Phase

1

Initiating Process

Workers may think that projects are launched on nothing more than a grab out of thin air. Some feel that "sweetheart deals" are made before the project is cost justified. Others use sophisticated feasibility analysis as well as business cases to determine whether a project should be launched.

Regardless of how your project is approved, at some point, trusted and experienced project managers may have to challenge the rationale of senior managers before placing the project into the portfolio or moving on to the next phase. Let's face it: these senior managers don't always have all of the information that we project managers may have. We do this based on data and facts. Emotions have no place here.

For example, some project managers working on internal projects (for example, capital improvement projects) are advised not to be concerned with the cost; "just do whatever it takes to get the job done" seems to be the order from the sponsor and senior management. We as project managers are stewards of company funds. We can help launch projects that will not only provide benefit to the company, but also be cost-effective. But first we have to start at the beginning. This phase explores several ways you as the project manager can make a difference as projects are initiated:

- Understand finance principles
- Conduct project selection methods
- Establish a progressive business case with built-in feasibility analysis
- Conduct a stakeholder analysis
- Create a scope statement
- Develop the charter
- Document high-level risks, assumptions, and constraints

Task 1.1: Understanding Finance Principles

Project managers play a pivotal role in the economic engineering of projects and participate in feasibility studies as well as economic justification of projects, so we must have a broad understanding of the concepts of how money is used. In no way is this information intended to be all-inclusive—people earn degrees to master this topic.

Scenario

Cimarron Industries is a multimillion dollar corporation that had very humble beginnings. It is now in the Fortune 500 ranks and owns 200 stores as well as a centralized textile mill that produces fabrics.

The company was started to produce a series of children's books that were being written by the company founder and current CEO, Olivia Ross. The books were a total success, and the revenues from the books provided seed money to open a line of children's clothing stores patterned after the principal characters in the books.

The lines of clothing for each character were originally designed and created by Ms. Ross and were consigned to a children's boutique of a large clothing chain. They sold out immediately. Later, the apparel stores were also wildly successful. Marketing continues to focus on the superior quality of the clothing at discount store prices.

Based on that success, Ms. Ross would now like to open a line of women's clothing stores called Apples and Pears. Ms. Ross believes that the store would provide what women everywhere are looking for, that is, chic clothing tailored to body types. Those women with expanded waistlines would be "apples" and those with large derrières and legs would be "pears." The target audience would be middle-age to senior women, but Apples and Pears (A&P) would also have a line for younger women with less-than-perfect shapes. It will not focus on plus sizes, just body types in all sizes.

Ms. Ross does not consider herself business savvy. Her degree is in textiles and merchandising, so she counts on Skylar Reese, MBA, chief financial officer (CFO), to guide her business and financial decisions. During the discussions between Ms. Reese and Ms. Ross, Ms. Reese reminded Ms. Ross that several other projects are under consideration. One of these is the remodel of the five top-producing stores. Another is the upgrade of equipment at the textile mill.

Ms. Reese believes that to start another project now would tighten their cash flow, but has suggested that a market analysis and economic study of the proposal be conducted and the decision made after that. Ms. Ross agrees.

Scope of Task

Duration

This task should take several days, if not weeks, depending on the size of the project and your level of involvement in project selection methods.

Setup

For this task you need an understanding, if not a working knowledge, of key financial principles. The project manager collects data pertinent to the project, and a financial person crunches the numbers. You have to know what the crunched numbers mean and be able to use them to help create your project plan.

Caveat

During project selection, the project manager usually partners with a financial person to the extent needed to clarify the project to senior management.

Procedure

In this task you will learn how businesses and organizations use money and understand its relevance in project management. We will review the following:

- Time value of money
- Capital budgeting concepts
- Cash flow concepts
- Future value of money
- Present value of money

Details

It has been our experience that even though complete finance concepts are not generally taught in a project management class, business leaders expect project managers to be able to discuss issues relevant to finance. You may not be involved in the actual selection of projects, but given a basic knowledge of project selection methods and the way your project was chosen, you will be able to provide logical answers to problems along the way. Our intention is to provide simple finance concepts relevant to the project manager's role in the money game.

Time Value of Money

One of the basic concepts of business economics and managerial decision making is that the value of an amount of money is a function of the time of receipt or disbursement of cash. A dollar received today is more valuable than a dollar to be received at some future period of time. The only requirement for this concept to be valid is that there exists a positive rate of interest wherever you invest your funds. We will further explore this concept by showing you how to find the present value of a future amount and the future equivalent of a present amount. Time value of money is the heart of capital budgeting.

Capital Budgeting Concepts

Capital budgeting is used for investment decision making. Some decision-making criteria include the following:

- Maximize shareholder wealth
- Consider all cash flows
- Discount cash flows at the cost of capital
- Attempt to place an economic value on the strategic implications of new projects and include them in the economic analysis

- Quantify the strategic benefits of new projects in nonfinancial terms (for example, quality improvement, reduced lead time, and so forth)

Capital budgeting's purpose is to

- Generate and gather investment ideas
- Estimate/forecast investment costs and benefits
- Analyze/evaluate the costs and benefits of each alternative
- Select among the alternatives and implement the investment chosen
- Evaluate the implemented investment

Cash Flow Concepts

Because investment decision making requires knowledge of cash flows, let's take a brief look at a simple cash flow illustration (see Table 1.1). A company spends $100,000 on a concept study and uses the following facts to determine cash flow:

Equipment $2,400 (year 0)

Depreciation $450, $360, $270, $180, $90

Training costs $816 (year 0)

Incremental sales $7,500 with a 10% increase over six years

Incremental operating expenses $6,500 with a 6% increase over five years

TABLE 1.1 Sample Cash Flow

	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Equipment	$–2,400.00					
Depreciation		–$450.00	–$360.00	–$270.00	$–180.00	–$90.00
Training Costs	–$816.00					
Incremental Sales		$7,500.00	$8,250.00	$9,075.00	$9,982.50	$10,980.75
Operating Expenses		–$6,500.00	–$6,890.00	–$7,303.40	–$7,741.60	–$8,206.10
Earnings before Interest and Taxes—Total Expenses (EBIT)		$550.00	$1,000.00	$1,501.60	$2,060.90	$2,684.65
Taxes = 40%		–$220.00	–$400.00	–$600.64	–$824.36	–$1,073.86
Cash Flow	–$3,216.00	$330.00	$600.00	$900.96	$1,236.54	$1,610.79

Notice that in year 0, there are only expenses. The following years show depreciation as a negative number, which is subtracted from the incremental revenue as well as the operating expenses to come up with the EBIT figures. Taxes are then subtracted to find the cash flow. Most cash flows are more complicated and include adding back the depreciation to receive a net cash flow.

Present Value

Most large companies today use some form of discounted cash flow (DCF) techniques in investment decision making (capital budgeting). To perform a DCF analysis, we must find the present value of future sums of money. If you are entitled to receive $200 at the end of two years, you might consider receiving a lesser amount today (say, $188.68), provided that you could invest it over the next two years and earn enough to receive the $200.

The formula for present value is $PV = FV/(1 + i)^n$, where $(1 + i)^n$ is the present value of a dollar to be received at the end of period n when the time value of money is i. The term $/(1 + i)^n$ is called the *present value factor* or *discount factor.*

These discount factors determine potential growth. Present value is equal to the future value times the discount factor. These factors can be computed in three ways: via tables, hand calculators, or computer programs. Tables are the easiest. Table 1.2 is an example of discount factors.

TABLE 1.2 Discount Factors

n/r	1%	2%	3%	4%	5%	6%	7%
1	0.9901	0.9804	0.9709	0.9615	0.9524	0.9434	0.9346
2	0.9803	0.9612	0.9426	0.9246	0.9070	0.8900	0.8734
3	0.9706	0.8423	0.9151	0.8890	0.8638	0.8396	0.8163
4	0.9610	0.9238	0.8885	0.8548	0.8227	0.7921	0.7639
5	0.9515	0.9057	0.8626	0.8219	0.7835	0.7473	0.7130
6	0.9420	0.8880	0.8375	0.7903	0.7462	0.7050	0.6663
7	0.9327	0.8706	0.8131	0.7599	0.7107	0.6651	0.6227
8	0.9235	0.8535	0.7894	0.7307	0.6768	0.6274	0.5820
9	0.9143	0.8363	0.7664	0.7026	0.6448	0.5919	0.5439
10	0.9053	0.8303	0.7441	0.6756	0.6139	0.5584	0.5083

TABLE 1.2 *Discount Factors (continued)*

8%	9%	10%	11%	12%	13%	14%	15%
0.9259	0.9174	0.9091	0.9009	0.8929	0.8850	0.8772	0.8696
0.8573	0.8417	0.8264	0.8116	0.7972	0.7831	0.7695	0.7561
0.7938	0.7722	0.7513	0.7312	0.7118	0.6931	0.6750	0.6575
0.7350	0.7084	0.6830	0.6587	0.6355	0.6133	0.5921	0.5718
0.6806	0.6499	0.6209	0.5935	0.5674	0.5428	0.5194	0.4972
0.6302	0.5963	0.5645	0.5346	0.5066	0.4803	0.4556	0.4323
0.5835	0.5470	0.5132	0.4817	0.4523	0.4251	0.3996	0.3759
0.5403	0.5019	0.4665	0.4339	0.4039	0.3762	0.3506	0.3269
0.5002	0.4604	0.4241	0.3909	0.3606	0.3329	0.3075	0.2472
0.4632	0.4224	0.3855	0.3522	0.3220	0.2946	0.2697	0.2472

What is the present value of $1 to be received three time periods from now if the time value of money is 0.10 per period?

In Table 1.2 at the intersection of 10% and 3 time periods, the value equals 0.7513. Therefore, if you invest $0.7513 to earn 10% per year, after three years you will have $1.

What is the present value of $100 to be received three time periods from now if the time value of money is 0.10 per period? Because $(1 + 0.1)^3 = 0.7513$ (according to the discount table in Table 1.2), you can see in Table 1.3 that the present value of $100 is $75.13 at time 1, $82.64 at time 2, and finally $100 at time 3.

TABLE 1.3 Present Value Example

Time Period	Investment at Beginning of Period	Interest	Investment at End of Period
1	$75.13	7.513	$82.64
2	$82.64	8.264	$90.91
3	$90.91	9.091	$100.00

With discount factors, we can compute the present value of any single cash flow. But in most applications we need to be able to calculate the present value of any sequence of cash flows.

Present Value Addition Rule

The *present value addition rule* states that the value of any set of cash flows is the sum of the present value of each of the cash flows in the set. For example, using Table 1.2, what is the present value of two cash flows, $100 to be received at the end of one period from now and $200 to be received two periods from now, if the time value of money is 0.10? Table 1.4 shows an example of how to compute this.

TABLE 1.4 Present Value Addition Rule

Period	Cash Flow	Discount Factor	Present Value
1	$100.00	0.9091	$90.91
2	$200.00	0.8264	$165.28
		Present value using 0.10 =	$256.19

By using the formula for the present value of a future cash flow and the present value addition rule, you can calculate the present value of any possible cash flow.

Future Value

Assume that you have $1 now and can invest it to earn i interest. After one period, you will have $1 plus the interest earned on the $1. Let FV be the future value and i be the annual interest.

