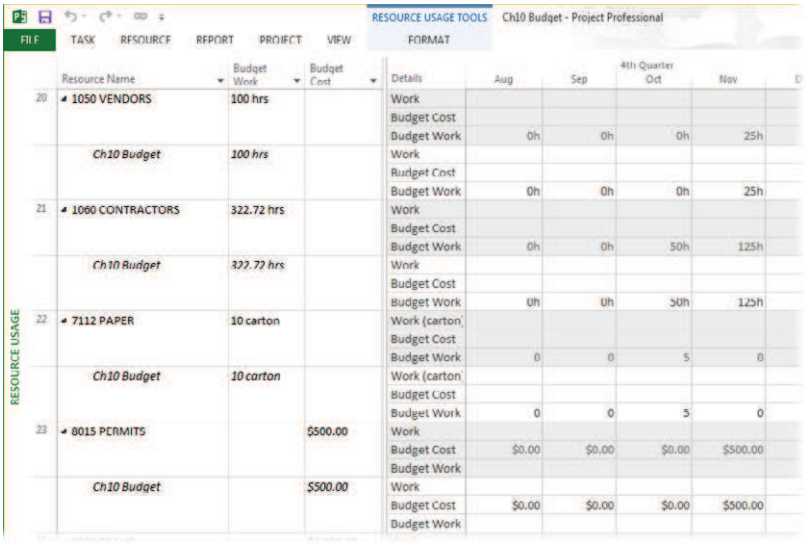


FIGURE 10-10

Even if you enter budget values in the time-phased portion of the view, it's good to keep the Budget Cost and Budget Work columns visible in the table. Those fields show you the overall project totals for each budget category you've created.

FREQUENTLY ASKED QUESTION

Entering Values in Budget Fields

Where can I enter budget amounts in a view?

When you add the Budget Cost and Budget Work fields to a usage view's table or time-phased portion, it's not always clear where you can actually *enter* your budget amounts. No visual cue like shading or hatching indicates areas that are off limits, so the fields seem to be available throughout the entire view. If you try to enter a value and nothing happens, that's your clue that the cell isn't editable.

Project is particular about where you can enter budget amounts. Here are the rules:

1. Enter budget amounts in an assignment field (in Task Usage view, the row with the budget resource's name; in Resource Usage view, the row with the project summary task's name).
2. In a project summary task's Budget Cost or Budget Work cell, enter project-wide budget totals.
3. Enter time-specific amounts in the Budget Cost or Budget work cells in the time-phased portion of the view.

You can't enter budget amounts in assignments for regular resources to regular tasks.

Step 4: Associate Resources with Their Budget Types

Creating budget resources and entering target budget amounts for them in the project summary task is all well and good, but it's only one side of the equation. You also have to set up the other side: the resource costs you want to compare against the budget. This section explains how to connect work, material, and cost resources to cost categories in the budget, whether you want to track all resources against the budget or only a few.

The trick is to use a text field to specify the budget category for each resource you want to track. If you aren't using Resource Sheet view's Group or Code fields, they're both great candidates for your budget categories; they're text fields and are already included in the Entry table for the Resource Sheet. (If you decide to use one of these fields, skip to page 284 to learn how to enter budget types for your resources.) On the other hand, if you're using Group and Code fields for something else, you can set up a custom text field to specify budget categories, as described in the following section.

CREATING A CUSTOM RESOURCE TEXT FIELD

If you want to use a custom text field for budget categories, you first have to set it up for that purpose and then add it to the Entry table in Resource Sheet view. Here are the steps:

1. **Display Resource Sheet view (View→Resource Sheet), right-click a table heading, and then choose Insert Column. In the drop-down list, choose the custom text field you want to use, such as Text1 or Text2.**

   Project inserts a new column for the text field to the left of the column you right-clicked.

2. **Right-click the new column's heading and then, on the shortcut menu, choose Custom Fields.**

   The Custom Fields dialog box opens with the Resource option selected at the top of the dialog box and the name of the text field selected in the list below that, which is exactly what you want.

3. **Click Rename and then, in the Rename Field dialog box, type the name you want for this field, such as *Budget Type* or *Budget Item*, and then click OK.**

   When you rename custom fields you use (page 666), Project displays the field's original name in parentheses in the Custom Fields dialog box and in field drop-down lists, so it's easy to tell which fields you've already used.

4. **In the "Calculation for assignment rows" section, select the "Roll down unless manually entered" option. Then click OK.**

   Selecting this option tells Project to distribute the custom field's values across assignments in usage-oriented views unless you manually type a value in a time-phased assignment cell.

Now that the text field is set up, you can designate budget categories for your project's work, material, and cost resources, as described in the next section.

