Chapter 1

It Takes a Company . . .

Developing new products that will succeed in the marketplace goes way beyond simply coming up with a great new idea, a great new invention, or a great new design. Developing successful new products is a complex job that comes with many tasks and many responsibilities. And how many different people, with how many different skills, do you need to accomplish the tasks? How about inventors, scientists, designers, and engineers? And manufacturers, marketers, and salespeople? How about heads of businesses and functions and people with finance and legal expertise? Maybe we should also include suppliers and partners, and what about customers, and . . . well, you get the idea. Instead of a village, "it takes a company to develop new products . . ."

Oh my! It's no wonder that so many companies find it hard to be successful at developing new products. In this chapter, we give you the general require-ments for new product development (NPD) success, and we look at a map of the processes that you can take on your NPD journey. We identify the players in your company who have important roles in the NPD drama. Finally, we review what role you, our faithful reader, play in your company and what that means for your NPD participation.

We hope that by the time you finish this chapter, you're ready to order copies of this book for everyone you work with so that they'll know how to play their parts. NPD is one game you can't play by yourself!

The Requirements of NPD Success

Over the years, product developers have come up with a pretty good list of what new products need to do to succeed at NPD. They need to

✔ **Meet the needs of potential customers (see Chapter 4).** This is probably the most important item on the list. If you haven't identified your potential customers, and if you don't understand their needs, the rest of this list won't do you much good.

✔ **Use technology that your company has access to or can develop (see Chapters 7 and 16).** Peter Carcia at Polaroid used to warn his teams not to design products that required "transparent aluminum." Don't limit yourself to your existing resources. Have an aggressive program of technology development and technology outsourcing and/or acquisition. But don't fool yourself into thinking that you can develop products that require miracles in the course of development (even minor ones!).

✔ **Attract customers by being different from competitors' products.** What's worse than spending six months or two years working on a product only to find that it's a me-too? Be sure you know who your competitors are and what they're up to, and be sure that you understand your customers well enough to produce a product that will delight them more than your competitors' products do.

✔ **Be designed so that you can manufacture, package, ship, and/or service them.** Long ago — not any more, we hope — engineers used to consistently design products that manufacturers couldn't build. Successful product developers "design for X" by including manufacturers, distributors, and so on in the early conversations and the ongoing work of product design and development. See Chapter 9 for more on how to "design for X."

✔ **Enhance or be consistent with your company's brand image.** The best product with the wrong brand is the wrong product. Your products reflect on your brand, and your brand reflects on your products, and if they don't enhance each other they may play takeaway. If you've got a great product that doesn't square with your brand, maybe your company needs a second — or fourth or fifth — brand. See Chapter 3 for a bit more on lining new products up with your brand.

✔ **Be promoted by a good marketing campaign (see Chapter 13, as well as *Marketing For Dummies,* 2nd Edition, by Alexander Hiam [Wiley]).** Don't make the marketing campaign an afterthought.

> ✔ **Provide a good return on your company's investment.** This is where the rubber hits the road in terms of judging the success of a product. Product development teams and business leaders can make this outcome far more likely by taking the new product's business case very seriously (see Chapter 12) and doing what's needed to make sure the product hits its goals.

REMEMBER

Having a successful new product from time to time isn't enough. New product development is a core competency of the company that takes resources and generates revenue. To build its competence at NPD, your company must

> ✔ Develop employees who can make sure your new products meet all the requirements in the previous list, and a little more.
>
> ✔ Assign its scarce resources to projects that are most likely to succeed.
>
> ✔ Ensure that new product projects and business functions within the company support each other as much as possible.

Moving from Product Possibility to Market Reality

Although it's true that every new product starts with an idea, not every idea ends up in the market. The most successful companies start by exploring many different opportunities and coming up with many different options. You want to make sure that among these options are ideas for products that will appeal to customers, sell in large markets, and take advantage of the latest technologies.

REMEMBER

When we go through the product development map in the sections that follow, we say "start here" and "go there" as if we were playing a board game. In this game, though, you can start anywhere and go anywhere. If you just picked up this book and you're in the middle of a new product development project, you can skip to the part that addresses what you're doing. When you have time, read the other parts, too. Often, you can trace what goes wrong or right in one part of the development process to good or bad work in the other parts.

In the sections that follow, we take a quick look at the three major territories of the NPD landscape.

Discovering opportunities

In the NPD process (refer to the Cheat Sheet for a handy illustration of the process), we call the place where you find product opportunities the "ocean." The ocean of new product opportunity is nearly limitless because constant change opens up new vistas. Think of the changes you've seen just in the past ten years. New technologies, new markets, and new products have enabled people to dive deeper and voyage wider into the resourcefulness and creativity of the human race.

