

Making it Easy for Customers to Do Business with You

Customers.com[®] Handbook

An Executive Guide and Technology
Roadmap for Your
Customers.com[®] Initiatives

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Making It Easy for Customers to Do Business with You

A Handbook for your Customers.com[®]
Initiatives

Netting It Out

Customers.com[®] is a new strategic planning service and practice area for the Patricia Seybold Group, as well as a book—*Customers.com: How to Create a Profitable Business Strategy for the Internet & Beyond*. The foundation for all of these efforts stems from our ongoing research into best practices in electronic commerce. As it turns out, all of the successful electronic commerce (e-comm) ventures have one key attribute in common that is neither new nor peculiar to Internet initiatives. A successful electronic commerce initiative makes it easy for customers and prospects to do business with you. This sounds simple, but it is very difficult in practice. We have identified eight critical factors that characterize successful electronic commerce initiatives.

When you tackle your own Customers.com[®] initiative, you will find both organizational and technical obstacles. You will find that your data, applications, and internal procedures isolate customer interaction into silos. Your responsibility and measurement models will have to be rearranged to reflect new customer-focused objectives. Successful lines of business will see no reason to change their operations and will resist risking their revenue streams to do so. We can offer some practical advice on how to overcome these challenges in order to be even more successful with your customers than you are today.

Is Your Organization Engaged in Electronic Commerce?

We define electronic commerce very broadly as doing business electronically. Every time you interact with your customers using electronic technologies, you're engaging in electronic commerce. To us, the terms E-Business and electronic commerce are interchangeable, although some industry pundits would argue that electronic commerce refers only to the actual financial transactions.

Streamlining Customer Interactions

Today's electronic commerce isn't limited to shopping over the Internet. It's also not confined to supply chain transactions between large trading partners. Electronic commerce means doing business electronically—all of the aspects of doing business.

It embodies the total business process—from advertising and marketing to sales, ordering, manufacturing, distribution, customer service, after-sales support, and replenishment of inventory—managing the entire customer and product lifecycle.

When we engage in E-Business, we're applying today's technologies to streamline our business interactions. Those technologies include the Internet, but they also include advanced telephone systems, hand-held digital appliances, interactive TVs, self-service kiosks, smart cards, and a whole host of emerging technologies. All of these customer-facing technologies are supported, behind the scenes, by integrated customer databases, call centers, streamlined workflows, and secure transactional systems. They require systems to talk to one another—seamlessly, reliably, and securely—across company boundaries, geographic boundaries, and time zones.

Sounds complicated, doesn't it? How do you get it right? The real secret of success in electronic commerce or E-Business today revolves around customers. A successful strategy involves building and sustaining business relationships with customers electronically. First, let's take a look at the critical success factors you'll need to master. Second, we offer a roadmap to help you deal with the hardest set of issues—building consensus within your organization. Third we offer a roadmap and an approach your technology team can follow to map business processes into a technical architecture. Finally, we offer a methodology for a Customers.com® workshop that will help you jumpstart your initiatives and shave up to six month off of your implementation time!

Eight Critical Success Factors for Customers.com® Initiatives

The lifetime value of your customers will increase in direct proportion to how easy you can make it for them to do business with you. There are eight organizational behaviors that make doing business with you easy and attractive.

The Concept

In looking for best practices in Web-based electronic business initiatives over the past 24 months, we've discovered that all of the successful ventures have one key attribute in common: They make it easy for their customers and prospects to do business with them. After we began to notice this pattern on the Web, we broadened the search and began to look on and off the Web. Below are the results of that search.

The Eight Critical Success Factors

In analyzing how these organizations, in fact, deliver on this promise, we've discovered eight critical success factors. They are:

- Target the right customers
- Own the customer's total experience
- Streamline business processes that impact the customer
- Provide a 360° view of the customer relationship
- Let customers help themselves
- Help customers do their jobs

- Deliver personalized service
- Foster community

You'll notice that the critical success factors tend to build on one another. If you do a good job with one, chances are you're making progress on at least two more. Now let's take a closer look at each one.

1. Target the Right Customers

American Airlines and National Semiconductor are great examples of companies that have carefully targeted their Web initiatives to the right customers—the ones that make a difference to the bottom line. American Airlines targets its Web site to its most loyal customers—its 32+ million AAdvantage frequent flyers. National Semiconductor targets the people who have the greatest influence on the decision to purchase its products—design engineers.

Readers Digest uses the Web to target the consumer segment it's losing—young families. Dow Jones uses the Web to go after the market it needs to bolster—people who don't read a daily business newspaper but care about business events.

What's your most profitable customer segment? Which group of people have the most influence on purchasing decisions? Which group of desirable customers are defecting or not coming on board at all? Therein lies the first target market for your initiatives—to make it easy for customers to do business with you.

2. Own the Customer's Total Experience

Virtual Vineyards and Amazon.com are good examples of virtual companies that take complete responsibility for the customer's total experience of doing business, from browsing, recommending, and secure ordering, to fulfillment, shipping, and customer service.

There are many non-virtual companies that have met this total experience challenge as well. One of our favorites is Hertz. Hertz ensures that their #1 Gold Club customer's total experience, from reserving a car to driving it, is as easy and pleasurable as possible.

How much control do you have over your end customer's total experience? The customer's experience includes learning about your products, making a selection, purchase, delivery, setup, installation, after-care, purchasing follow-on products, taking delivery, receiving accurate bills, and resolving disputes. If you deal through channels, you are ultimately responsible for the customer's entire experience with that channel partner. If you outsource delivery, service, or other operations, you still care about the quality of the experience the customer is having.

3. Streamline Business Processes That Impact the Customer

Federal Express and United Parcel Service (UPS) are great examples of companies that have instrumented and streamlined the entire end-to-end business process that affects the customer. The National Science Foundation is a government agency that has done a great job of understanding its end customers—the researchers applying for grants—and the many stakeholders at their research institutions who are intimately involved with the grant application and administration process. Babson Col-

lege is one of the few universities we've found that has streamlined its administrative processes from the standpoint of its customers—the students.

Where does your company stand in streamlining the end-to-end business processes that affect your customers in some way? Everything is a candidate for streamlining, including product configuration and manufacturing, shipment and delivery, pre-sales and post-sales service, billing, and credit-checking. Many companies have reengineered internal operations to reduce cycle time or cut costs, but only a few companies have done this by focusing on the processes that impact customers the most. To be successful in electronic commerce, you'll need to streamline your business processes from the outside in—from your customers' perspective—rather than from the inside out. As you do more and more business electronically, you'll find that every gap in your business processes will quickly expose itself. When you replace the people processes with electronic processes, the safety net of employees and business partners who scurry around to fix problems or to anticipate snags is gone.