CLASSIFYING RESOURCES BY BUDGET CATEGORY

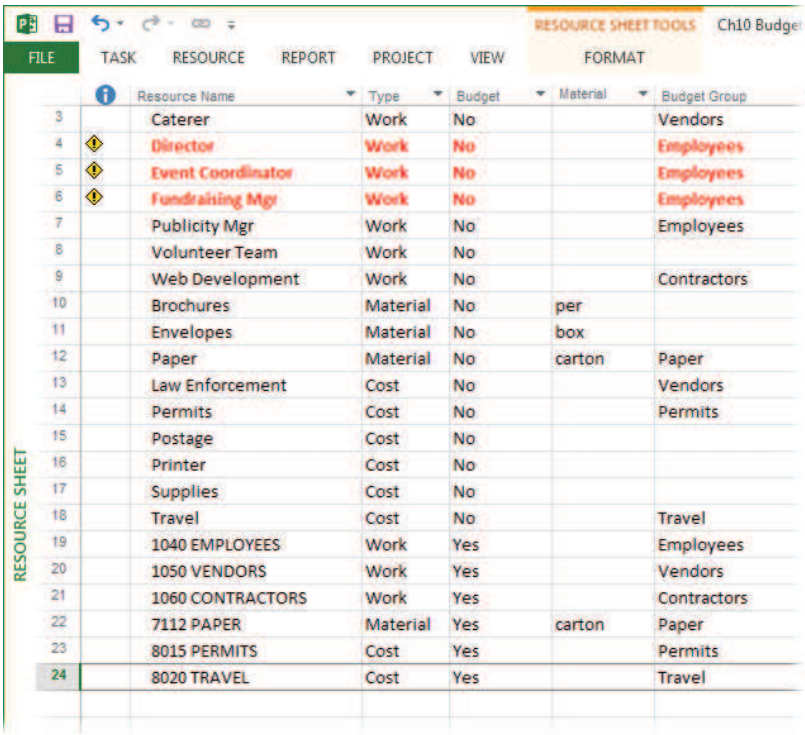
Before you begin typing values in the text field where you're going to store budget categories, decide on the budget category names you want to use. Have a different budget category for each budget resource you've created—for example, Employees, Vendors, Contractors, Permits, and Travel. Here's how:

1. **With your text field (Group, Code, or custom text field) prominently displayed in Resource Sheet view, work your way through the resources, typing the appropriate budget category name for each one, as illustrated in Figure 10-11.**

   Repeat this step for each work, material, and cost resource in the project.

2. **Enter the corresponding budget category value for each budget resources.**

   That's how you connect resource costs and budget costs.



	Resource Name	Type	Budget	Material	Budget Group
3	Caterer	Work	No		Vendors
4	Director	Work	No		Employees
5	Event Coordinator	Work	No		Employees
6	Fundraising Mgr	Work	No		Employees
7	Publicity Mgr	Work	No		Employees
8	Volunteer Team	Work	No		
9	Web Development	Work	No		Contractors
10	Brochures	Material	No	per	
11	Envelopes	Material	No	box	
12	Paper	Material	No	carton	Paper
13	Law Enforcement	Cost	No		Vendors
14	Permits	Cost	No		Permits
15	Postage	Cost	No		
16	Printer	Cost	No		
17	Supplies	Cost	No		
18	Travel	Cost	No		Travel
19	1040 EMPLOYEES	Work	Yes		Employees
20	1050 VENDORS	Work	Yes		Vendors
21	1060 CONTRACTORS	Work	Yes		Contractors
22	7112 PAPER	Material	Yes	carton	Paper
23	8015 PERMITS	Cost	Yes		Permits
24	8020 TRAVEL	Cost	Yes		Travel

FIGURE 10-11

When you type budget categories into Resource Sheet view, be sure to consistently use exactly the same names with the same spelling. To prevent spurious entries due to typos, set up a custom text field with a lookup table of valid budget categories as described on page 283.

Congratulations! You've completed the daunting task of setting up Project to compare resource costs and work values against your budget.

TIP You can add new resources, create new budget resources, and create and assign additional budget categories at any time throughout your project. If you add a new resource, be sure to assign it a budget category if you plan to compare its cost or work values to your budgeted values. And if you create a new budget category, update any resources that belong in this new category.

Step 5: Compare Budget Resource Values

Finally, you're about to reap the harvest of the previous four steps: You're going to compare your project resource cost and work values against the budgeted values from your budget resources. You may find the occasional bad apple if your costs outrun your budgeted values. The good news is that this comparison helps you see potential problems when it's early enough to find solutions.