Repeating the process, at time 2 you will have

$$FV = (1 + i) + (1 + \text{i})$$

or to be precise,

$$FV = PV(1 + i)^2.$$

If $i = 0.1$ and $n = 2$, we have

$$FV = PV\ (1 + i)^2 = (1 + 0.1)^2 = \$1.21.$$

If, instead of starting with $1, we start with a present value, PV, of $50, the value at time 2 is

$$FV = PV\ (1 + i)^n = \$50\ (1.0 + 0.1)^2 = \$60.50.$$

At 10% interest, $50.00 grows to $55.00 at time 1. The $55.00 (still at 10% interest) grows to $60.50 at time 2. This equation is the standard compound interest formula for the future value of a present sum. The term $(1 + i)^n$ is called the *accumulation factor*. It shows how to calculate future values of a present sum: the dollar amount you will have in n periods (which could be months, quarters, years, and so on) in the future if a present sum of PV dollars is compounded for n periods at an interest rate of i per period. Instead of computing future values, business decisions are frequently made based on present values.

Hands-on 1.1: Testing Your Knowledge of Finance Principles

Make the calculations necessary to show which of the following statements are true and which are false if the interest rate is 5% per year. Remember that *n* is an accumulation factor and not a multiplier.

1. $98.00 now is equivalent to $105.60 one year from now. (True or false?)
2. $200.00 one year past is equivalent to $205.00 now. (True or false?)
3. $3,000.00 now is equivalent to $3,150.00 one year from now. (True or false?)
4. $3,000.00 now is equivalent to $2,887.14 one year ago. (True or false?)
5. Interest accumulated in one year on an investment of $2,000.00 is $100.00. (True or false?)

Task 1.2: Understanding Project Selection Methods

Internal projects are selected in a variety of ways. Most come from internal customers wanting to change the way they operate, the systems they use, their location, and so on.

Project selection methods help decision makers choose projects based on some criteria. There are several types of project selection methods. In this task we will show you economic models using net present value and internal rate of return as well as benefit measurement methods that compare projects based on prearranged criteria. We will also look at a weighted scoring model.

Scenario

You have been assigned as the project manager of the Apples and Pears project and are to assist Ms. Reese any way you can. Ms. Reese has chosen you because your previous position was that of a business analyst. You have been a successful project manager for five years now, and know your way around the company and most of its processes.

You gathered data about cash flows, and considered operating expenses and earnings before interest, taxes, depreciation, and amortization (EBITDA) as well as the availability of personnel to work on the project, the training needed, strategic fit, competitive advantage, and a high-level comparative analysis. You have taken a recent class on capital budgeting and are anxious to try out what you have learned. It all looks promising, but the answer is in the money.

Scope of Task

Duration

This task may take hours or days, depending on the complexity of the project and your involvement in financial decision making.

Setup

Now that you have an understanding, if not a working knowledge, of key financial principles, you are ready to make some financial calculations.

Caveat

None.

Procedure

In this task you will learn different approaches to determine whether projects should be approved or denied. We will discuss the following:

- Net present value
- Internal rate of return
- Benefit measurement methods
- Economic methods such as net present value (NPV) and internal rate of return (IRR)
- Benefit measurement methods such as comparative approaches and scoring models

Details

Sometimes it is difficult to choose one project over another. You may have a variety of project selection methods, but one of them should at least include an objective economic model such as NPV or IRR. You want to be able to defend your logic with facts and figures as well as your own subjective thoughts and ideas.

Economic Model: Net Present Value

NPV is the current market value of a cash flow amount at time *n* if the discount factor *Dn* is based on a discount rate *r* that is the market price for the use of one dollar. It is an application of the present value concept, in which the values are summed over time. NPV is also known as the market value for the stream of cash.

If the NPV is greater than 0, the investment is always considered acceptable. With zero taxes, the NPV of an investment may be described as the maximum amount a firm could pay for the opportunity of making the investment without being financially worse off.

The NPV of the investment is the sum of the present values of the cash flow minus the initial investment. NPV is determined by following these steps:

1. Choose an appropriate rate of discount.
2. Compute the present value of the cash proceeds expected from the investment.

3. Compute the present values of the cash outlays required by the investment.
4. Sum the present values of the proceeds minus the present values of the outlays.

Following along in Table 1.5, assume that an investment costs $10,000,000 and returns $12,100,000 a year later. If the rate of discount is 10%, a company could make a maximum immediate outlay of $11,000,110 in the expectation of receiving $12,100,000 a year later. If it can receive the $12,100,000 with an actual outlay of only $10,000,000, the NPV of the investment will be $1,000,110. In other words, the $1,000,110 represents the difference between the present value of the proceeds, $11,000,110, and the actual outlay of $10,000,000. The value in period 0 is negative because that is our original investment.

TABLE 1.5 Net Present Value Example

Period	Cash Flow	Present Value Factor	Present Value
0	–$10,000,000	1.000	–$10,000,000
1	$12,100,000	0.9091	$11,000,110
		NPV =	$1,000,110

NPV is widely used and accepted by most organizations. It is simple to calculate and easy to understand. Additionally, NPV in this example is positive, indicating that the investment is acceptable. NPV has the following advantages:

NPV is valid. It directly measures the present market value of one or more cash flows considered separately or in combination.

NPV is effective. As a decision variable, NPV provides all the usefulness of any other variable and also provides additional strengths.

NPV is reliable. If the rules for calculating NPV are followed, any analyst will produce the same result for a given stream of cash flows and a discount rate based on the market cost of money.

NPV is flexible. After the NPV has been calculated for a portion of any project, it can be used without recalculation to include that portion in any other investment.

In several examples we have shown the use of NPV at either time 0 or time 1. If we start with time 0, that is the *beginning* of the time period. If we use time 1, we are saying that the investment has been working for a period of time (for example, the *end* of the first year).

It is also important to note that if you start with time 0, you stay with time 0 to calculate NPV. If you start with time 1, you stay with time 1 to calculate NPV.

Now that you know the steps needed to calculate NPV, let's try it.

Hands-on 1.2: Testing Your Knowledge of NPV

1. Assume that there is an investment to pursue. The initial investment is $12,337 (year 0). Because this amount is the initial investment, it appears as a negative number. The cash flow at the end of the first year (period 1) is $10,000. The cash flow at the end of the second year is $5,000. Using Table 1.6, compute the NPV of this investment by using 10% as the discount rate.

TABLE 1.6 Determine NPV Problem 1

Period	Cash Flow	Present Value Factor	Present Value
		NPV =	

2. The remodel project initial investment is $5 million, and the cost of money is 9%. Cash flow for year 1 is $1 million, for years 2–3 is $900,000, and for years 4–6 is $750,000. Using Table 1.7, determine the present values for each year of the remodel project.

TABLE 1.7 PV for Remodel Project

Period	Cash Flow	Present Value Factor	Present Value
		NPV =	

3. What is the NPV for the remodel project?

4. The Apples and Pears project initial investment is $7,000,000, and the cost of money is 9%. Assume cash flow for year 1 is $3,000,000, for years 2–3 is $2,000,000, and for years 4–6 is $1,500,000. Using Table 1.8, determine the present values for each year of the Apples and Pears project.

TABLE 1.8 PV for Apples and Pears Project

Period	Cash Flow	Present Value Factor	Present Value
		NPV =	

5. What is the NPV of the Apples and Pears project?

6. If the investment for the Apples and Pears project increased to $8,750,000, how would that change the NPV?

7. Which project should be pursued?

8. What other project selection methods could you pursue?

Economic Model: Internal Rate of Return (IRR)

The internal rate of return (IRR) is the value of r that makes the NPV = 0. The IRR is, therefore, a summary measure of an investment (not just of the cash flows) that is useful only when comparing that investment with another identical investment. For example, comparing two capital improvement projects is considered acceptable when using IRR. Comparing a construction project and an IT project is not.

Using IRR can create serious challenges for those who manage capital budgets. When managers decide to finance only the projects with the highest IRR, they may be making a decision that is not as favorable as they think. For example, when all elements of the cash flow stream are known, the IRR provides some information about a particular stream of cash. Each financial investment in Table 1.9 has an IRR of 10%.

TABLE 1.9 Internal Rate of Return Example

Time Period	0	1	2
A	–$100	$0	$110
B	–$100	$10	$110
C	–$100	$110.	$110

- In scenario A $100 is invested at 10% for two years before there is a return on the investment of $100.
- In scenario B $100 is invested at 10% for two years also, but the interest payment is made at the end of year 1 and principal is returned at the end of year 2 along with an interest payment for the last year.
- In scenario C principal *and* interest are paid at the end of year 1. The principal ($100) is then invested for the second year at the same rate (10%).

These examples have quite different scenarios, but all have the same IRR. Be careful when using IRR.

Although it is quite possible that each of the alternatives A, B, and C would be viewed as the same by one or more investors, it is also possible to alter the differences of the scale so the IRR would be the same for financial investment opportunities that would otherwise appear very different—say, when compared with one another using NPV.

Benefit Measurement Method: Comparative Approach

There are several comparative approaches you can use to select one project over another. Table 1.10 illustrates one of them. There are three steps:

1. Criteria are determined. (These are typically preassigned.)
2. Each criterion is compared.
3. The decision is weighed.

TABLE 1.10 Comparative Approach

Criteria	Project 1	Project 2
1. Project maps to business vision, mission, goals, and corporate strategy.	Yes No	Yes No
2. Project delivers sufficient value to the business.	Yes No	Yes No
3. Project impacts or relates to a project or application within other business units.	Yes No	Yes No

TABLE 1.10 Comparative Approach *(continued)*

Criteria	Project 1	Project 2
4. Alternative analysis done.	Yes No	Yes No
5. Project follows company standards.	Yes No	Yes No
6. Team members have appropriate skill set and are available.	Yes No	Yes No
7. Other projects similar to this project address similar requirements.	Yes No	Yes No
8. Would any existing projects have to be discontinued when this project is completed?	Yes No	Yes No

It is important to remember that most projects also use an economic model before a decision is made or include an economic model as one of the criteria.

Benefit Measurement Methods: Weighted Scoring Models

The same comparison can be used but with a weight associated with each question. Each weight should be described to avoid confusion (for example, 5 = Mission critical, 4 = Very important, 3 = Important, 2 = Nice to have, 1 = Not important). In this case the scale is 1–5, with 5 being the highest. Other scoring models may have a different range. There are three steps for this process:

1. Assign a weight to each criterion.
2. Rate each criterion.
3. Multiply the weight by the rating to get the score.

Table 1.11 shows an example of weighted scoring.

TABLE 1.11 Weighted Scoring

Criteria	Project 1			Project 2		
	Weight	Rate	Score	Weight	Rate	Score
1. Project maps to business vision, mission, goals, and corporate strategy.	5	5	25	5	3	15
2. Project delivers sufficient value to the business.	5	4	20	5	5	25
3. Project impacts or relates to a project or application within other business units.	4	4	16	4	4	16

TABLE 1.11 Weighted Scoring *(continued)*

Criteria	Project 1			Project 2		
	Weight	**Rate**	**Score**	**Weight**	**Rate**	**Score**
4. Alternative analysis done.	4	3	12	4	2	8
5. Project follows company standards.	4	3	12	4	4	16
6. Team members have appropriate skill set and are available.	3	3	9	3	3	9
7. Other projects relate that address similar requirements.	4	2	8	4	3	12
8. Would any existing projects have to be discontinued when this project is completed?	3	2	6	3	1	3
		Total	108		Total	104

Weighted scoring models are simple and provide consistency in their approach. For small projects (and your company would have to decide what is considered *small*), weighted scoring models may be enough. But most companies use an economic model as well.