4. Provide a 360° View of the Customer Relationship

When a customer calls into your company, does whoever takes the call (salesperson, customer service rep, product manager, or CEO) have quick and easy access to records of the customer's complete relationship with your company? When a customer comes to your Web site to do business with you or calls an Interactive Voice Response (IVR) system, can he or she access information about all of his or her accounts and outstanding service issues?

Wells Fargo provides a 360° view of all of the transactions that affect the customer. Both Wells's call center operations and its Web site are built on the same seamless infrastructure that gives customers (and customer service reps) direct access to all accounts and functions across computer systems, business units, and departments. Bell Atlantic has also taken great pains over the last five years to redesign and re-implement each of the layers of service that affect its customers—pre-sales, configuration, order entry, provisioning, field service, and billing. This gives account reps and customers helping themselves immediate access to every service the customer has requested, the service history for each, and his or her current account status.

5. Let Customers Help Themselves

For customers who want to help themselves, not just in getting information but also ordering and procuring products via the Web, Dell OnLine and iPrint (your print shop on the Web) are bellwether sites. These companies have thought through each step of the customer's decision-making and procurement process.

How much has your organization done to let customers help themselves? How far can customers go in self-service? What happens when they reach a stumbling block? Can customers interact with your organization 24 hours a day from anywhere in the world? These are the kinds of questions for which you need to have good answers in today's highly competitive environment.

6. Help Customers Do Their Jobs

For customers who use the Web as an integral part of their jobs, Boeing's spare parts ordering system and PhotoDisc's Web site (PhotoDisc sells digitized photographs, artwork, and animation) for graphic design professionals are worthy of emulation. What both companies did was to crawl into the heads of their customers to understand how they work and what they need to make their jobs easier.

Do you really understand your customers' decision-making process? Do you know how your product or service fits into your customer's job? Do you know what it would take to really integrate your product or service seamlessly into your customer's job?

7. Deliver Personalized Service

Dow Jones's *Wall Street Journal* Interactive and Liberty Financial's Stein Roe Farhnam Web sites are great examples of delivering cost-effective personalized service on the Web. Both build dynamic Web sites for each individual based on that person's profile. General Motors' OnStar service is much more than a Web channel; it's a "smart car"—an electronic connection between your car and a 24-hour customer service organization that can see exactly where you are (using GPS technology) and can access emergency road services, give you directions, or book you a table at a nearby restaurant.

Personalization may mean tailoring the offer directly for you, as in the three examples above, or it may involve simply giving you all the information about your account or proactively alerting you to items of particular interest to you.

What are you doing to ensure that your customers experience the personal touch, whether they're dealing with you face-to-face, via the phone, or using an Interactive Voice Response system or a Web site? It's surprising how easy it is to give customers that high-touch experience using today's technology.

8. Foster Community

Why is fostering community a way to make it easier for customers to do business with you? At first, it seemed like a "nice to have," but not essential, characteristic of an easy-to-use Web site or a successful customer loyalty program. But as time goes on, it's become apparent that customers gain a lot of value from interacting with one another and often find that the community aspect of a Web site is what makes them feel taken care of.

One of the best examples of a Web site that uses the sense of community to lure customers in and keep them coming back for more is Tripod—the Web site that offers "Tools for Life" for 18- to 36-year-olds. Cisco Systems' incredible success in electronic commerce was built on a foundation of community—customers helping each other to solve highly technical problems. What do your customers have in common? Would they value the opportunity to learn from one another? Have you considered the added value you'd reap by fostering dialogues among your customers and being able to listen in?

The Executive's Guide

An Organizational Roadmap for Your Customers.com[®] Initiatives

The Executive's Guide: An Organizational Roadmap for Your Customers.com[®] Initiatives

To set your Customers.com[®] vision in motion, there will be cultural, process, and organization issues to overcome.

Preparing the Ground for Electronic Commerce

The idea of making it easy for customers to do business with you is simple. But implementing this vision is hard. What we've learned from watching the companies that excel is that it takes at least two years to begin to make headway. This work requires a visionary leader—typically someone with a marketing bent and background. It requires a lot of perseverance. It requires a good deal of investment. It requires a unique partnership between business pragmatists and information technology visionaries. And it requires buy-in and participation from the entire organization. Here are some suggestions about how to move forward.

Overcoming the Organizational Obstacles

Piecemeal vs. Holistic Approach

Many of the companies we've met with are caught in the same dilemma. They want to get moving on electronic commerce initiatives, but they're caught in organizational paralysis that prevents them from tackling the big picture. Instead, they use a piecemeal approach—Web sites proliferate, sponsored by different product managers; the marketing department launches a data warehousing project; the sales VP deploys a new opportunity management system for his field force; distributors are requesting online access to inventory, and so on. In the meantime, customers are still finding it hard to do business with you because you haven't taken a unified approach.

Success Not Guaranteed

Even when everyone in your organization—from CEO to line-of-business managers, sales and marketing executives, and information technologists—is aligned in the commitment to make it easier for customers to do business with you, without a clear game plan and corporate dollars allocated, your project could well falter in the starting gate.

So what's the answer? Here is the actual sequence of events that we recommend you follow to get a successful Customers.com® initiative underway.

Step 1: Setting the Vision in Motion

Executive Visionary

In all of the case studies we've examined, there has been one common element: a highly placed visionary who clearly saw the value and potential of using e-comm technologies to make it easy for customers to do business with the company. Although visionaries can come from any position in the organization, realistically, they need to be high up enough on the corporate ladder to get the ears of the executives. They need to have achieved a high level of trust in the company. And these visionaries have to be risk takers. Launching new customer-interaction initiatives is not a simple task. It requires commitment, time, and money before you can even begin.

In almost all the cases we've studied, the vision was set by someone at the V.P. level or higher. In only one case was the initiative led by the head of customer support. There's overwhelming evidence that these initiatives do best when they're led by either the head of sales or marketing or spearheaded by the head of the company or the person chartered with developing new business opportunities.

Widespread Acceptance

Even when the visionary is high-up in the corporation, he or she cannot succeed without consensus—and this consensus has to come from all levels, not just from executives. Of course, without executive support, there would be no mandate to succeed and no funding to allow it to happen. And truth to tell, sometimes it's all about funding. Money tends to set priorities, and if you want your Customers.com® program to be a corporate priority, it must be visibly well funded.