Exploring the ocean of opportunity gives you (and your new product team) the information you need to develop your company's strategy for new product development. By identifying market and technology opportunities, you can focus your development efforts on the most promising ideas and avoid the traps and dead ends. And by reviewing your current product lines, you know whether to direct NPD projects to improve offerings in your existing product lines or develop wholly new products or product lines. (The chapters in Part II describe the ocean of opportunity in more detail.)

Developing the product

After you've identified a bunch of opportunities, you want to choose the very best ideas that can succeed in your market and that you have the resources to develop. To do this, you use screens that allow only a few ideas to move into and through the development process (also known as the "river of development"). These screens — companies call them *reviews* or *Decision Diamonds* — are places where the company's decision makers review ideas for products against the company's strategic criteria and decide which ideas should use some of the company's scarce resources. Only a small number of opportunities should pass through the initial Idea Screen compared to the vast amount that float around in the ocean of opportunity. After an idea has passed the initial Idea Screen, it becomes the property of the cross-functional development team, which works through the phases and reviews of the product development process (see Chapter 9). At each review, business decision makers do one of the following:

- ✔ Continue funding the project for another phase
- ✔ Stop or hold *(recycle)* the project if the reviewers need more information
- ✔ Redirect, or even cancel, the project if it isn't meeting expectations or if the company's strategic landscape has changed

You can read more about reviews in Chapter 12.

REMEMBER Don't forget that a company's executives need to know that they can get good returns on their new product investments. Therefore, in addition to doing the actual work of developing new products, the product development team has to develop a *business case* for management. You can read more about business cases and how to create them in Chapter 12, and you can find a business case template in the Appendix.

Launching the product

Your development team has spent months, maybe years, anticipating this moment — the moment when your new product launches from the protected environment of the team atmosphere into the wide world of the marketplace. In some companies, moving a product from development into the market is called "crossing the valley of death." Why? Because many new products fail at this point. To avoid launch failure, you need to plan for the launch throughout the development process instead of waiting for when your product is nearly ready for the market (see Chapter 13 for more on this topic).

Identifying the Roles of the Functions

The major players in the development of new products are the people on the new product development team. These people have different roles, which may include the team leader, the members of the core team, and members of the extended team. One thing they have in common, though, is that they come from different functions and departments within the company. In this section, we give you an overview of what each function contributes to your new product development efforts, and we explain the particular roles the functions play throughout the process.

TIP Even if your company is too small to have distinct functions, you can recognize the roles that individuals and groups play in your company. This section, as well as the information in Chapter 10, can help you do a better job of making sure the people and groups in your company are collaborating to make your NPD efforts as effective and efficient as possible.

REMEMBER Many new product efforts include partners from outside your company. You need to understand the basics of working with different functions when "outsiders" are part of the development picture. See Chapter 16 for more on partnering in product development.

Marketing

Success in new product development depends in large measure on how well you understand the market, including the following:

✔ The existing markets for your products

✔ How your markets are growing or shrinking

✔ What new markets you may be able to enter

✔ What your competitors are doing in the marketplace

The marketing function in a large company, along with market research, may be responsible for collecting and managing market knowledge. In a small company, one person may be most interested in the market. But here's the thing: Understanding the market isn't the same as being good at selling in it. Your company, big or small, and your new product development team need to develop a deep appreciation for your customers and your markets. And your marketers must be able to communicate their knowledge to others with whom they share the responsibility for developing new products.

R&D

Research and development is where many of your scientists and engineers live. Members of the R&D department contribute their understanding of technology to the company's product development efforts. Much of what your R&D experts know is pretty arcane (like that word, which means mysterious, deep, esoteric!).

Successful product developers make sure that their scientists and engineers work with others to share their knowledge and to understand how it relates to what the other functions know and do. This type of collaboration and sharing needs to happen in all the parts of the product development landscape.

Technologists can be very perceptive during customer visits (see Chapter 4). They also have the best understanding of existing and emerging technology (see Chapter 7). Members of R&D on an NPD team are likely to offer suggestions about technology innovations or technology tweaks or that may just provide a competitive leap forward as your new products meet their competition.

Manufacturing

The role of manufacturing in NPD is to make the product concept a reality. Within this role, manufacturing has the following tasks:

✔ Ensuring that the company's manufacturing capabilities and infrastructure are adequate to produce the new product

✔ Deciding what parts of production the company may need to outsource (see Chapters 15 and 16)

✔ Managing the supply chain for the new product

Your manufacturing function must be able to produce as much of the product as you think you can sell, at the expected quality and performance. Therefore, members of this function should be involved in the development process from the very beginning. Include them when you visit customers to understand customer needs (see Chapter 4). Not only are their insights different from the insights of individuals in other functions, but they also have a much better idea of what it takes to put products into production.