There could be challenges with scoring models. Projects may be ranked and scored subjectively (without data and facts) instead of objectively. There may be inconsistencies in the selection committee based on politics, a personal agenda, and so on. Senior management may override the decision. If these challenges do exist, consider revamping the criteria so that all are in agreement.

Hands-on 1.3: Testing Your Knowledge of Benefit Measurement Methods—Scoring Models

Answer the following questions:

1. For each criterion found in Table 1.11, what information could you provide that would justify the rating and score?
2. Select five additional criteria. Weight and rank them. Determine the score. How could this impact the result in question 1?
3. What are the advantages of scoring models?
4. Is a comparative approach enough? Why or why not?
5. What problems could you have with this approach?

Task 1.3: Using Business Cases with Built-in Feasibility Analysis

Now that you have a good grasp of business finance, you are ready to look at a business case and its value to project management. Business cases are only as good as the people who prepare them and their knowledge of corporate finance and project management. A progressive business case has built-in feasibility analysis and provides a *score* at the completion of each phase. A minimum score is needed in order to move to the next phase. Each phase has its own *scorecard* that measures progress by the use of a minimum score. The scorecards for three activities are as follows:

- Project selection scorecard
- Project charter sign-off scorecard
- Project planning scorecard

Scenario

Although Ms. Reese is 99% sure that Ms. Ross would approve the project, based on what is known to date, Ms. Reese wants to take a closer look at the real world implications to their business. You have apprised Ms. Reese that there are operational issues, revenue tests, and other elements besides financials that could impact the bottom line. Ms Reese has discussed your suggestion with James Stevens, a member of the finance committee they both attend, and he agrees that a progressive business case should be used. He believes that it would bring reality to their assumptions and solidify support from those who may oppose the project.

Scope of Task

Duration

This task should take several days, if not weeks, depending on the size of the project and your level of involvement in project selection.

Setup

For this task you need a basic understanding of how business operates. With that, you can easily assist in the preparation of a business case. Again you will work with other managers—all of whom will own a piece of the pie.

Caveat

The project manager is typically given the operations criteria of the business case segment, called *probability of success* and *milestones*, because that is where project managers typically have expertise.

Procedure

In this task you will learn the elements of a progressive business case and see how they are iteratively refined. You will look at the five segments of a business case and compare their iterative scorecards. Those five segments are:

- Program assessment
- Financials
- Internal issues
- Alternatives and recommendations
- Milestones

Details

The difference between a business case and other project selection methods is that a business case affords a higher level of confidence to decision makers, because it takes a holistic view of the company. The business case is completed through the planning phase, thus before major expenditures occur. Additionally, the business case can be followed through the end of the project and beyond. For instance, if the business goal of the project were to increase revenues, it may take another year or more to see whether revenues have increased.

A minimum score is assigned to each of the criteria within a segment of the business case. If the total minimum score is not achieved, the project cannot proceed to the next activity.

The minimum values have been preassigned to each criteria. A project selection committee usually decides the minimum score for each scorecard. In the real world, this business case is repeated for the project charter sign-off and planning activities. Each progressive phase increases the minimum score that enables a decision maker to decide whether the project should continue.

For example, if the minimum score through project charter sign-off does not meet the minimum score for both activities (selection and charter), the project cannot advance to planning. Rather than show the table in its entirety for charter and planning, we include only summary minimums. Table 1.12 is an example of a minimum scorecard for the project selection activities.

TABLE 1.12 Project Selection Scorecard

1. PROGRAM ASSESSMENT					
A.	MARKET ANALYSIS				**SCORE**
	Customer-Initiated Request or Customer Expectation		Minimum Score	0	
	0	No request			
	5	Informal request			
	10	Formal request/expectation			
	Meets Customer Need		Minimum Score	5	
	0	No needs identified			
	5	Perceived fit with need(s)			
	10	Known fit with need(s)			
	Market Window		Minimum Score	4	
	0	Can't meet—delivery time exceeds customer requirements			
	5	Perceived ability to meet customer requirements			
	10	Known ability to meet customer requirements			
	Willingness to Pay		Minimum Score	5	
	0	Known unwillingness			
	5	Perceived willingness			
	10	Known willingness at proposed price			
	Market Potential		Minimum Score	3	
	0	No potential			
	3	Perceived potential			
	5	Some customers want			
	10	Most customers want			
	Forecast		Minimum Score	3	
	0	No forecast			
	5	Draft forecast			
	10	Firm forecast from customers with commitments from account teams and customers			
B.	**STRATEGIC FIT**				**SCORE**
	Product Alignment with Strategy		Minimum Score	3	
	0	No fit with any business unit strategy			
	5	Fits with half of business unit's strategies			
	10	Fits with all of business unit's strategies			
C.	**COMPETITIVE ADVANTAGE**				**SCORE**
	Creates Competitive Advantage		Minimum Score	0	
	0	No advantage			
	5	Perceived advantage or meets competition			
	10	Clear advantage			
D.	**PROBABILITY OF SUCCESS**				**SCORE**
	Availability of Technology		Minimum Score	5	
	0	No advantage			
	5	Perceived advantage or meets competition			
	10	Clear advantage			
	Ordering		Minimum Score	3	
	0	Means not available			
	5	Perceived feasibility			
	10	Known feasibility—mechanized systems ready when needed			

TABLE 1.12 Project Selection Scorecard *(continued)*

	Billing		Minimum Score	3	
	0	Means not available			
	5	Perceived feasibility			
	10	Known feasibility—mechanized systems ready when needed			
	Fraud Control		Minimum Score	3	
	0	No advantage			
	5	Perceived advantage or meets competition			
	10	Clear advantage			
	Maintenance		Minimum Score	3	
	0	Means not available			
	5	Perceived feasibility			
	10	Known feasibility—available when needed			
	Installation/Deployment		Minimum Score	3	
	0	Means not available			
	5	Perceived feasibility			
	10	Known feasibility—available when needed			
	Systems Synergy		Minimum Score	3	
	0	All new systems needed			
	5	Major modifications needed			
	10	Minimal modifications needed			
	Risk Versus Benefits		Minimum Score	3	
	0	Risks outweigh benefits			
	5	Risks and benefits are equal			
	10	Benefits outweigh risks			
		PROGRAM ASSESSMENT MINIMUM SCORE			49
		PROGRAM ASSESSMENT ACTUAL SCORE			
		DIFFERENCE			
2.	**FINANCIALS**				
A.	**Quality of Financial Analysis**		Minimum Score	3	**SCORE**
	0	Not done			
	1	Rough estimate of revenue, expense, capital or price, and estimated incremental investment (per unit basis)			
	3	Estimated demand, revenue, expense, capital in business case format (income statement, etc.)			
	5	Preliminary financial analysis including sensitivity analysis of variables, functional units involved in estimating costs where appropriate			
	7	Financial analysis including best/worst case scenarios, sensitivity analysis, and functional units involved in estimating costs where appropriate			
	10	Financial analysis including Monte Carlo risk analysis, best/worse case scenarios, sensitivity analysis, and service units involved in estimating costs where appropriate			
B.	**Financial Desirability of Program**		Minimum Score	1	**SCORE**
	0	Not done			
	1	Project/Program is expected to break even within 5 years			
	3	Project/Program has a positive NPV within the study life and has a discounted break even of 5 years or less			
	5	Project has significant gross margin/EBITDA opportunity and impact			

TABLE 1.12 Project Selection Scorecard *(continued)*

	7	Project/Program meets 3 of the 4 following criteria: 1. A modified profitability index of 2.0 or greater 2. A program rate of return 10% above the cost of capital 3. A discounted break even of 5 years or less 4. Shareholder value greater than $5M			
	10	Project/Program has: 1. A modified profitability index of 3.0 or greater 2. A program rate of return 15% above the cost of capital 3. A discounted break even of 3 years or less 4. Shareholder value greater than $10M			
			FINANCIALS MINIMUM SCORE		4
			FINANCIALS ACTUAL SCORE		
			DIFFERENCE		
3.	**INTERNAL ISSUES**				
A.	**Effects of Preliminary Disclosure**		Minimum Score	3	**SCORE**
	0	Effects of disclosure either have not been considered, or considered to be generally negative			
	1	Net impacts of full disclosure to competitors considered to be generally neutral			
	3	Net impacts of full disclosure to competitors considered to be generally positive			
B.	**Contract Development**		Minimum Score	2	**SCORE**
	0	Not done			
	3	Outline completed			
	3	Draft completed, issues resolvable			
	10	Contract completed			
C.	**NET REVENUE TEST INPUTS/ANALYSIS**				
	Impact on Cross Elastic (CE) and Complimentary Services		Minimum Score	5	**SCORE**
	0	Not done or negative net impact			
	3	Neutral net impact			
	3	Positive net impact			
	Demand Analysis for New Services, Cross Elastic, and Complimentary Services		Minimum Score	5	**SCORE**
	0	Not done			
	5	Preliminary analysis completed, somewhat rough but much research either completed or in process			
	10	Analysis well developed and documented			
	Net Revenue Test Demand Relationships Analysis		Minimum Score	5	**SCORE**
	0	Not done or negative net impact			
	5	Neutral net impact			
	10	Positive net impact			
	Legal		Minimum Score	4	**SCORE**
	0	Violates rules/law			
	3	Issues identified			
	4	Legal department contacted			
	5	Perceived ability to resolve issues			
	10	Does not violate rules/laws			

TABLE 1.12 Project Selection Scorecard *(continued)*

			INTERNAL ISSUES MINIMUM SCORE		24
			INTERNAL ISSUES ACTUAL SCORE		
			DIFFERENCE		
4.	**ALTERNATIVES AND RECOMMENDATIONS**				
A.	**Pricing Plan (first year)**		Minimum Score	3	**SCORE**
	0	Not done			
	5	Rough draft			
	10	Completed			
			ALTERNATIVES AND RECOMMENDATIONS MINIMUM SCORE		3
			ALTERNATIVES AND RECOMMENDATIONS ACTUAL SCORE		
			DIFFERENCE		
4.	**MILESTONES**				
A.	**A. First Year Milestones by Quarter (including tracking mechanisms and contingencies)**		Minimum Score	0	**SCORE**
	0	Not done			
	5	Rough draft			
	10	Completed			
			MILESTONES MINIMUM SCORE		0
			MILESTONES ACTUAL SCORE		
			DIFFERENCE		

Now that you have reviewed the business case, take a look at the summaries for the project selection scorecard as well as the summaries for charter sign-off and planning (see Table 1.13). Notice how the scores progressively increase.

Hands-on 1.4: Testing Your Knowledge of Business Cases

Using your common sense and experience, please answer the following questions:

1. Who should prepare the business case? Why?
2. What do you think are the advantages of a project manager participating in the business case process?
3. Are there disadvantages? Why or why not?
4. Is a business case enough? Why or why not?