But the vision also needs the support of the managers, who are going to have to change how they run their departments, and, equally important, there needs to be support from the people who are actually going to be on the front line, interacting daily with the customers. Not only do operations people understand fully what the customers' issues are, they are the ones with the power to make your initiative work or to sabotage the whole thing. Remember, you will be asking them to change the way they perform their jobs, and that is a very frightening concept to most people. You need to have them on your side right from the beginning.

Strong Project Director

Now, the visionary who first identifies and endorses a new customer-focused initiative is not necessarily the right person to manage the project. Many of these visionaries have had very strong lieutenants; Julie Shohet at American Airlines, Janet Smythe at Hertz, Carolyn Miller at the National Science Foundation, and Gary Weisenborn at Bell Atlantic are good examples.

Yet visionaries and/or their lieutenants aren't usually enough to make the vision happen. In almost all cases, a cross-functional team of enthusiastic and dedicated workers on all levels was established to lead the efforts, representing different departments, areas of expertise, and interests.

Step 2: Targeting the Right Customer

You Must Get This Right

Although all eight critical success factors are...well...critical, the first, targeting the right customer, is the place to start. If you get this one wrong, it won't matter how well you do the others. You could end up with the happiest customers who don't earn you a cent.

So finding out this information is the first step to planning your Customers.com® program. Once you have determined on which customers to focus, you can begin to work on programs to make their lives easier. Let's look at three different kinds of customers: key accounts, intermediaries, and consumers.

Key Accounts

Most organizations have a small number of top customers who actually make up the bulk of the business. Each customer spends a lot of money on your products or services. (Or, in the case of non-profits and governments, each makes use of a large portion of the services you provide, regardless of who pays the bill.) This top tier is typically the target of initial customer relationship initiatives. When investigating how your company handles customer relationships, you might well find that special programs and processes are already in place to nurture these key accounts. The challenge is to make these programs more effective and less expensive, both in time and dollars.

TARGET YOUR MOST PROFITABLE ACCOUNTS. Of course, some of your customers will be more profitable than others. It's imperative that you identify your most profitable customers. As you're analyzing profitability, look both at the revenues each customer segment represents and at the costs to service that customer segment. And be sure to look at the lifetime value of these customers. How much profit will this customer segment generate over its lifetime, measured in increased sales, lower costs of doing business, referrals, and higher profit margin business?

Middle Tier

Although no one customer at this level is a make-or-break proposition, there is a lot of money to be made at this level. Usually, this type of customer needs less hand-holding, and, as such, costs less to support well. Often this is the level at which there is the most untapped potential. Customer.com projects which focus only on the top tier often leave a lot of money on the table. Although you may well start at the top, as your project gets implemented, you should take the time to explore the possibilities in the middle.

WHOM DO YOU WANT TO ATTRACT? When dealing with electronic channels of interaction, it's important to focus clearly on the kinds of new customers you may be able to attract, as well as to earmark those you want to keep from losing. When Dow Jones initiated its Web-based version of the *Wall Street Journal*, the company set its sights on a very clear target market. With newspaper readership dwindling, the Journal wanted to find and attract people who don't currently read a daily newspaper but who care about business events. They thought they'd find them on the Web, and they did. Over 40 percent of the paying subscribers to the *Wall Street Journal* Interactive were not subscribers to the print version.

WHICH CUSTOMERS INFLUENCE KEY PURCHASES? The customer isn't always the person who calls in the order or writes the check. Often the real customer is the person who influences key purchases. For example, Community Playthings, manufacturers of daycare equipment and specialized furniture for special needs children, identified physical therapists as key influencers. Who influences the purchase of your products? How can you establish a direct relationship with them? How do you track them, communicate with them, and ensure that they have accurate, timely information about your products and services?

The Masses of Consumers

The bottom layer of customers doesn't do a lot of business with you. The business they do is sporadic, low volume, and low revenue. But they are a hard bunch to alienate, and, as such, require very little investment in keeping them happy. Customers.com[®] practices can successfully address this group also, allowing you to find new ways to make it even easier for them to do business with you without costing you any more. In fact, if you can find ways to cut the cost while increasing the service, you can move many of these customers to the middle tier. However, this is not the type of customer to target exclusively. This becomes a follow-up project or a side benefit of streamlining processes for the top and middle tiers.

Step 3: Determine How to Measure Success

What Is Success? The best of implementations isn't successful until someone decides that it has achieved its goals. Yet all too often when designing a program, we forget to specify what actually constitutes success. We then have to determine what metrics to use to see if we have achieved our goals. American Airline's John Samuel measures success in terms of cost savings in travel distribution and communication. Wells Fargo's Dudley Nigg measures it based on customer retention and customer profitability. Dell's Scott Eckert measures success based on revenues and profit margins received through his Internet channel. The National Science Foundation's Fred Wendling measures it by the number of customers and stakeholders served and the amount of time and effort saved.

Dollar Investment, Non-Dollar Return

Return on investment can be measured in a number of ways: increased productivity (getting more from fewer people), lowered expenses, and increased revenues. But often these measurements take a while to realize, especially in the fast moving world of electronic commerce, where a new Web site process can go into effect in a matter of days and then be improved and modified continuously. In a Customers.com[®] program, measurements should include non-monetary ROI metrics, such as the percentage of decrease in customer complaints, the increased number of Web site hits achieved per day, and the number of inquiries these hits have satisfied. Remember, when dealing with customers, quality is more important than quantity.

Step 4: Blueprint Your Customer Information Strategy

What Information Do You Have?

One of the first steps in redesigning your customer-facing processes is to figure out what information you have available about your customers. Then, and this is equally important, you need to figure out what information you *don't* have about them—usually because no one ever thought to ask them. And you need to figure out how to get that information.

Defining Customer Profiles

Basically, what you're doing is defining a customer profile. This profile needs to be company-wide. In too many organizations, each department has its own customer database, each containing little bits and pieces about the customer, as shown in the following illustration. Although there may be technical approaches that will let you begin to integrate this information, technology is only a small part of the solution. Not only is all the information about your customers dispersed throughout a myriad of departments, but each department feels that it owns that information; no one wants to give up control.

Who Owns Your Customer Database?