Service

Some of the new "products" that companies create are actually services. Airlines, for example, distinguish themselves on the services they offer. So do hotels, restaurants, and companies that deliver your packages overnight to anywhere in the world. The people in your company who design and market services should take the lead in developing services.

However, when the product a company creates is a product, companies may make the mistake of paying little attention to service. The individuals in your company who are responsible for providing service should be integral parts of the new product effort whenever a product entails aftermarket service.

Integrating service into the NPD process can alert product developers to new opportunities and help them avoid costly mistakes. For example, an NPD team that includes a member from the service function is less likely to design a product that's overly hard to service. Integrating service into development also can help NPD teams think about installation and repairs — whether these are the responsibility of the customer or of your company, and how expensive they should be (the easier and cheaper, the better for everyone).

Packaging

Packaging impacts your new product's attractiveness on a store shelf, a computer screen, or in any other place customers are likely to find and buy it. Your new product's attractiveness — and often the size and shape of the final package — sometimes impacts a store's willingness to stock it. Here's a bottom-line way to perk up management: How much it costs to ship your new product depends, in part, on its packaging. And the cost of shipping impacts the final price, which impacts everything!

Our point? Involve your packaging function early in the development process. The members of the function can help the team understand the preferences of retailers and wholesalers; they can help influence product design to simplify packaging; and they can participate in consumer preference tests (see Chapter 17). At the end of the process, the packaging of your product often is the first impression your product makes. Use the resources of your packaging department to make it a good one.

Distribution

The four Ps of marketing include product, pricing, promotion, and *place.* Your new product won't sell unless you distribute it to places where customers can buy it. A company's distribution and channel strategy shapes the choices that are open to the NPD team. Does your company sell through one of the "big box" stores? Do you offer products through catalogues or on the Internet? Is your distribution through dealers or distributors? Which of the existing routes will the NPD team choose to get its product out? Or will it try to carve out a new route? The distribution function should be involved in the product development process to make sure your NPD team understands the distribution options so it can get the new product out in front of an eager audience.

Information technology

Your information technology (IT) department provides your NPD team (and your whole company, really) with valuable tools for development and business. For instance, through IT, you have the ability to

- ✔ **Communicate internally:** Many of us now send e-mails to the person in the office next door instead of getting up and knocking on the door. Most NPD teams are linked together via e-mail and instant messaging, and teams can send and share documents and keep an assortment of others "in the loop."

- ✔ **Store data:** Your NPD team can use an Intranet site to post documents and progress reports to facilitate work, communication, and company involvement. Your IT department can help with document formatting, document control, and your ability to access and use data from other parts of the company.

- ✔ **Communicate with the outside world:** Many development teams are spread throughout the world (see Chapter 15), and many development efforts require companies to outsource work to other locations (see Chapter 16). IT provides the tools that help these teams communicate, including Intranet sites where project information can be stored and shared. Teams can access documents from a shared site, and team members located in different places can work on projects simultaneously.

Go to Chapter 14 for more on the role of IT in NPD.

Finance

You can't assemble the data your NPD team needs to represent the value proposition for your new product (which is what management and your customers are interested in) without the expertise of your finance department. Involve members of this function early in the process as you map the ocean of opportunity, and keep them involved as you build your business case (see Chapter 12).

Human resources

People develop new products. These people need rewards, career paths, and all the other motivators that keep employees happy and productive. Your human resource (HR) department needs to understand the special needs of employees who develop new products. The performance goals and reviews that work for functional employees may not be appropriate for product developers.

Your HR department may be the right function in your company to create a cross-cutting set of practices that enable the functions to support your product developers. HR can look across the functions and design employee reward structures that balance functional and project work. And these structures can help the company in other ways by leveling the playing field among the functions.

NPD teams should also not hesitate to turn to HR for its special expertise in organizational development. For example, HR can help a team leader understand how to lead and motivate her team (see Chapter 10), and help a team identify the diversity that they need to come up with the best ideas (see Chapter 5).

Regulatory, legal, and standards

New product development can present challenges to legal and standards boundaries. Many companies have to work within clear boundaries — for example, the pharmaceutical and medical device industries. For others, these issues come up when they're developing some products, but not all. Be sure your team has explored the possibility that its work may need to clear regulatory hurdles or that existing standards may limit what the team can do. Involve the legal department if the intellectual property (IP) it's developing needs protecting.

Your regulatory, legal, and standards functions have the responsibility of supporting your new product teams — as well as executives, business leaders, and functional heads — and helping them to understand regulations that may advance or hinder their work. But they can do their jobs only if the new product developers keep them informed of potential issues.