TABLE 1.13 Summary Scorecards for Project Selection, Charter Sign-off, and Planning

Summary Project Selection			
	Minimum Score	Actual Score	Difference
PROGRAM ASSESSMENT	49		
FINANCIALS	4		
INTERNAL ISSUES	24		
ALTERNATIVES AND RECOMMENDATIONS	4		
MILESTONES	0		
*TOTALS	81		

Summary Project Charter Sign-off			
	Minimum Score	Actual Score	Difference
PROGRAM ASSESSMENT	76		
FINANCIALS	8		
INTERNAL ISSUES	33		
ALTERNATIVES AND RECOMMENDATIONS	10		
MILESTONES	5		
*TOTALS	132		

Summary Project Planning			
	Minimum Score	Actual Score	Difference
PROGRAM ASSESSMENT	117		
FINANCIALS	12		
INTERNAL ISSUES	43		
ALTERNATIVES AND RECOMMENDATIONS	19		
MILESTONES	9		
*TOTALS	200		

Now that you have an overview on finance, how projects are selected, and how business cases evolve, you are ready to move forward! You now have the ability to map your project activities to the corporate issues that matter the most—money. Remember, at the top of the food chain, it's always about money. You can now plan your project brilliantly, present your project brilliantly, and defend your project brilliantly: with data and facts relative to money!

Task 1.4: Identifying Stakeholders—Who Are They?

Stakeholders are people. First and foremost, they are human beings. These folks can be an individual, a group, a community, or the like, but whatever we call them, they have an interest in your project. They may support your project with enthusiasm or they may have serious concerns about your project.

Some people may have serious concerns but have no power to change anything in the project. Others may be highly supportive but have no rank. And the opposite is also true: Some high-ranking corporate individuals may be the champions for your project or the harbingers of doom because they do not support the project at all.

In all cases it is important to listen to all of the stakeholders in your project. You may learn something you didn't understand or know. In this task you will discover who your stakeholders are, and their roles and responsibilities in a project.

Scenario

Ms. Reese, with help from her project manager from Cimarron Industries, has determined that the Apples and Pears project is a favorable project to pursue. It was determined that this project will generate more revenue in the short term than upgrades to the textile mill or a remodel of existing children's stores.

Creating clothing stores is the company's bread and butter. Ms. Ross believes they should use the same approach they used 20 years ago when the original children's stores were launched. Ms. Reese wants to bring in additional internal people who may have a better understanding of the more current way this type of project is handled. Ms. Ross thinks this is a waste of time but reluctantly agrees.

Ms. Reese also reminds Ms. Ross that if all goes well during this initiation phase, the planning work can be started in December and the project could be complete by the start of the next holiday season. Ms. Ross thinks that would be splendid but realizes those dates are not cast in stone until thorough planning has occurred.

Scope of Task

Duration

This task may take a few hours or several days, depending on the scope of the project and the availability of stakeholders.

Setup

None.

Caveat

For this task, you must be able to converse with senior management or others at their level.

Procedure

In this task we will

- Identify types of projects.
- Identify and analyze project stakeholders.
- Explore the roles and responsibilities of the project sponsor and project manager.
- Take a look at the management and leadership skills needed in a project manager.

Details

People are the most important resource on a project! Individuals are complex, and the project manager spends a great deal of time with them. We provide and receive information, overcome emotional hurdles, and provide and receive performance information in all manner of communications. First and foremost we must know and understand who these people are and their roles in the project. The stakeholders will come from different backgrounds, depending on the types of projects you're working on. Let's take a look at the types of projects you may manage someday.

Types of Projects

Different project types will dictate the appropriate stakeholders who will participate in the project. Most project managers do not have experience in all types of projects, and although it is helpful to have technical skills, the right project manager can manage many types of projects. Several types of projects seem to be common to most businesses and organizations from time to time, although this list is not all-inclusive:

Research and development projects are often likened to programs because they typically have an element of ongoing activity and exist as long as they are funded and achieve the desired result.

Strategic projects include reorganizations, mergers, acquisitions, reengineering, or enterprise-wide initiatives such as process improvement or quality efforts.

Information technology projects include new development, rapid application development, small and large maintenance, LAN/WAN creation, application acquisition, and the like.

Engineering and construction projects create buildings, bridges, and roads, among other things.

Capital improvement projects exist to upgrade internal or external infrastructures (roads, bridges, and the like) or equipment.

Product development projects create new products and services for internal or external use based on market demand and technology advances, and often involve manufacturing efforts.

Legal mandates or requirements can include, for example, a manufacturing facility that must comply with mandatory Environmental Protection Agency (EPA) emissions standards or a legal mandate that safety equipment be updated, perhaps based on a negligence lawsuit.

External customer requests are projects generated by customers that are not internal to your organization.

This list does not represent all types of projects—there are many more.

What Is a Stakeholder?

A stakeholder is anyone who will be impacted by or has an interest in the project. Who are these interested and involved people? The following is a list of some of the stakeholders on a project.

- Clients
- Sponsor
- Project manager
- Champion
- Performers
- Users
- Line managers
- Vendors
- Steering committee
- Support and operational staff
- Quality control staff
- Quality assurance staff

Some of the most important members of the project team are the project sponsor, project manager, and project team leaders. You need to understand their roles and responsibilities so there is no role confusion. We also will take a brief look at the leadership and management skills of a project manager.

ROLES OF THE PROJECT SPONSOR

The project sponsor plays a key role and has a defined set of responsibilities within a project:

- Participates in sales efforts and contract negotiations
- Establishes and maintains top-level client relationships
- Assists the project manager in launching the project
- Participates in the project steering committee, governance board, or oversight committee to assist in setting project priorities
- Interprets company policies if necessary
- Cuts through the red tape when that is required
- Optimizes corporate objectives

The sponsor should be in constant communication with the project manager. The project manager must keep the sponsor informed of project activities. The sponsor should never find out from someone else something they should have found out from the project manager.

ROLES OF THE PROJECT MANAGER: MANAGEMENT

Most people can be taught the tools of the trade, but a project manager must possess good management skills able to support the following disciplines:

- Financial management and accounting
- Purchasing and procurement
- Contracts and commercial law
- Manufacturing and distribution
- Logistics and supply chain
- Strategic planning, tactical planning, and operational planning
- Organizational structures, organizational behavior, personnel administration, compensation, benefits, and career paths
- Information technology

Additionally, project managers must have some technical skills, including the following:

- Able to manage the technology even if not skilled in the technology
- Can communicate with technical personnel
- Has a holistic perspective
- Can facilitate trade-offs
- Integrates technical, business, and human objectives
- Understands engineering tools and support methods
- Able to perform appropriate budgeting and estimating techniques
- Can plan and organize multifunctional teams
- Understands functional policies and operating procedures

So what else is a manager looking for when they hire a project manager? Not everyone is cut out to do this work. Do you fit the bill?

- You have to have a very thick skin.
- You need to be a technical generalist (not a specialist).
- You need to be able to live without structure and rules.
- Conversely, you also need to be able to live with structure and rules.
- You can accept the fact that you will (on occasion) have high-maintenance team members.
- You will manage conflict on a daily basis.
- You will have to decide whether an issue equates to the milk being left out or missing a job interview.

- You will deal with all ranks in the hierarchy but will have no significant rank.
- You must be willing to take the heat without it breaking your heart.
- You will smile when you see the client shaking hands with the president of your company on the company newsletter.
- You will be an honorable mention in the last paragraph of the company newsletter.
- Expect to be on the 6 o'clock news if things go wrong.
- You are in a place of notoriety and visibility (for good or ill).
- You will have a great sense of humor!

And remember, this is just a job—don't forget work/life balance.

Now that you know what the project manager's management roles are, let's take a look at the leadership roles of a project manager.

ROLES OF THE PROJECT MANAGER: LEADERSHIP

The project manager position is not for everyone. There is a discrete difference between management and leadership. The first woman general of the U.S. Army, Brigadier General Anna Mae Hays, Chief of the Army Nurse Corp, coined the phase, "You lead people. You manage time and things." Both are necessary, but in the project management role, quintessential leadership is the more important role.

Most project managers probably didn't tell their parents as they were growing up that they wanted to be a project manager. We landed that role in a variety of ways. You may have been asked if you wanted a "job enrichment opportunity." Of course you said yes, but in reality you knew nothing about managing projects. Thankfully, your boss saw good managerial and leadership skills in you and over time you became successful as a project manager.

Others were chosen to be a project manager because of their superior technical skills. This may sometimes be a hindrance to the project, however, as project managers focus their expertise in the technical field. It is difficult to remove your technical hat and become a generalist instead of a specialist. It takes a lot of trust that someone can do your technical job as well as you did.

Some project managers actually went to school and studied the topic, so they were prepared to be a project manager from the onset. Are you ready to take on the project management *leadership* role?

Hands-on 1.5: Testing Your Knowledge of Leadership Analysis

Table 1.14 represents key project management leadership skills. For each item, circle the number that represents your brutally honest answer. Your analysis is found in the Phase 1 Solutions section.

TABLE 1.14 Leadership Analysis

Little	Some		A Great Deal		SKILL
1	2	3	4	5	1. Ability to understand and work with group dynamics
1	2	3	4	5	2. Ability to differentiate between important and unimportant issues
1	2	3	4	5	3. Ability to know when to compromise
1	2	3	4	5	4. Possess both a flexible personality and a strong determination to succeed
1	2	3	4	5	5. Ability to state case well when needed
1	2	3	4	5	6. Ability to be assertive
1	2	3	4	5	7. Want to see things through
1	2	3	4	5	8. Ability to be persuasive and not be put off by potential confrontations or arguments
1	2	3	4	5	9. Feel comfortable with self-direction and do not become frustrated with unclear delegation of authority and/or from superiors
1	2	3	4	5	10. Ability to make fast, on-the-job decisions
1	2	3	4	5	11. Exhibit mature judgment
1	2	3	4	5	12. Ability to control costs
1	2	3	4	5	13. Ability to establish ties, and monitor and evaluate project accountability among team members
1	2	3	4	5	14. Ability to understand major technical issues
1	2	3	4	5	15. Ability to provide feedback for productive and creative efforts
1	2	3	4	5	16. Ability to communicate upward with clients and higher management and downward with key technical managers and professionals
1	2	3	4	5	17. Ability to take strong leadership in the beginning and willingness to delegate responsibility and authority to others as the project progresses
1	2	3	4	5	18. Ability to listen, probe, and objectively evaluate information
1	2	3	4	5	19. Ability to play unfamiliar roles as a manager
1	2	3	4	5	20. Politically astute
1	2	3	4	5	21. Ability to develop effective work relationships with peers and with individuals of different ranks
1	2	3	4	5	22. Willingness to participate in problem identification, problem solving, and decision making
1	2	3	4	5	23. Willingness to use, when needed, a trial and error approach rather than a sophisticated management approach
1	2	3	4	5	24. Well skilled in negotiating processes
1	2	3	4	5	25. Ability to be a political diplomat

ROLE OF THE PROJECT TEAM LEADER

Project managers usually work within the construct of a matrix organizational structure. Functional managers, line managers, or team leaders play a vital role in the success of projects. Their role, in addition to being accountable for their operational objectives, is to support the project manager. Here are some make or break roles that a project manager expects from team leaders:

- Demonstrates potential for innovative and creative behavior
- Supportive of project goals and objectives
- Flexible when changes are necessary
- Meets commitments for completion of deliverables
- Deals with conflicts within own area of authority
- Results oriented
- Maintains high morale
- Communicates clearly and concisely

Responsibility Assignment Matrix

Project managers have many things to be responsible for on a project, but what about the members of the team? The responsibility assignment matrix (RAM) is a simple tool to see at a glance who is responsible for what. Table 1.15 shows a RAM that represents a two-dimensional relationship between personnel on the project and their level of involvement in the project. They can be noted as responsible, accountable, provide support, must be consulted, or need to provide information (RASCI).