In addition, even if you do succeed in defining a centralized customer database that includes all profile information, creating a complete picture out of the bits and pieces, you have now created an entirely new entity—one that needs to be managed and maintained. Who owns this shared information? Who pays for it? Who is responsible for its accuracy? Its integrity? Its timeliness? And who determines policy on usage? Who defines and enforces security? The database administrator? No, that's not appropriate; these are strategic business issues that have to be carefully considered and belong much higher in the corporate ladder. What we envision is a new position, the CCO (Chief Customer Officer), to work with the CEO, CFO, and CIO and provide corporate vision at the same level. The CCO will most likely come out of the sales and marketing discipline and should be compensated based on the results of using this new, improved, consolidated customer information.

Whether you create a new position to lead all this or not, it is vital that you understand what information you need to maintain about your customers, where you are going to get it, where you are going to keep it, and what policies you are going to enforce on when and how it is used, and by whom.

Step 5: Redesign Your Processes by Talking to Your Customers

Streamline with Customers in Mind

A lot of technologies will automate your new customer-facing processes, but how do you determine what these processes will be? Again, this isn't a technical issue. Business process redesign begins with talking to your customers and beginning to think like them. Many of the best examples of this happened because people played their hunches—they took something a customer once said off-the-cuff, and molded it into something tangible and valuable. Then they tested it out with customers, going back and fixing what was wrong, and testing it again and again.

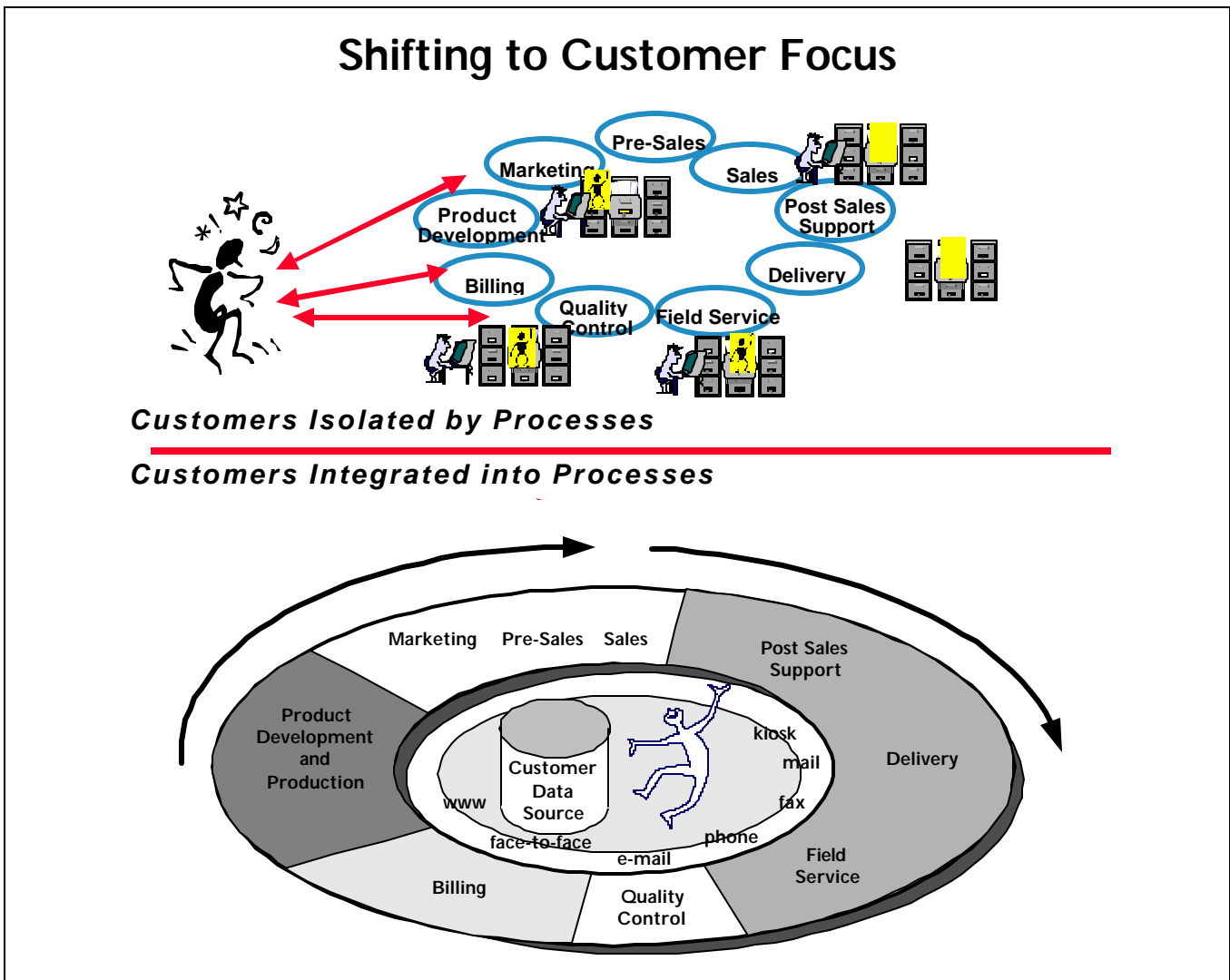


Illustration 1. Customer data and customer care are typically isolated by internal processes. Customers value companies that provide seamless interaction to satisfy a variety of their requests.

Continuous Improvement

A good redesign example is National Semiconductor, which put a Web site in front of its customers based on customer surveys and a lot of good guesses. Then the company sat back and watched what customers did on the site, measuring usage, asking questions, and continually redesigning its Web site based on customer feedback.

Step 6: Expand to Different Customer Contact Channels

It's Not Just the Web

We talk a lot about Web site development and the processes that underlie customer interactions over the Internet. And we do believe that this is an optimal place to start because the Internet is such a flexible environment and Web-based processes are easy to rapidly put in place and measure. But customers come into your organization in

multiple ways. Bell Atlantic focuses first and foremost on its telemarketing and telephone-based customer service operations. GM's OnStar service communicates with customers through their cars. Brooklyn Union Gas sends its field service personnel with hand-held devices that let them look up customers' bills and meter reading dates and answer other questions about their accounts.

Once you have designed a new Customers.com® process in one channel, you should expand to the other customer contact points—from the call center to the Web, for example. Often the process is very similar, but each point of contact has its unique character and requirements. And remember, always measure your progress and solicit customer feedback so you know if you are succeeding.

Step 7: Identify Intersecting Customer Processes

Expand Your Scope

After you have addressed all the different customer contact channels—or while you are doing this—you should expand your scope. By necessity, the initial process that you redesigned and implemented was only a small part of the complete customer picture. (To try to redesign every customer-facing process in one fell swoop not only invites overload but also means that you are flying blind, changing a bunch of intersecting processes before you know if any of them is on target.) Once you have a successful process in place, look at what other processes feed into or out of that process. Then start the business process redesign effort all over again, beginning with talking to the customers.