To compare budget values to planned values, you need a table that shows both budgeted and planned fields. Then you can group the contents of the view by your budget categories. The result is groups of budgeted and planned values for each budget category, and voilà—your budget situation becomes crystal clear. Follow these steps to set up your budget-comparison view:

1. **Switch to Resource Usage view (View→Resource Usage).**

   When you're *entering* budget cost and work values, Task Usage view is better, because it shows the project summary task at the top, with the assigned budget resources just under it. But for *comparing* budget and planned values, Resource Usage view inherits the throne, because you want to group resources by the custom resource text field you set up on page 283, and resource fields aren't available in Task Usage view. Moreover, you want to look at budget values in terms of resources and their assignments.

2. **If they aren't there already, add the Budget Work, Budget Cost, Work, and Cost columns to the table.**

   To add a column, right-click the heading of the column to the right of where you want to insert the new column and then, on the shortcut menu, choose Insert Column. In the Field Name drop-down list, choose the field you want to add. Project displays the new field to the left of the selected column.

3. **To group the resources by the custom resource text field, click the down arrow to the right of the Resource Name column heading and then, on the drop-down menu, choose "Group by"→Custom Group.**

   The Group Definition dialog box appears. See page 656 for the full scoop on creating groups.

4. **In the Group By row, click the down arrow in the Field Name cell, and then, in the drop-down list of resource fields, choose the name of the custom text field for your budget categories (or Group or Code if you used one of those fields instead), and then click Apply.**

   Project groups the resources in your project by the budget categories you set up, as demonstrated in Figure 10-12.

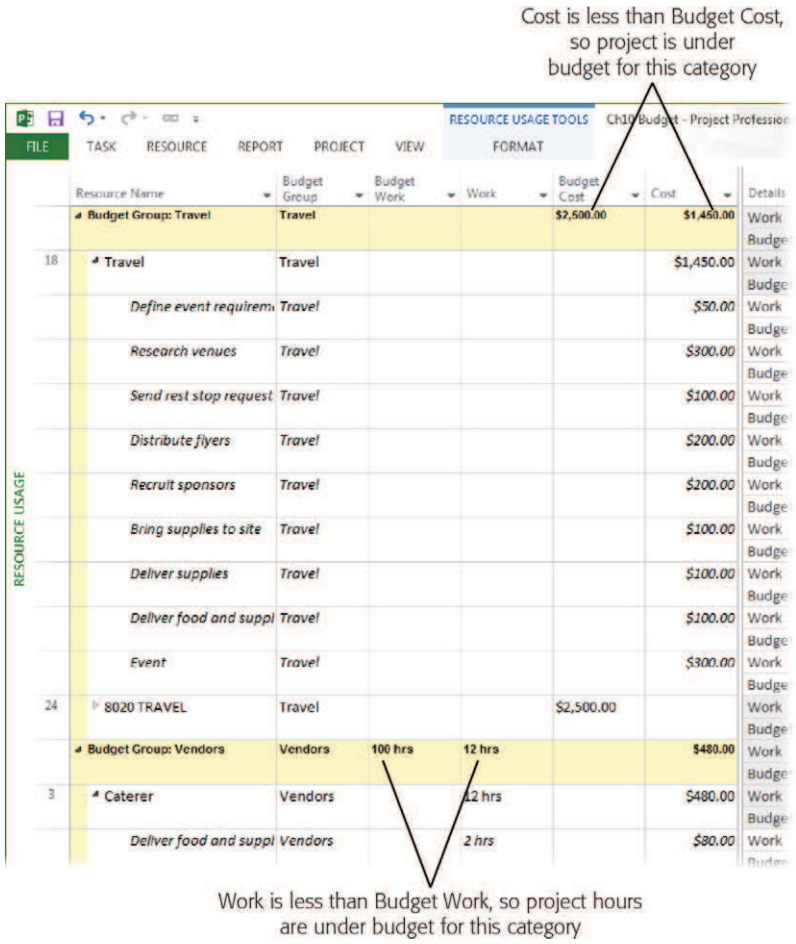


FIGURE 10-12

When Resource Usage view groups resources by budget category, each group includes one budget resource and all the work, material, and cost resources that apply to that budget line item.

5. **In the group summary rows (which have yellow shading), compare the Budget Cost or Budget Work values to the Cost or Work values, respectively.**

   The Budget Cost or Budget Work cells in the group summary rows show the budget values for each budget resource. For each group, you see a value for Budget Cost or Budget Work, depending on whether the budget resource is a cost resource or a work (or material) resource.

The Cost and Work cells in the group summary rows show the rolled-up cost and rolled-up work for the resources in that particular budgetary group. If the value in a group summary row's Cost cell is higher than the value in its Budget Cost cell, then you've exceeded your budget. If the value in the Work cell is higher than the Budget Work cell, then your work hours are over budget.

TIP If you want to see resources in alphabetical order, click the down arrow to the right of the Resource Name column heading, and then choose Sort A to Z. Project sorts resources within each group in alphabetical order.