Playing Your Part in Product Development

Executives, business and functional heads, members of functions and departments, and so on — all these people play a role in developing new products. In this section, we speak directly to you by identifying the roles people play in product development. Find your title and read away, or brush up on all the titles for a more complete understanding.

Executives

Executives include CEOs, CTOs — can we say "CXOs"? — as well as heads of business units, vice presidents, directors, functional heads, and so on. These managers are responsible for charting the overall direction of the business as a whole, and their top-down support provides the context for product development.

The specific role of the executive depends a lot on the size of the company. In a smaller company, executives may play a very hands-on role; in a larger company, an executive is more likely to act as a context setter. In a company of any size, executives often appoint a process owner to plan and execute the tasks that build the company's new product capabilities, such as strategic planning and process development.

The executive role also varies depending on the role new products play in the company's strategy. In making the company's new product strategy clear, executives set a frame for everyone else. In Chapter 3, you can read more about the different parameters executives must consider in setting NPD strategy.

Functional heads

A *functional head* is someone who leads one of the company's functional departments, such as R&D or marketing. In this position, you play an important role in building the expertise, the competency, and the capability your company needs to excel in new product development. Your function is one of the sources of NPD resources, in terms of manpower and expertise. You're also a major source of the information and knowledge that your company needs to chart its NPD course (see Chapter 3). Quite simply, without the functions and your leadership, product development wouldn't exist. (Read more about the roles of the functions in Chapters 9 and 11.)

Your responsibilities as a functional head point in two directions:

✔ **You have to make sure that, as you build knowledge and expertise for the product development effort, your function is working with the rest of the company.** Technology maps (Chapter 7) that no one outside

of R&D can decipher are useless; market insights that no one else shares do no good; and process advances that don't contribute to the company's product strategy are a waste of time and money.

✔ **You have to make sure that your function is capable of providing the necessary resources for developing new products (and is willing to do so).** Your function needs to resource the exploration that takes place in the ocean of opportunity; you provide employees and infrastructure for new product teams; and you support products in the market. (For more on the politics of product development, see Chapters 9 and 10.)

Business leaders

Many companies have business units, or *strategic business units* (SBUs), that focus on different business opportunities. These SBUs are headed by business leaders who come up with strategies for the development of new products that advance the goals of the businesses — goals that should align with the work of other businesses in the companies and in other functions. In a smaller company, the top executives are responsible for NPD strategy creation.

As part of your strategy, you need to make sure that the portfolio of new and existing products is well balanced and in line with your objectives (see Chapter 3 for more on product portfolios). Is your business focused on existing markets and existing technologies? Then be sure your portfolio provides adequate attention to all the markets under your care, and don't be so wedded to existing technology that you overlook new technologies that might come with a "low-risk" price tag. Is your business focused on a volatile market or technology? Then make sure that some of your new product projects explore future options, but don't forget to balance the forward-looking portfolio with support of existing product lines and platforms.

New product development team members

The members of the NPD team have the job of actually carrying the ball, so to speak. You do the development work from front end to back end. You also have to make sure that your company's executives, business leaders, and functional heads are aware of your value and of your resource needs (see Chapter 9 for more on these relationships and for advice on dealing with company politics, and Chapter 10 for more on the NPD team).

Some companies assign "product champions" to oversee important new product development projects. The champion's role is to advise the team members, understand their needs — and the value of their project — and influence the functions and executives in the company to provide the needed support. A champion usually holds an executive position in the company and has good powers of influence.

Review committee members

Review committee members hold jobs in the executive, directorial, and managerial levels of the company. As a reviewer, your primary job is to decide whether products in the development process should go forward to the next development phase, stay in the current phase for more work, be shelved or sold, or cease to exist altogether.

Executing the job of reviewer means preparing for and attending all scheduled reviews, listening carefully to the product team's presentation, and discussing your thoughts openly and honestly with other reviewers and the team members.

As a reviewer, you need to do your homework before reviews, which includes reading the executive summary and the business case provided by the team. Be sure to talk with team members if you have questions or concerns before the review.

For more on phases and phase reviews, head to Chapter 9. For much more on reviews, executive summaries, business cases, and the role of the reviewers, check out Chapter 12.

Functional support people

The functional head — of, say, marketing — is responsible for making sure that the product development process has the functional resources it needs (see the earlier section "Functional heads"). The functional employee, however, has a different responsibility: You need to be sure that you understand the product development process (see Chapter 9), and you need to know how you can contribute.

For example, if you work in the service function and a new product team asks you to join — either as a full-fledged member of the core team or as a resource at points during the product development process — your task may be to identify ways in which product design might influence service issues later on. The team will depend on you for a variety of expertise: anticipating the impact of different designs, modeling the financial implications of one service option over another, and so on. The more you understand about the NPD process as a whole, the more effectively you'll bring your experience to bear on the team's issues.