TABLE 1.15 Responsibility Assignment Matrix

Responsible	This person is usually a line manager responsible for individuals performing the work.
Accountable	An accountable party is a person or group who is liable for the outcome and having the authority to approve or reject deliverables based on acceptance criteria. This person is usually the owner of the project.
Support	A support person is usually the person performing the work. This may be an internal support person or an external vendor.
Contributor	This person is a contributor or a consultant who provides input to the project. These folks contribute expertise on an as-needed basis.
Information	This person is one who is informed of project information. This is usually the sponsor and members of the project team. Senior managers may wish to be informed if the project is highly visible.

Projects and the tasks within them are often complex. People want to know where they fit in the scheme of things. There are many models for identifying the roles of individuals in a project. A popular model is the RASCI model shown in Table 1.15 and described in Table 1.16.

TABLE 1.16 RASCI Model

Tasks	Project Manager	PMO	Team Members	Line Managers	Dept Manager	Sponsor	Senior Management

R	Responsible
A	Accountable
S	Support
C	Contributor
I	Information

Step 1 List the tasks.

Step 2 Use the letters of RASCI for each task as it corresponds to the title of the person listed above.

Step 3 Make sure there is only one accountable individual.

The RASCI model is simple. It can be made more complex by adding task numbers and any number of additional personnel titles. The RAM is a good executive overview tool enabling senior management to see at a glance what is being done by whom.

Now that you know who these people are, you should identify key stakeholders other than the sponsor, project manager, and team leaders. You need to do this because key stakeholders can influence a project in a positive or negative way. For example, a key stakeholder is concerned about exceeding the budget. In fact, that key stakeholder may be able to cancel your project if she does not feel that the project is staying on track and within the budget.

If you know this information, you can provide the key stakeholders with a level of confidence that the project is within the budget by giving them project cash flow data, earned value information, and so forth. So how do you determine these things? By conducting a stakeholder analysis.

Task 1.5: Conducting a Stakeholder Analysis

The stakeholders on your project can make or break the project. The project manager defines stakeholder assets or detriments and as a result will discover who supports your project and who does not.

You need to know who you can go to for help and support; but you especially want to know who may sabotage your project or cause you to "lose traction" as you move forward. People with high rank and high support should be leveraged fully. The project manager should create a response strategy that satisfies those with high power and no support.

Everyone has something of value to bring to the project, some more than others. Acknowledging contributions and feedback of stakeholders will go a long way toward project success. To accomplish this, you conduct a stakeholder analysis.

Scenario

Ms. Reese has prepared a list of potential stakeholders and provided them to the project manager.

- Megan Holly is a marketing manager who participated in the original market study. She has a sales background and is already planning her marketing strategy.
- James Stevens is on the finance committee with Ms. Reese. He believes that even though the initial numbers looked positive, it is risky to assume that the current economy will support the increasing revenue projections for the project.
- Jacob Patrick is the manager of engineering and construction. He believes that the cost of materials is decreasing because of the slowdown in new home sales and that the project could provide many jobs during its implementation.
- Jordyn Kelly is the human resources vice president who is all for the project because it will create new jobs in many new cities.
- Skylar Janes is the advertising manager for Cimarron Industries and is eager to pursue the brand project this will create.
- Carolyn Lee is the union representative for the manufacturing facility. She represents those who will ultimately design and manufacture the clothing.
- Madison Adams is the webmaster of Cimarron's web pages. She wants to know whether Apples and Pears customers will order clothing through the Internet and if so, will adequate funding be provided for additional servers and the like.
- Allison Jones is the IT manager and is concerned that traffic may double without adequate support systems being provided.

- Darcy Moore is the operations director for the West Coast children's stores.
- Louise Rose is the operations director for the East Coast children's stores.
- Todd Franks is a site superintendent for new stores.
- Harry Edwards is the procurement director for Cimarron.

Scope of Task

Duration

This task could take several hours to several days, depending on the complexity of the project.

Setup

The project manager should obtain a private place for interviews and a public space conducive to a free flow of information.

Caveat

None.

Procedure

As mentioned earlier, we conduct a stakeholder analysis to identify those who may have a positive or negative influence on the project. The steps include, but are not limited to, the following:

1. Brainstorm who potential stakeholders might be.
2. Interview potential stakeholders for their interests or concerns they may have about the project.
3. Determine the stakeholder's level of power or influence.
4. Determine the impacts of stakeholders.
5. Develop strategies that will lend support to your projects from these stakeholders.
6. Create a stakeholder map.

Details

A stakeholder analysis is a relatively simple task to do. Keep in mind, however, that key stakeholders may not always be the higher-level managers in an organization. For example, five call centers located in different areas were being moved to a location at least 75 miles

away to create a mega-center. The key stakeholders for this project were the call center employees. Their concerns were very high relative to the cost of gas, the increase in time, and day care issues. Most were going to quit. By conducting a stakeholder analysis, their concerns were noted and several steps were taken to make it palatable for these workers to stay with their jobs.

After you brainstorm with your team and others to identify the stakeholders and have interviewed them, the next two steps are relatively simple. Developing strategies can be a little more complicated, but not so much if you did a good job with the previous steps. Table 1.17 shows four elements of the analysis.

TABLE 1.17 Stakeholder Analysis Template

Identify and Interview Potential Stakeholders	Determine Concern or Interest	Impact Assessment	Strategies to Reduce Challenges and Gain Support

For those who have *high power and high concern,* you must get them involved in the stakeholder analysis and make a concerted effort to satisfy their concerns. Before they can be involved, you must be prepared to answer their questions. Here are a few questions that executives might have:

- What is the business need for the project?
- Why are we undertaking it now?
- What is the commercial implication?
- Do we have the right people with the right skills available to do the project?
- Will this affect our market share?
- What is the proposed schedule?
- What are the cost factors?
- Are there any special requirements?
- What would happen if we did not do this project?

For those who have *high power and no concerns,* you should keep them in the loop but not bog them down with details.

For those who have *low power but high concern,* make sure to identify those concerns, and keep them involved in the details of the project. These are the folks who are technically proficient but may not trust that you have all the details needed. They can be a detriment to your project if you ignore them. For example, they might bring up a technical issue that you are not familiar with. If you do not listen to these folks, they may stand back, watch you get in trouble, and say "Well, if you had asked me to help, I would have." Not everyone would do this, but if only one does it, the project can be in peril.

Here are a few questions that people with low power and high concern might have:

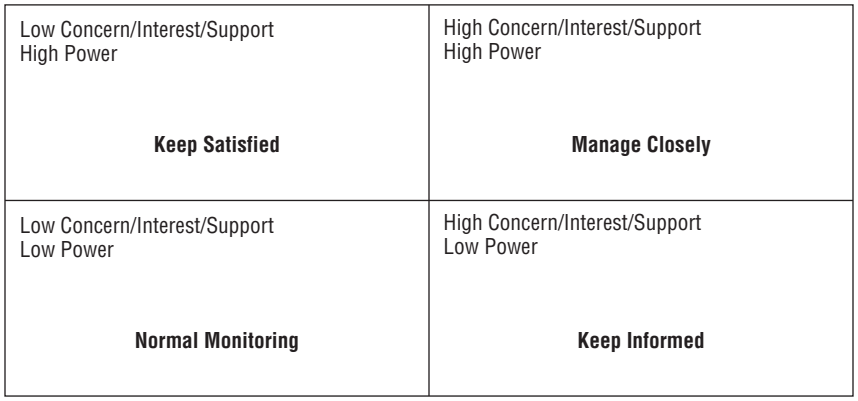
- What is the benefit of this project to me?
- Will this project change/eliminate my job?
- Will this project change the way I do my job?
- Will this project create personal conflict for me (start of shift, overtime, day care issues, and so forth)?

For those who have *low power and low interest,* do not send them too much information.

So now we know who the key stakeholders are: those with high power and high concern and those with low power and high concern.

The last step of the analysis is accomplished by creating a stakeholder map. This map (Figure 1.1) allows you to see at a glance how to manage your stakeholders. When creating the map, some people like to color-code the output, for instance, green for positive people plotted on the grid, yellow for neutral, and red for negative.

FIGURE 1.1 Stakeholder map



Hands-on 1.6: Testing Your Knowledge of the Stakeholder Analysis

1. Complete Table 1.18 to determine the level of power or influence, the impact assessment, and the strategy to leverage or reduce the challenges perceived by these stakeholders.

TABLE 1.18 Stakeholder Analysis

Identify and Interview Potential Stakeholders	Determine Concern or Interest	Impact Assessment	Strategies to Reduce Challenges and Gain Support
Megan Holly			
James Stevens			
Jacob Patrick			
Jordyn Kelly			
Skylar Janes			
Carolyn Lee			
Madison Adams			
Allison Jones			
Darcy Moore			
Louise Rose			
Todd Franks			
Harry Edwards			

2. What are the benefits of interviewing stakeholders and conducting a stakeholder analysis?
3. What other stakeholders may be interested in your project?
4. What other information might you want to know to help understand your stakeholders?
5. How does stakeholder analysis help you to build the support you need?

Hands-on 1.7: Testing Your Knowledge of Stakeholder Mapping

Use Table 1.19 to map the stakeholders that you have analyzed.

TABLE 1.19 Stakeholder mapping exercise

Low Concern/Interest/Support High Power **Keep Satisfied**	High Concern/Interest/Support High Power **Manage Closely**
Low Concern/Interest/Support Low Power **Normal Monitoring**	High Concern/Interest/Support Low Power **Keep Informed**

Task 1.6: Understanding Corporate Strategy

Strategic plans describe the corporate vision for their target markets with the goal of creating customer satisfaction effectively.

Plans that aren't implemented serve no useful purpose. It is imperative that the strategic plan is "in the headlights," so to speak, in order to solve problems and create marketing plans, product development plans, research and development plans, capital improvement plans, and other business plans that may be developed. Optimal decision making is the ultimate result when all plans, problems, and so on are integrated and supported.

Scenario

You have identified stakeholders, analyzed them, and learned a great deal of information. You know that the project must align with corporate strategy, so you have decided that all of your efforts from now on will map to Cimarron's strategic vision.

Scope of Task

Duration

This task could take several hours or days of research, depending on the complexity of the project.

Setup

None.

Caveat

You must have access to information that provides the company's strategic plans, goals, and the like.