How do you decide which customer-facing process to attack first? We recommend that you start on the Web with applications in the order given below.

A) Start with Customer Service

Even though this is a group that typically has no clout in the enterprise, it is the one that is closest to the customer. It is also an area where it is easy not only to get feedback but to establish a mechanism for actually doing something about the feedback. Customer service personnel are the most likely to know the customer and understand his or her problems. They are also the people who have to deal with the daily problems and who can easily identify how to improve processes. It is also the way to most quickly improve relationships with customers—by solving their most pressing problems.

Doug Allread, the Senior VP of customer advocacy, acted as the catalyst in Cisco's case. By combining his call center with his Web site, he created a single virtual call center with a common knowledge base of technical support information and a common call-tracking and problem resolution database.

B) Expand to Pre-Sales Information

The next area to tackle is providing the information that customers need to easily figure out what they want to buy. This should be much more than brochureware. It needs to answer every question a customer might have about your products or services. And it should integrate nicely with your customer service information. Customers often want to know answers to service-oriented questions and issues before they

buy. Assume that you want to provide every piece of information required to actually close a sale (e.g., Will you take a check? What's the warranty? Will it work with the "X" I already have? How soon can I get it?).

Cisco's end-customers and dealers were soon able to use the Web to access all the latest product information, specifications, and configuration requirements. Customers also requested access to current standard price lists via the Web.

**C) Provide
Ordering,
Customization,
and
Configuration**

The pre-sales information must not stop there. It's just the first step in providing a complete, multi-channel environment where customers can help themselves to information and design and order their own products and services. You want the process of moving from research to decision-making to ordering to be as smooth and seamless as possible.

In Cisco's case, to place an order, customers had to be able to easily configure systems. So the company invested in a new configuration engine and developed a process to add new products and maintain the product configuration rules base.

**D) Provide
Inventory and
Product
Availability
Information**

Customers won't place an order if they don't know what you have available and when they can get it. If they're ordering a custom-configured or customized product, they want to know if a particular option will take longer.

Like Boeing, Cisco discovered that both end-customers and distributors couldn't place orders until they knew which products were immediately available or could be shipped within a few days, as opposed to those products that might take longer. So Cisco offers its large accounts and its distributors electronic access to its inventory.

**E) Provide
Status
Information**

Once you allow people to order online, you need to allow them to check on the status of the order. In fact, it's also very important for customers who order through another channel—by phone, in person, through an agent—to check on the status of that order or reservation from the Web.

In Cisco's case, as soon as they made online order status-checking available, over 90 percent of those calls vanished from its call center. Customers simply went to the Web.

**F) Deal with
Fulfillment and
Delivery**

The ordering/configuring ultimately leads to products being delivered—whether by downloading, mail, or truck. Making sure this happens cleanly and with status provided proactively at every step is all part of the application.

Customers who are expecting major systems absolutely need to know when to expect them so that they can have their technical staff ready and waiting to install and deploy them. Cisco handles this by alerting its customers with advanced shipping notifications and proactive e-mails.

G) Provide Customized Billing

Which takes us to billing. Although much of electronic commerce can be credit card-based, there are always billing issues. Customers may request alternative payment methods, such as purchase orders/invoicing, or they may need to categorize purchases according to department, project, client, or geography.

Cisco's customers expect to be able to check the status of their accounts online. By linking its electronic commerce front ends into its Oracle financials back-end systems and giving customers a view into their own account information using secure Web access, Cisco is able to accommodate customers' needs to organize their bills by department, division, or geography.

Again, as you expand your processes, you're going to be constantly fine-tuning the applications, figuring out what works and what doesn't. That means that you'll need to put in place mechanisms for gathering information about what's going on with each customer on each visit and for digesting and sharing that information with others in your organization.

Step 8: Refine, Refine, Refine!**Not Perfect**

Refine ad nauseum! You will not get it right the first time, trust us. Nor perhaps the hundredth time. But each time you reexamine what you're doing and how you're doing it, it will get better.

But Ever Closer to Perfect

In fact, you should never consider a process to be done. There are always improvements that can be made. After a while, when a practice has proved to be effective and yielded the result you wanted, it can become a lower priority for refinement, but it should never be left in place for too long without examination. The way we do business changes daily—nay, hourly—in the fast-paced world of electronic commerce. Even the most effective, well-targeted, and beautifully designed process is bound to get old as customer needs and expectations change.

Building New Competencies: Managing Customer Interactions

Customers.com® initiatives are different from other IT initiatives because they cross organizational boundaries and touch the customer directly. In the past, we've focused on product-specific customer interactions. Now we're focusing on customer-specific interactions across product lines.

Supporting Cross-Organizational Customer Interactions

So that's all you need to do. But are you staffed to undertake such activities? Probably not. Most companies know how to staff their call center operations and their information technology organizations. The major decisions have to do with whether these call centers or IT shops are to be centralized, decentralized, or federated operations. After all, today's networking technologies make it easy to transfer calls trans-

parently from one location to another, or to diagnose systems and even upgrade or repair them remotely.

But how do you build the new competencies you'll need to manage cross-product-line customer call centers, kiosks, and Web sites? This will require unprecedented cooperation between your technology staff and your business-line managers. It will require exquisite planning and coordination. And you'll need to be able to move fast.

Start with the Web

We recommend that you use your Web initiatives as the proving ground for new ways of doing things. Why? Everyone understands that the Web is a new and fast-moving target and that it requires new skills and innovative business practices. It will be much easier to invent and refine your cross-organizational business processes starting with the Web and then fan out to all your other customer-facing initiatives.

Lack of Historic Models for Managing the Web

But there isn't as much history in the design and running of successful Web operations. How should these be staffed? What does it take to be successful? If we look back through the examples we've studied, a pattern emerges that might provide a useful starting point for those of you embarking on Web initiatives.

Best Practices in Staffing Web Operations

High-touch Web sites require a level and type of staffing that most organizations are unprepared for. It's not necessary to have a huge staff. Many organizations have only a handful of people. What is important is to be sure that someone in your organization is filling each of the roles you'll want to have covered to ensure success on the Web.

Web Team the Most Dispersed Project You'll Run

As you'll quickly see, there's a lot more to a successful Web site than a Webmaster. You're going to wind up with a focused team that's dedicated to the evolution and operation of your Web site. This team will form the hub of a huge amount of distributed activity that will take place throughout your organization as new copy is written, new products are designed and marketed, orders are taken, and customers are served.