6. **To dismantle the groups, click the down arrow to the right of the Resource Name column heading, and then, on the drop-down menu, choose No Group.**

   Resource Usage view returns to its ungrouped state.

TIP Given all the steps needed to fashion a view for comparing budget values, a view with everything already in place can save you time. You want the Budget Cost, Budget Work, Cost, and Work columns side by side, the rows grouped by the text field you used for budget categories, and resources sorted by name. See Chapter 21 to learn how to create a custom view, custom table, and custom group. You can also copy the BudgetComparison view (with its custom table and group) from *ProjectMM_Customizations.mpp* from this book's Missing CD page at *www.missingmanuals.com/cds*.

With your budget fields and values in place, and a custom budget-resource view created, you have everything you need to compare budget values with planned values at any point during the project. See Chapter 14 for more information about monitoring costs during the execution phase.

Setting the Project's Fiscal Year

You can set the fiscal year for a project, whether it's the fiscal year your own company uses or the one the project's customer uses. Whether the fiscal year starts in January, July, or October, setting a project's fiscal year can help you communicate project costs to your accounting department in the format it wants.

NOTE You may have heard that Project lets you set up fiscal periods in the project, like 28-day periods, 13-week periods, and so on. This timesheet-related feature is available in the enterprise project-management features of Project Server.

SETTING THE PROJECT'S FISCAL YEAR

Project handles fiscal years in a rather limited way, and it may cause more confusion than convenience. While Project can show you the fiscal year in the timescale headings of Gantt Chart views and usage-oriented views, Project doesn't change any other dates in the project: The project's start and finish dates, working-time calendar, resource availability dates, and reports all still use the calendar year. If you want to see fiscal year dates in views, here's what you do:

1. **Choose File→Options, and then, on the left side of the Project Options dialog box, choose Schedule.**

   Project displays all the schedule-related settings you can adjust, including fiscal calendar.

2. **If you want this fiscal year setting to apply to all projects from this point forward, in the "Calendar options for this project" drop-down list at the top of the dialog box, choose All New Projects.**

   Do this only if most of your projects work on this fiscal year. Otherwise it's probably best to set the fiscal year individually for each project. If you don't change the setting in the "Calendar options for this project" drop-down list, Project automatically selects the current project.

3. **In the "Fiscal year starts in" box, choose the month in which the fiscal year begins.**

   For example, if your fiscal year runs from June 1 through May 31, choose June.

4. **If your fiscal year is named by the calendar year in which it begins, turn on the "Use starting year for FY numbering" checkbox.**

   With this checkbox turned on, Project sets your fiscal year 2014 dates so they start in 2014: that is, from June 2014 through May 2015. Turn this checkbox off if your fiscal year is named by the calendar year in which it *ends*; for example, if your 2014 fiscal year runs from June 2013 through May 2014.

5. **Click OK.**

   The fiscal year is reflected in the timescale headings of Gantt Chart views and usage-oriented views, as shown in Figure 10-13.

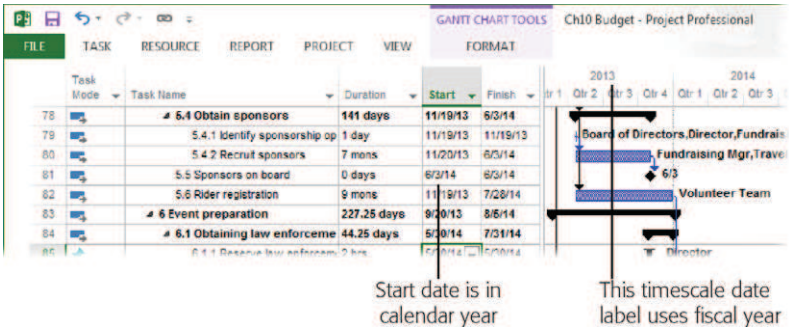


FIGURE 10-13

You can display fiscal year dates in Gantt Chart and usage view timescale headings. However, start and finish dates, as well as any other dates in Project, are still calendar dates. For example, you could see a date like 6/3/14 in a Start cell while seeing Qtr4 2013 in the timescale for the same task.

TIP If you've set your fiscal year but the timescale headings haven't changed, first check the zoom level of your timescale. If it's zoomed way in to an hour-by-hour basis, Project typically doesn't list the year. In the status bar, drag the Zoom slider until you can see days. If a year appears in the timescale heading and it isn't "fiscal," then right-click anywhere in the timescale heading and choose Timescale. In the Timescale dialog box (page 614), check the tab for each tier that appears (Top Tier, Middle Tier, Bottom Tier) and make sure the "Use fiscal year" checkbox is turned on for the tiers you're using in your project. Also on each tab, check to make sure that the date listed in the Label box includes the year.