Procedure

In this task you will take a look at the items you need in order to understand strategic plans:

- Description of strategic plans
- Elements of a strategic plan
- Project portfolio management
- Business needs

Details

Organizations are always in a state of change because of technological advances, legal requirements, market demand, customer requests, and so on. An organization's strategic plan will also change depending on the rate of change and the organization's ability to manage those changes.

Elements of a Strategic Plan

The elements of a strategic plan typically answer the following questions: Where do we see ourselves going with our business? Is the business and market environment conducive to our success? How do we get there from here?

Project plans should map back to strategic plans. It becomes a tactical plan along with the marketing plan, business plans, and so forth. So it is essential that project managers understand the elements of a strategic plan, which include, in part, these elements:

- Value and vision statement
- Mission statement
- Critical success factors for the business
- What kind of image we want
- What we want to be known for
- Where we want to be in five years
- Key business drivers
- Actions for achievement
- Measurement system for success

Projects should be sanctioned based on their alignment with strategic goals and objectives.

Project Portfolio Management

Project portfolio management is a business process that takes a holistic view of projects and the total investment required of them so that decisions on funding can be prioritized based on corporate strategy and organizational alignment with those strategies as well as resources available, and so on. Investments should not be made based on the political clout of one business unit over another.

For example, most large corporations have business units, and those units have senior managers. The senior managers, with help from their team, forecast which projects will benefit their business unit and budget accordingly. If portfolio management was being used, the business unit leaders would meet with each other and throw all their projects on the table. The team would then prioritize those projects based on what's *best for the business* rather than what's best for the business unit. The benefits are obvious:

- Decisions about funding are more fair.
- Provides an optimal mix of investment risk and reward.

- Facilitates the balance of riskier, higher-reward projects vs. safer, lower-reward ones.
- Categorizes, prioritizes, and monitors new and ongoing investments.
- Better communication between project owners and business leaders.
- Greater understanding and cooperation over funding allocation; everybody sees where the dollars are flowing and why.
- Greater business accountability for investments.
- Portfolio management can be used to assign responsibility to appropriate leaders.
- More-efficient use of human resources. The number of staff and managers allocated to various projects becomes more visible and comparable.
- Exposes redundant and overlapping projects.

There are a few pitfalls to portfolio management, however:

- Some business unit leaders may feel as if their position is in jeopardy if they are not funded for all of their project requests.
- Even in the senior ranks, it is sometimes difficult to change thinking.

It will be up to senior executives to support the process and lead their direct reports through the transition.

Define Business Needs

The business need for the project should tie back to the strategic plan. Typical business needs might be as follows:

- Increase revenue
- Increase market share
- Create better customer satisfaction
- Reduce expenses
- Update technology
- Update infrastructure
- Create new products and services
- Perform capital improvements
- Comply with regulatory or legal mandates

Key business drivers that help create strategic plans may change from year to year depending on the economy or the availability of key personnel. One year the strategic plan might be to reduce expenses by laying off personnel. Another may be to change a capability in order to remain competitive. And there are many others. It is your job to always be able to answer the question, "Why are we doing this?"

Hands-on 1.8: Testing Your Knowledge of Corporate Strategy

1. Why does a project manager have to understand the corporate strategy?
2. List three elements of a strategic plan.
3. Why is portfolio management important?
4. What are the business needs for the Apples and Pears project?

Task 1.7: Creating the Scope Statement

The purpose of creating a scope statement at the beginning of the project is to have a basis upon which to make future project decisions. The project scope statement should give senior management a holistic overview of what to expect throughout the life of the project.

At this stage in the process, you describe what you know. This high-level scope statement then becomes part of the project charter. Further planning steps will progressively elaborate on this initial scope statement, providing additional detail for estimating, assigning, controlling, and finally accepting the project deliverables.

Scenario

Rather than reinvent the wheel, you obtained the original project plans for Cimarron's children's stores; although the plans are outdated, you were able to glean and update what you feel is enough information to develop a scope statement. These facts supplement additional information you have obtained. You learned through your interviews with the stakeholders that not everyone was wild about the project.

You have been privileged to be a part of some strategic planning sessions because your mentor is also your project sponsor. Terri Higgins is a Project Management Professional (PMP®), and hopefully you will become one by the end of December, as this project will give you the required hours needed to sit for the PMP exam. She will be a huge help to you. Thankfully, you know that project management is a key business process and is supported from above. In fact, there is a central project management office (PMO), with a manager of project managers who provides project management services, support, training, and mentoring to their staff. You belong to this group.

You now know that for phase 1 of the project, trial stores will be constructed at a new mall being built in Bellevue, Washington. This is a high-end location, but the company is betting that no matter what their customer's spending habits might be, beautiful clothing that fits and can be purchased at a reasonable price will appeal to most women. The other

location will be at Washington Square, just south of Portland, Oregon, where there is a broader range of spending habits.

These stores are to be elegant, with plush carpeting, soft music playing, designer showcasing, private dressing rooms, ambient lighting, as well as displays for jewelry, accessories, and perfume items. There will also be a second-floor bridal gallery.

Senior management initially decided that developing and advertising the brand, hiring personnel, and any IT work would be considered a cost of doing business. You and Ms. Reese have since convinced senior management that the cost for that work will be at least $1,750,000 more than the original estimate and should be included in the project so that real costs can be determined for future use. They agreed to add that amount to the budget.

The project will not include the cost of leasing space at the malls because that is considered a yearly operational cost.

Terri Higgins has advised you that the project has been conditionally approved based on the business case you helped to prepare. The rough order-of-magnitude budget for setting up the two stores is $8,750,000 to be allocated as shown in Table 1.20.

TABLE 1.20 Preliminary Budget

Budget Item	Amount
Advertising	$1,000,000
Space planning	$5,000
Construction	$3,600,000
Noninventoried furnishings	$50,000
Design of clothing	$1,250,000
Hiring and training of personnel	$50,000
Information technology	$700,000
Manufacturing costs	$2,075,000
Delivery and setup	$20,000
Total	$8,750,000

This number will be refined when the details of the project are known. The target date for completion is November 1 of next year for both stores, just in time for the holidays.

Scope of Task

Duration

The duration of this task could take hours or days, depending on the complexities of the project.

Setup

This is not a task you will do alone. You will enlist your team members and others to assist you with this task. Don't forget your sponsor!

Caveat

None.

Procedure

For this task you will build a project scope statement that will include, but is not limited to these factors:

- Project objectives
- Product scope description
- Project deliverables
- Project requirements
- Project boundaries
- Work product acceptance criteria
- Initial project organization

Details

It has been said that a poorly prepared scope statement is often the cause of major cost overruns, schedule delays, poor morale, and ultimately project failure. So where do you get all of the information needed to create the scope statement? You can rely on experts; use templates, forms, and past history; and talk to fellow project managers, who may be your best source if they have managed the same kind of project. You have already conducted a stakeholder analysis, and much of the information you will need comes from that.

A properly prepared baselined project scope statement is comprehensive enough to provide a common understanding of the project objectives and deliverables among all the stakeholders.

After the scope is baselined, it allows for evaluating change requests on additional work to verify whether they are within the boundaries of the originally approved work effort.

Business Goals vs. Project Objectives

Business goals describe *what* you want to accomplish. The business goals should align with corporate strategy. Project objectives describe *how* you are going to accomplish the business goal. The best method to use when writing project objectives is the SMART method, a popular method that has been around for many years. The objectives should be as follows:

Specific The objective tells exactly what, where, and how the problem or need is to be addressed and should be written in a clear, concise, and understandable way.

Measurable Metrics need to be put in place so that you know whether you succeeded.

Accurate The objective should be described precisely so errors do not occur.

Realistic The objective should be a result that can be achieved in the time allowed.

Time-bound The objective must include a specific date for its achievement.

Hands-on 1.9: Testing Your Knowledge of Goals and Objectives

Given what you now know about the Apples and Pears project, write the business goals for this project and the project objectives to achieve them. Use the SMART model (Table 1.21) to assist you.

TABLE 1.21 SMART Goals and Objectives Exercise

SMART	Business Goals (What)	Project Objectives (How)
Specific		
Measurable		
Accurate		
Realistic		
Time-bound		

Product Scope Description

If a project is in-house, the product scope description indicates the characteristics of the end result of the product within the project and should map back to the business goals. Because you will know more as the project progresses, this description will be progressively elaborated.

If the project comes from an external source and will be performed under a signed contract, it is referred to as a *statement of work* or *contractual statement of work*.

This activity should be the driving force for what you want to end up with, so it is imperative that the statement not be confusing. Most elements of the project management plan (which we will discuss later) should map back to this description.

Hands-on 1.10: Testing Your Knowledge of the Product Scope Description

Given what you now know about the Apples and Pears project, use Table 1.22 to write the product scope description for two products.

TABLE 1.22 Product Scope Description

Product Scope Description
1.
2.

Project Deliverables

A task is not considered complete unless the deliverable associated with that task is accepted by predetermined and measurable results. It is vital that the project manager communicate the deliverables and their associated requirements before the project begins. If you do not communicate these items correctly, some people will do just about anything to produce what they think you want.

Deliverables typically include physical properties, content properties (documents or other written artifacts), technical properties, and acceptance criteria. When managing deliverables, follow these steps:

1. Document each deliverable from the client's point of view.
2. Review project objectives, key assumptions, and scope with the client.
3. Review with the client the overall project strategy to ensure that the deliverables can and will be achieved.

4. Define the properties of each deliverable in terms of content and physical properties.
5. Define the acceptance criteria for each deliverable.
6. Establish metrics for each of the acceptance criteria.

Hands-on 1.11: Testing Your Knowledge of Deliverables

Given what you now know about the Apples and Pears project, using your common sense and Table 1.23, describe five deliverables associated with the project. Remember to provide enough detail so there are no questions associated with the deliverables.

TABLE 1.23 Deliverables

Deliverables
1.
2.
3.
4.
5.

High-Level Project Requirements

Project requirements describe the characteristics of the deliverables. The *PMBOK® Guide, 4th ed.*, p. 104, Project Management Institute, 2008 describes requirements as "the quantified and documented expectations of the sponsor, customer and other stakeholder."

Requirements are often not fully known at the onset of a project. A good rule of thumb to follow is to continue to accept requirements until actual work begins. It is much easier to change a document than to perform rework out in the field or when developing software.

So where do we get these requirements? This is something you will never want to do alone. Business process owners, team members, consultants, customers, management staff, and experts are just a few of the people you can enlist to be sure you have all the requirements and only the requirements necessary to fulfill the goals of the project.

A simple approach is to validate the needs and expectations of your customers. You simply take each need and expectation and do the RUMBA! Ask, "Is this requirement...?" Table 1.24 describes the elements of the RUMBA.

TABLE 1.24 The RUMBA

Responsible	You or your organization can meet the requirement (it does not violate company procedures, equipment capability, and so forth).
Understandable	The customers verify that you understand what they require from you.
Measurable	In some way, you can objectively determine the degree or frequency of meeting the requirement.
Believable	Employees will agree to strive for that level of achievement.
Achievable	Can you meet the requirement (is the desired performance level theoretically possible)? If not, you may need to renegotiate as facts and data become available.