For the sake of simplicity we divide the roles that you'll need into three separate areas: marketing/sales, content, and technology. Please note that these are roles we're talking about; not necessarily new full-time positions. In fact, most of the most successful Web initiatives we've studied are staffed by no more than six to eight people. Many of the roles described below are undertaken by people who already have jobs in the relevant areas.

Marketing/Sales Roles

Director of Electronic Commerce or Director of Interactive Marketing. The director of Electronic Commerce or of Interactive Marketing is a seasoned marketing professional who has already achieved vice president-level status in the company. He or she is responsible for the vision, direction, and hands-on overseeing of the Web initiative. The scope of his activities includes: advertising, PR, targeted marketing,

pre- and post-sales customer service, order entry, billing, fulfillment, and product marketing, with strong linkages into product development, manufacturing, and logistics. This person is probably also the de facto owner of the company-wide customer profile database.

Web Channel Manager. The Web channel manager is the key lieutenant charged with turning the Web distribution channel into a reality. He or she is generally someone with a strong marketing background who is also technically savvy (or at least not technology averse). He or she has a strong ability to build consensus, do internal marketing, and get buy-in from all the different groups within the organization that need to be proactive in providing Web content and support functions. This person oversees several critical functions, including:

- Technology development and continuous improvement
- Content quality control
- Order entry/fulfillment
- Web customer service
- Business process design and continuous improvement

Customer Profile Czar. The customer profile czar is a marketing professional who takes responsibility for evolving the kind of information being captured in customers' profiles. He or she ensures that customers are only asked to supply information in exchange for a relevant and valued capability, that customers are never asked to supply the same information more than once, and that all customer profile information is captured, kept up-to-date, and reviewed by customers. This same person may oversee the development of targeted offers and promotions for customers based on their profiles.

Customer/Visitor Analyst. The customer/visitor analyst is a marketing analyst whose job is to analyze the logs of the Web site on a daily (or hourly) basis. He or she looks to see what dead-ends customers are encountering, what products or services they are looking at, where they're coming from, and what they're actually doing on the site. This person then digests this information and disseminates it quickly to all the people in the organization who need to see it.

Web Customer Service Manager. The Web Customer Service manager is a seasoned customer service professional who will be responsible for overseeing all the customer service functions for customers who choose to interact via the Web. These functions include watching what customers do online and where they get stuck (using the reports provided by the customer/visitor analyst), developing and monitoring the processes for making sure that all customers' e-mails are answered quickly and thoroughly, and ensuring that all outbound communications (e.g., e-mails) arrive satisfactorily. This person is ultimately responsible for making sure that each customer has a good time and a positive experience each time he or she interacts with your company via the Web.

Content and Editorial Quality Control Roles

Unless you run a publishing operation, you may not have a single department that's responsible for the quality control of all content being produced by the various departments and product lines. The closest analog may be the marketing department or the corporate communications department. Yet you're going to want to have these responsibilities covered, and whoever does it will need to report to someone!

Graphic Design Czar. This is the person who is responsible for the quality and consistency of the overall look of the site. He or she may work with an outside design firm. This person sets and evolves the overall look of the site and polices other departments and divisions to ensure that their designs are consistent in quality and branding. This person is also responsible for the creation of the templates that are used by people throughout the company in the creation of Web material.

Content Czar. In a publishing company, the content czar is the editor-in-chief. This is the person who is responsible for ensuring that no wrong, unapproved, or badly-written content ever appears on the site. He or she is also responsible for making sure that no old or stale content remains and there are no broken links. In order to carry out his duties, this person will *not* personally check every piece of copy that goes on the site. That's undesirable and unrealistic. He will, however, set up and police workflow processes and procedures to ensure that all copy has been approved by the right parties before it's posted.

Technology Roles

Webmaster. The Webmaster is the person who is in charge of the physical Web site (even if it is outsourced to an Internet Service Provider). He or she ensures that the Web site stays up and running at all times, that performance is optimal, and that all of the applications that touch the Web site are running properly. The Webmaster is also responsible for providing logs of the activity on the site to the marketing department. And this person is responsible for continually upgrading the site with new releases of software and new applications.

There are many other tasks that fall in the Webmaster's lap, so it's probably more important to delineate what the Webmaster shouldn't be doing: He shouldn't have to answer customers' e-mails, he shouldn't be writing copy, and he shouldn't be developing marketing strategies.

Programmers. The programmers are the people who will develop and continuously refine your Web applications. They will probably be a combination of internal and external developers. It's very important to have programmers assigned to the Web development team who understand your existing operational systems. Much of the hardest work involves integrating Web-based front ends onto existing ordering, inventory, and billing systems.

Build on Success, Continue to Evolve

Don't worry too much about long-term, detailed objectives and plans for your Customers.com® initiative. Seize opportunity, be flexible, and watch closely what happens.

Success from Reacting, Not Planning

The key to success is to have a clear, short-term objective, achieve it quickly, and take your cues for the next step from your customers. We've talked a number of times to all of the players whose case studies we've chronicled here. Each time we asked, "so what's next?" They can always tell me what they'll accomplish in the next three months, but they laugh when we ask them to predict six months to a year from now. That's not how you do this kind of work; there's no strategic grand plan. Just watch your customers, listen to their priorities, and respond as quickly as you can. It's as simple as that.

Biggest Payback Still to Come

Most of the initiatives we've studied didn't reap substantial returns for at least the first 24 months. Once the projects had been underway, staffed, funded, and significantly enhanced, they began to generate a payback. Frankly, the biggest returns for most of these companies are yet to come. What each one has discovered by now, however, is where the ROI will come from—cost savings, customer loyalty, customer profitability, higher volume, new markets, and so on. You'll need perseverance, high-level sponsorship, commitment, and staying power to pull this off.

Culture Change Is Gradual

Remember, we're not just talking about designing and deploying a Web site. We're talking about changing your company's culture from a product-centered one to a customer-centered organization. We're talking about doing major business process redesign across product lines and functional fiefdoms. We're talking about using an integrated set of electronic commerce technologies to make it easy for your customers to do business with you.

A Technology Roadmap for your Customers.com[®] Initiatives

Developing an Integrated Infrastructure for E-Business Initiatives

What is E-Business? It's the use of customer-facing technologies—the Web, touch-tone telephones, Interactive Voice Response (IVR), Point of Sale (POS) devices, kiosks, Personal Digital Assistants (PDAs), pagers, and even call centers—and streamlined business processes to improve customer service, reduce cycle time, and transact business electronically with prospects, customers, suppliers, and business partners.