For each agreed upon and reasonable expectation, if all answers to the RUMBA questions are yes, then that requirement is valid. Any no answer implies further negotiation until it becomes a yes answer. If it cannot become a yes answer, then the need or reasonable expectation is not a valid requirement and should not be accepted as such.

Hands-on 1.12: Testing Your Knowledge of Requirements

Given what you now know about the Apples and Pears project, use Table 1.25 and the RUMBA to describe and validate five requirements associated with the project.

TABLE 1.25 Requirements

Requirements	R	U	M	B	A
1.					
2.					
3.					
4.					
5.					

Project Boundaries

Describing what is not within the scope of the project will avoid confusion as the project moves along. For instance, if you decide you will be updating equipment for an IT unit, you may decide that it includes only specific equipment and you would name other pieces of equipment that would not be changed. In other words, be very specific with your requirements, and the boundaries will identify themselves. This will help to avoid conflicts as the project continues.

Establishing project boundaries also reduces, or in some cases eliminates, what is called *scope creep,* which are uncontrolled changes to the project. For example, if one of the requirements was to purchase accounting software, you would describe it and point out that you are not going to purchase the payroll software also because the payroll software will be outsourced.

Scope creep often occurs because customers do not really know what they want until the project is well under way. Some client changes can be added to the project as long as appropriate change control measures are followed. We have to learn how to say "no" without saying no. We can do this by saying to the customer, "I would be happy to make that change for you. It will increase the budget by $___ and will extend the schedule until ___ and will increase risk. If you wish to approve these changes with all of the impacts I have identified for you, we can do it." Sometimes they will, but more often then not, they won't. They didn't realize the impacts of their requests.

Remember, if the change comes before actual work begins, then it isn't as risky as making changes in the middle of work.

Hands-on 1.13: Testing Your Knowledge of Project Boundaries

Given what you now know about the Apples and Pears project, use Table 1.26 to describe as many of the project boundaries as you can.

TABLE 1.26 Project Boundaries

Project Boundaries
1.
2.
3.
4.
5.

Product Acceptance Criteria

Product acceptance criteria may include, but are not limited to, the following:

- Quality expectations
- Schedule dates
- Functionality
- Appearance
- Performance levels
- Practicality
- Clarity
- Capacity
- Accuracy
- Availability
- Maintainability
- Reliability
- Flexibility

This should be further developed by identifying particular artifacts, evaluation methods, the required resources, an acceptance schedule, and a problem resolution process.

Hands-on 1.14: Testing Your Knowledge of Product Acceptance Criteria

Given what you now know about the Apples and Pears project, and using the quality measures discussed previously, describe the product acceptance criteria for the clothing that will be designed and manufactured for the stores. Use Table 1.27 to show your answers.

TABLE 1.27 Product Acceptance Criteria

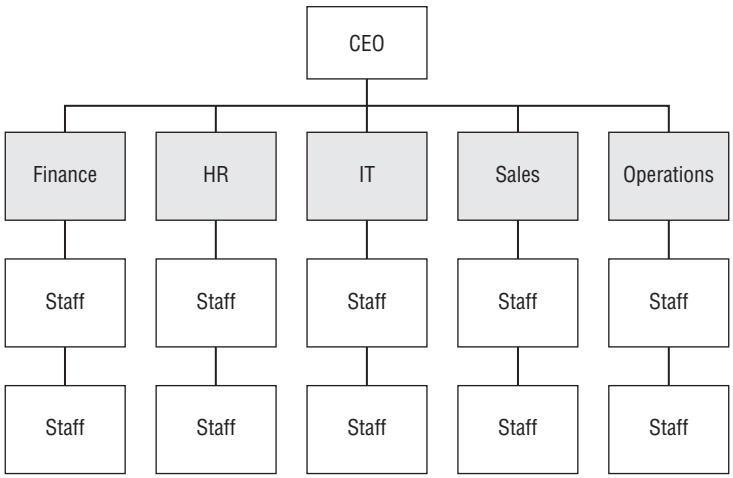
Product Acceptance Criteria	
Schedule Dates	
Functionality	
Appearance	
Performance Levels	
Practicality	
Clarity	
Capacity	
Accuracy	
Availability	
Maintainability	
Reliabiity	
Flexibility	

Initial Project Organization

Understanding the organizational structure(s) that exist within companies will help you manage your project better. At this point, you define authority and accountability issues as well as control issues.

There are several types of organizational structures. First is the *functional organization* (see Figure 1.2). This type of organization is your typical hierarchy; coordination takes place among the functional or line managers. Project managers are rarely assigned, but if they are, they have little or no authority. The people assigned as project managers also have their full-time line job and have not participated in the initiation phase of the project. Their managers will coordinate activities among themselves by using their staff. Staff members do not cut across functional boundaries; their managers do that.

FIGURE 1.2 Functional organizational chart



There are advantages and disadvantages of functional organizations. See Table 1.28.

TABLE 1.28 Advantages and Disadvantages of Functional Organizations

Advantages	Disadvantages
Enduring organizational structure.	Project manager has little or no authority.
Clear career path with separation of functions allowing specialty skills to flourish.	Multiple projects compete for limited resources and priority.
Employees have one supervisor with a clear chain of command.	Project team members are loyal to the functional manager.

Projectized organizations have ultimate authority over the project. Figure 1.3 illustrates that the focus of the organization is the project. Staff for the project are focused only on projects and project work—they do not wear more than one hat. Team members are typically colocated, and loyalties are formed to the project, not to a functional manager.

The project manager may hire and fire staff because the project manager is not only a manager of the project, but also a manager of the people.

A *strong matrix environment* is an ideal organizational structure that supports project management (see Figure 1.4). In the figure you can see a director of project management who would be on equal footing with other directors relative to staffing and funding. In this arrangement a project management office is most likely to survive, but project management offices can reside in other organizational structures as well, even if they are not as well supported.

FIGURE 1.3 Projectized organizational chart

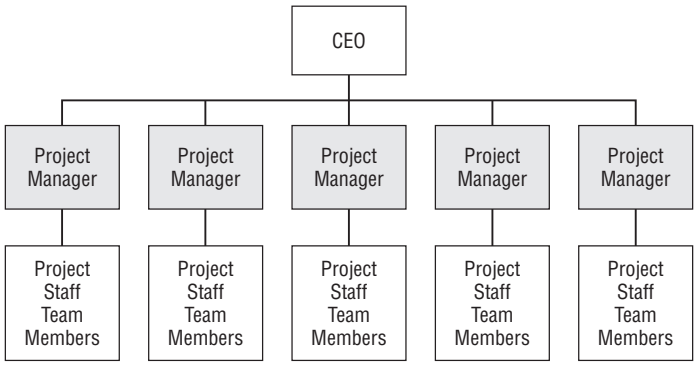
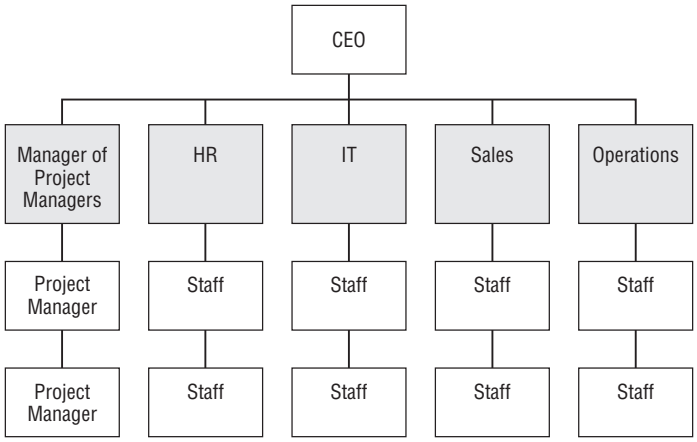


FIGURE 1.4 Strong matrix organizational chart



In a *weak* (Figure 1.5) or *balanced matrix* (Figure 1.6) structure, the project management work remains a stepchild to the organization within which it resides. For example, if the budget for marketing is *x* amount of dollars, you can be sure that only about 5% of that budget will be allocated to project management support. The balanced matrix, however, gives equal power to the project manager and functional manager.

FIGURE 1.5 Weak matrix organizational chart

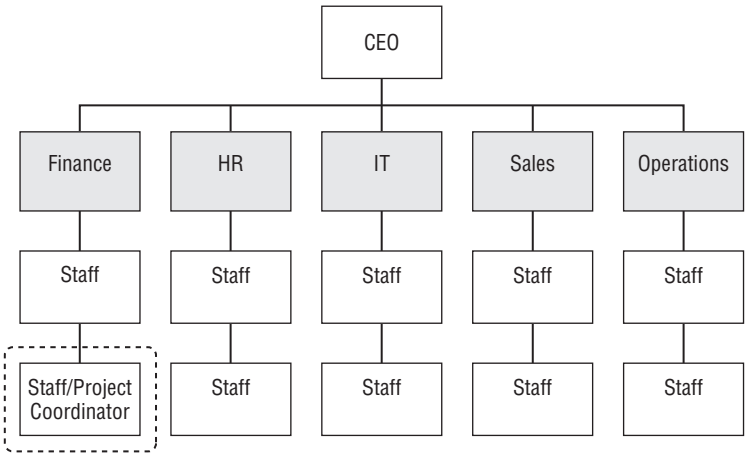
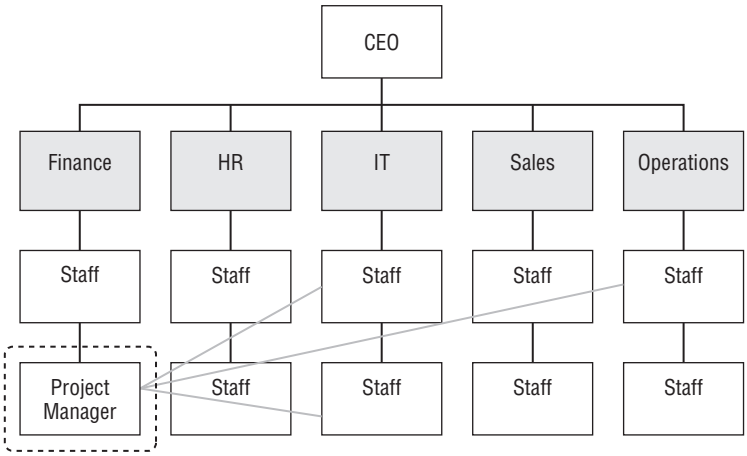


FIGURE 1.6 Balanced matrix organizational chart



In Table 1.29 you can easily see how project management is viewed in the different organizational structures as well as the power and focus of the project manager.

TABLE 1.29 Comparison of Matrix Organizational Structures

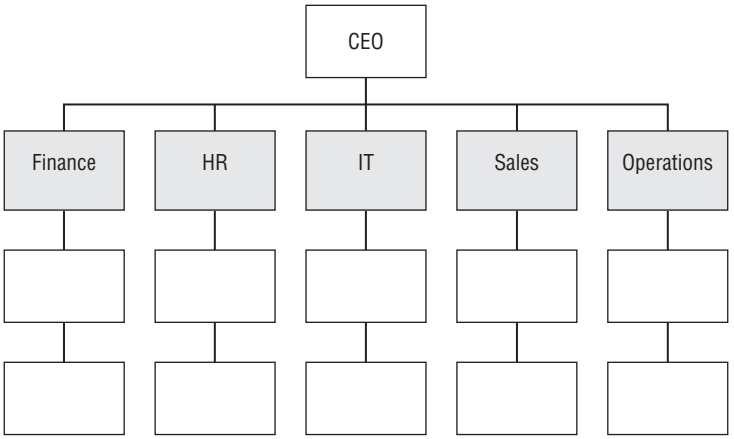
	Weak Matrix	Balanced Matrix	Strong Matrix
Project Manager's Title	Project coordinator, project leader, or project expediter	Project manager	Project manager
Project Manager's Focus	Split focus between project and functional responsibilities	Projects and project work	Projects and project work
Project Manager's Power	Minimal authority and power	Balance of authority and power	Significant authority and power
Project Manager's Time	Part-time on projects	Full-time on projects	Full-time on projects
Organizational Style	Most like functional organization	Blend of both weak and strong matrix	Most like a projectized organization
Project Manager Reports to	Functional manager	A functional manager but shares both power and authority	Manager of project managers

Hands-on 1.15: Testing Your Knowledge of Project Organizational Structures

Given what you now know about organizational structures and the Apples and Pears project, answer the following questions:

1. Is Cimarron's organization considered functional, projectized, weak matrix, strong matrix, or balanced matrix?
2. List the characteristics of Cimarron's organization that led you to your answer in question 1.

3. Complete the organizational chart shown here as it relates to your previous answers.



Hands-on 1.16: Testing Your Knowledge of Project Scope Statements

Using Table 1.30, create the high-level Apples and Pears project scope statement with the elements known at this time.

TABLE 1.30 Scope Statement Template

High-Level Scope Statement Template	
Describe business goals	
Describe major objectives of this project	
Describe background for the project	
Describe the unexpected benefits	
List the stakeholders and their role in the project	
Describe the major deliverables	
Describe five high-level requirements	
Describe project boundaries	
Describe product acceptance criteria	
Describe project organization	

Task 1.8: Creating the Project Charter

The project charter formalizes the request from a sponsor for responding to a business need. The project charter is usually a short document that refers to other more-detailed documents such as a new offering request, a request for proposal, or any other perceived business need or client request. The project charter is a created by the sponsor but is signed off by someone external to the project. In reality, you will prepare this document for your sponsor.

Scenario

You have conducted your interviews with stakeholders and created your scope statement but now you find that you are missing a few things. A high-level risk assessment is needed, as well as the assumptions and constraints, scheduled milestones, configuration management, project acceptance, and approval guidelines. You are anxious to complete this part of the project so that it can be formally launched.

Scope of Task

Duration

The duration of this task could take several hours.

Setup

There is no particular setup for this task.

Caveat

None.

Procedure

For this task you will create the project charter, which in addition to the high-level project scope statement includes the following:

- Summary of milestones (preliminary)
- Summary of costs (preliminary)
- A description of the project's risks
- Configuration management requirements
- Environmental, organizational, and external assumptions
- Environmental, organizational, and external constraints
- Project approval requirements
- Project acceptance criteria

Details

The purpose of the project charter is to

- Acknowledge the existence of the project
- Name the project manager who will lead the project
- Provide the project manager with the authority to utilize corporate resources
- Failure to write a charter may lead to
- Ambiguity about the project objectives
- Ambiguity concerning the solution to a business need or client request
- Missing an important stakeholder for the project

You have determined the rationale for the project and written the high-level initial scope statement, but you still need additional information.

Scheduled Milestones

Milestones are significant events in a project, for example, the completion of deliverables. You can add additional milestones as the project planning progresses. Senior managers are not usually interested in all of the project details, but they will be interested in key milestone information. They simply want to know whether a scheduled milestone was completed as scheduled or if it was not, why not.

Hands-on 1.17: Testing Your Knowledge of Milestones

Given what you now know about the Apples and Pears project, use Table 1.31 to list the milestones for this project. You may use your imagination to indicate specific dates.

TABLE 1.31 Project Milestones

Milestones	Date

Estimated Budget Costs

We will spend more time on this subject in Phase 2. For now, we are talking about high-level estimates based on what is known now. Estimated time and costs should validate the proposed high-level budget and include at least the following:

- High-level estimates for the proposed project
- Requirements for out-of-the-ordinary funding, if needed
- Ongoing costs
- Major arguments that support time and cost elements

Hands-On 1.18: Testing Your Knowledge of an Estimated Budget

Given what you now know about the Apples and Pears project, and using your common sense, list any additional costs you feel have been left out and insert them into Table 1.32.

TABLE 1.32 Estimated Budget

Item	Amount

High-Level Project Risks

High-level project risks help you to decide whether the project should be approved or denied. You want to be able to answer questions that senior management may have regarding risks, such as the following:

- What is the probability of success?
- Will expectations be met?
- Is the scope statement understood by all?
- Is there a project champion for this project?
- Is there any known opposition to the project and if so, from where?
- Is the base budget reasonable?
- Is the schedule reasonable?
- Will resources be available when needed?
- What are the assumptions and constraints for this project?

- Are there marketing risks to this project?
- Are we aware of external project dependencies?
- Do we have the capability for support after launch?

Most folks look at risks as being negative, but opportunities also exist when defining risk. Suppose you are trying to solve a problem regarding some sort of risk. Your solution not only solves the risk, but can be used in daily operations and therefore becomes an opportunity as well.

We will discuss risk response strategies in Phase 2.

Hands-on 1.19: Testing Your Knowledge of High-Level Project Risks

Given what you now know about the Apples and Pears project, and using your common sense, list any high-level risks or opportunities at this stage of the project in Table 1.33.

TABLE 1.33 High-Level Risks

High-Level Risks and Opportunities
1.
2.
3.
4.
5.

Configuration Management Requirements

This is not a subject to take lightly. In the *PMP: Project Management Professional Exam Study Guide, Deluxe Edition,* 2nd edition, (Sybex, 2007), configuration management is described as consisting "of documented procedures that describe how to submit change requests and how to manage change requests. Configuration management tracks the status of change requests and defines the level of authority needed to approve changes. It describes the characteristics of the product of the project and ensures that the description is accurate and complete. Configuration management controls changes to the characteristics of an item and tracks the changes made or requested and their status." It is especially important for IT.

The project charter should describe a brief narrative of the change control process that will be used. (We will discuss change control in Phases 2, 3, and 4.)

Environmental, Organizational, and External Assumptions and Constraints

False assumptions and unknown constraints can bring your project to its knees. You may think you have your bases covered, but then find you are scrambling to overcome challenges due to false assumptions and unknown constraints. Although we discussed assumptions and constraints earlier in this phase, we will revisit them in greater detail here.

ASSUMPTIONS

Assumptions are those things we believe are true or take for granted. There are many elements that we don't know about the project, so we make assumptions. You might assume that Connie in IT will be the individual who manages testing. She is the only one that knows the new test environment. Then you find out that when you need her to perform her task, she is out on maternity leave. This assumption now becomes a risk.

You can find these assumptions by communicating with your stakeholders—all of them. Ask them to provide you with their assumptions. Document them. There will be redundancies, which means that others believe the assumptions are true also.

If an assumption turns out not to be true, then you have a risk—maybe even a major one. Try to validate any assumptions that are unclear and be sure to test them frequently by asking, "Is this assumption still true?"

CONSTRAINTS

Constraints are limitations or barriers that may or may not be obvious at the beginning of a project. Some will surface as the project progresses. Constraints can break a project if they are not managed. There are two major steps that can help manage constraints:

1. Identify constraints such as time, budget, quality, schedule, technology, and directives from management, legal, political, skill sets and attitudes, and geographical perspectives.
2. Develop a response strategy for those that can be managed. For instance, if management says there is to be no overtime, allow longer durations for a task if that is appropriate. If you are dependent on external factors such as delivery of products, allow a longer lead time.

There are also enterprise environmental factors and organizational process assets that may help you to define assumptions and constraints. The *PMBOK® Guide, 4th ed.,* p. 14 describes enterprise environmental factors as follows:

- Organizational or company culture and structure
- Governmental or industry standards
- Infrastructure (including IT)
- Human resources
- Personnel administration
- The organization's work authorization system
- Marketplace conditions
- Stakeholder risk tolerance
- Commercial databases (referring to industry-specific information, risk databases, and so forth)
- Project management information systems

The *PMBOK® Guide, 4th ed.*, p. 32, describes organizational process assets as follows:

- Organizational standard policies
- Guidelines, procedures, and plans
- Approaches or standards for conducting work
- Templates
- Communication requirements
- Project closure guidelines
- Financial control procedures
- Quality management procedures
- Change control procedures
- Risk control procedures
- Approval and work authorization procedures

Hands-on 1.20: Testing Your Knowledge of Project Assumptions

Given what you now know about the Apples and Pears project, use Table 1.34 to list three assumptions that you know are true and three assumptions that you are not sure about.

TABLE 1.34 Project Assumptions

Project Assumptions	
1.	True
2.	True
3.	True
4.	Not Sure
5.	Not Sure
6.	Not Sure

Hands-on 1.21: Testing Your Knowledge of Project Constraints

Given what you now know about the Apples and Pears project, list three constraints in Table 1.35 and determine a response strategy for them.

TABLE 1.35 Constraints and Response Strategies

Constraint	Response Strategy
1.	
2.	
3.	

Project Approval Requirements

Project approval should be aligned with the progressive business case at the *project charter scorecard* level (Table 1.36). You know that you can proceed if the summary scores are at least those shown back in Table 1.13. Remember, the project charter will be signed by someone external to the project. You need to provide the signatories a level of confidence that those scores are valid, so be prepared to defend your project brilliantly!

TABLE 1.36 Project Charter Summary Scorecard

	Minimum Score	Actual Score	Difference
Program Assessment	85		
Financials	8		
Internal Issues	38		
Alternatives and Recommendations	10		
Milestones	5		
Totals	146		

Project Acceptance Criteria

Project acceptance criteria vary according to the type of project, but most follow these general acceptance criteria:

- All work has been inspected.
- All deliverables have been accepted.
- Training of staff has been completed.
- Manuals and procedures have been provided.
- As-built drawings have been received and approved.
- Punch list items are completed and approved.
- Supplier contracts and agreements have been closed out.
- Contractors have received final payment.

It's important to list these criteria in the project charter so you don't lose sight of them down the road. This will be an important element when you create your project acceptance plan.

Hands-on 1.22: Testing Your Knowledge of Putting It All Together

Just as you did for the project scope statement, fill out the template (Table 1.37) to complete the project charter.

TABLE 1.37 The Project Charter

The Project Charter	
Summary of Milestones	
Summary of Costs	
High-Level Risks	
Configuration Management	
Assumptions	
Constraints	
Project Approvals	
Project Acceptance Criteria	

Believe us when we say that it will be worth doing all of these steps. Some will be redundant (go ahead and cut and paste), but no matter how it's put together, completing the initiation phase will give new meaning to the saying, "We have bonded!" You will be intimately involved with your project, which is where you want to be. We are not talking about micromanaging here, but being this informed will keep the meddling managers off your back because they will have a higher level of confidence that you really know what's going on and have the ball moving in the right direction.