Designing Customer-facing Systems

So, you're the technologist who has been given the opportunity to develop one or more customer-facing systems. How do you go about it? First, you should realize that this is probably the most challenging and gratifying work you'll ever do in your career. The satisfaction that comes from working on applications that touch the customer directly is immense. The continuous feedback you get from customers as they use these systems gives you clear, unequivocal priorities for each of your releases. Second, you need to recognize that this work is never done. This is not a project that consists of developing an application and then maintaining it. This is work that keeps growing and expanding to subsume more and more of your entire business's IT infrastructure.

Note that most of the projects described in the book, *Customers.com*, began at least two years ago and are still going strong. They may have started with a call center initiative or a Web initiative, but, eventually, they're reaching out to affect many more areas of technology: customer databases and data warehouses, knowledge bases, marketing campaign management, customer service systems, manufacturing, inventory, billing, shipping and delivery and replenishment of the supply chain, even in-vehicle and hand-held systems. None of these areas remains untouched. What we're really talking about here is the gradual redesign of all of your organization's information systems from a product-centric focus to a customer-centric focus. We're talking about redesigning many of your core business processes so that customers can help

themselves by reaching right into your networks, into your inventory, and into your accounting systems.

A Recursive, Iterative Process

Before I present a “strawman” roadmap for your consideration, let me provide a few caveats. First, as I’m sure you know, application design and development is not a sequential process. It’s a circular and iterative one. So, I don’t want to mislead you by giving you these steps as if they should be performed sequentially. Many of these steps should take place in parallel, and all of them will be done many times, over and over again. Second, this process may seem too elaborate for you, particularly if you are starting out with a Web initiative. Can’t you just design a Web site, put it up, get feedback and start refining? Absolutely. And that’s a great way to get started. But eventually, even if you begin by doing a basic Web site, by the time you’ve refined it to really meet the needs of your customers, you will probably have covered most of these bases, so you may want to know that they’re there. Third, the scope of these projects will inevitably creep. My recommendation is that you subdivide each area of your continually evolving charter into bite-size pieces, each of which can be tackled by a team of six to eight people. Support each of them with the same object model, business rules repository, database and knowledge base schemas, business process/business event models, and application services. They need to see exactly where they fit in the bigger picture, and you need to avoid a lot of duplication of effort.

Step 1: Determine Your Charter

Pick a Bounded Project with a Visionary Sponsor

It’s unlikely (and undesirable) that you’ll be given the charter to design an information architecture for your entire company’s customer-facing business processes. Instead, you’ll wind up with a single funded project for a particular area of the business. That’s what you want and need. However, as we all know, to do this bounded project “right,” you’d want to take into account all of the interdependencies between this project and other current or planned initiatives. We’ll talk about how to tackle that problem in the next step.

The most important criterion for success in gaining your charter will be the level of support and vision you receive from the business sponsor who funds your work. You need one, and only one, high level business sponsor to be successful. But you want this person to share with you a vision of what’s truly possible, and to have the political and organizational clout to see the project through. American Airlines’ John Samuel, National Semiconductor’s Phil Gibson, Wells Fargo’s Dudley Nigg, Hertz’s Brian Kennedy—these are the kind of sponsors you want and need. They will never run out of vision. As you deliver, they’ll keep upping the ante. That’s what you want.

Obviously your charter needs to include a very clear set of deliverables, with realistic, but ambitious, deadlines. Ideally, you want to be delivering new releases at least once a quarter. If your delivery platform is primarily Web-based, then you’ll be expected to produce monthly releases. Chances are there’s a lot of groundwork to be done, from a design and architecture standpoint, before you can begin development or

customization, so your first deliverable may take as long as a year. Hopefully, you'll be able to find a way to begin gnawing away on your chartered project in bite-size chunks, so that you begin delivering functionality within three to six months.

Step 2: Map Out Current & Future Conceptual Architecture

Design the “Big Picture”

So, now you're working on a specific project. But you can foresee several architectural hurdles that are likely to get in your way. First, you know that the success of your project depends on your ability to integrate the applications you're buying or developing with other applications, many of which your team doesn't "own." Second, you realize that the "best" way to architect your solution would be to rely on a set of underlying shared services (directories, databases, transaction services, middleware services, etc.) that you can't afford to design and deploy just for your one project. And, you know that there are other groups within the company that have other initiatives underway that could probably use many of the same underlying services. Yet, the process of convincing the members of these other groups, each of which has its own charter and funding, to join forces with you in designing a set of underlying shared services is pretty daunting. Who will pay for these? Your business sponsor isn't likely to want to extend your budget to pay for comprehensive, underlying services. Neither will the other guy's. Won't it slow the various projects down if everyone has to stop what they're doing and debate which technologies and products they're all going to agree upon? Yes, it will.

Build Consensus: A Collective Mental Model

So you start an educational effort to build consensus about heading in the same architectural directions with your colleagues in different parts of the company. You do it by drawing, at every opportunity, back-of-the-napkin type sketches of a conceptual future architecture that would serve the company's customer-centric focus in the long term. You share this with your colleagues over a beer, and invite them to scribble their conceptual architectures. You incorporate their ideas into this evolving vision. You draw this evolving picture on the white board at every meeting you chair or attend. You map your project to it, and you map other projects to it as well. Eventually, over a period of a few months, this will become the technology architecture vision for the company. You don't need to be appointed the Information Architect for the company. You're just doing your job, and everyone else will be greatly relieved when someone begins to pull together a coherent picture.

One project leader who pulled this off brilliantly was Ian Miller from Merck. His project involved the redesign of Merck's global manufacturing processes. As Ian tackled his project, he realized that he needed system services that Merck didn't have in place. So he drew a picture. The picture had several underlying layers of shared technology services that needed funding (directory services, security architecture, transactional middleware, etc.). Then at the top, he drew all the "hot" projects that Merck had underway. One of them was his. Finally, he drew arrows from each of these hot, funded projects, down to the shared services. Not surprisingly, each of the planned projects could benefit from several of the shared services Miller was propos-

ing. When he showed this diagram to Merck's business executives, they could immediately see the wisdom in what he was proposing. If we invest in these shared services, all of our projects will benefit at less overall cost to the company. The infrastructure work Miller needed was funded.

One caveat if you choose to embark down this path. Never put a product name on this kind of architectural diagram! It's an invitation for debate and dissension. It's always tempting when you're drawing a database, for example, to pencil in Oracle. Or if you're proposing middleware, to give one or more examples of companies or products that might fit the bill. But that step should come much later. All it will do is cause trouble if you're trying to build consensus. You'll be amazed how many technology "experts" there are in any company today. And each one has a strong personal opinion or horror story to share about any vendor or product you might propose. So steer clear.

Step 3: Recruit & Organize Your Teams — Select Analysis & Design Tools

Some Key Roles You May Need Covered

By this time, you probably know quite a bit about the staffing you're going to require for your project. You probably have a gut feel (or a mandate) to either buy off-the-shelf solutions and customize them or to develop a home-grown solution. Most likely, it will be a bit of both. The chances are pretty good that the people you'll need to get this job done will involve your own internal staff, some outside resources or consultants, and perhaps some new hires. The particular mix of talent and skills you'll need will, of course, vary depending on the project you're tackling. Do you need an HTML jock or a Java programmer, or both? Do you need people with Computer-Telephony Integration (CTI) expertise or do you need database architects, or both? Do you need Visual Basic programmers, Powerbuilder programmers or C++ programmers? You'll be able to figure this out. What I'd like to propose are a set of other roles that I've seen companies use successfully in customer-facing initiatives. This looks like a lot of people. It's not necessarily. It's a set of roles that you ideally need people to be able to play and one person can play multiple roles:

Each Person May Play Several Roles

- **Graphical User Interface Design Experts.** These are the people who actually establish the guidelines for the look and navigation and logic of your applications. They develop templates and widgets for others to use.
- **Graphical User Interface Designers.** These are the people who actually do most of the work of developing prototypes and iterating them into final form. Their work is reviewed by the GUI expert(s) before it's released.
- **Business Process Design Facilitators.** These are the people who'll be leading teams of customers, employees, and other stakeholders through the process of capturing each of the business processes you'll be working with. It's best if these people are NOT technically-trained, but rather, come from the business side.

- **Business Events Definers.** This is a new role. It's one that hasn't existed before on most development teams. But it's becoming increasingly important. These can be either business people or technologists (or a mixture of the two). Their job is to listen and watch as the business processes are being described and to capture each type of business event that occurs. What are business events? They are the steps in a business process that actually matter. An order placed, a payment received, a profile modified, a request for service, a product configured, a product shipped—these are all examples of business events. Each of these events triggers a variety of other activities in the process. Business events typically define the interfaces among applications.
- **Business Object Modelers.** These are the people who can listen to or look at a business process description and pinpoint all of the business objects that are involved in the process. Objects like: Customer, Phone Bill, Product, Renewal, and so on. You really only need one (or at most two) of these folks. Not only do they identify the objects, but they describe each object in terms of its attributes, its relationships to other objects and the business events that affect its state.
- **Business Rules Capturers.** These are the people who can listen to a business person describe the steps in a process and tease out the implicit business rules that are being described and then define and refine the rules by interacting with the business policymakers.
- **Customer Profile Czar.** This is a detail-oriented person, probably from the marketing department, who will “own” the definitions of the fields used in customer profiles. Since this profile information will be constantly evolving over time, it's important that this person's full-time job include having responsibility for maintaining and evolving these definitions.
- **System Services Designers.** These are probably the most senior programmers you will need. They will be responsible for taking the functional requirements and the business events' descriptions and translating them into a set of underlying services, application programming interfaces (APIs), and middleware. Even if you buy off-the-shelf software, you will need to plug the new applications into your existing back-end business applications. You'll want people on board who know how to abstract these interfacing requirements so they can use high-level services that can be reused across a variety of systems.
- **Object-Oriented Programmers.** If you are doing actual development (as opposed to customizing off-the-shelf software), you'll need programmers. Whether you start on the Web, or with a call center application, or with an order entry application, I recommend that you plan to design and develop your applications using object-oriented tools and techniques.
- **Knowledgebase Czar.** This is the person who will come up with the best way to categorize all the “information objects” that make up the vast amount of information that customers and customer service people and other employees need to

access. The type of person you want is someone who has had to categorize and locate things for a living. These are the kind of people who can look at any domain of knowledge, perceive the relevant distinctions, and infer a hierarchy within each category. A reference librarian or a lexicographer are good examples of the kind of people you're looking for here.

Tools You'll Need

As you assemble your team, you're probably also going to be selecting a set of tools for the analysis and design stage of your project. These tools can be paper-based, or simply flow-charting programs. However, I would strongly recommend that you consider using any of the more automated process modeling and business object modeling tools that are typically used for advanced object-oriented development and/or workflow development and design. I would also recommend that you select a business rules engine and a graphical user interface builder (a design environment for the Web and/or one for PC-based applications). There will be other tools you'll need as well. The most important of these will be a configuration management system and repository, so that you'll be able to easily manage all of the versions of the different pieces people are working on.

Step 4: Start with Business Process Design (from the Customer's point of view)

Focus on the Ideal Scenario(s)

There are two ways to do business process design. The first is to start by mapping out the way we do things now. From my experience, this is a pretty useless and depressing exercise. That's why, in our Customers.com® workshops, we map these out quickly at a high level, but we don't get bogged down in the details. We do enough so that everyone sees how convoluted and difficult we've made it for our customers. And everyone gets to laugh at the absurdity of the situation without placing blame!

Invite Customers to Design their own Preferred Processes

The second, and much more useful exercise is to map out the ideal business process(es) you'd like to be able to deliver. There is only one right way to do this, in my opinion, and that is to start from the outside of your organization in—to design from the end-customer's perspective. In our Customers.com workshops, we actually include end-customers in the design. Who is going to give you a better description of how they'd like to do business with you than an actual set of customers?

Occasionally, it isn't practical or desirable to get your end-customers to design your customer-facing processes. In that case, your own business people—the ones closest to the customer (typically these are the customer service folks)—should represent the customers' interests. Then, as soon as you have your first prototypes and processes described, you'll need to try these out on real customers.

Most projects will require you to map out several different business processes: order entry, billing, product configuration, and delivery, for example. To come up with reasonably complete process descriptions, you'll walk through different scenarios, sometimes called "use cases," such as "placing a new order," "placing a repeat order," "adjusting a bill," and so on.

Step 5: Begin Capturing Business Events & Identifying Interfaces

Identify Business Events that Impact the Customer

As the process design work is going on, your business event definers should be identifying all of the business events in each of the processes. It's important to capture these at the right level of abstraction—a business event is something that makes a difference to the outcome for the customer. For example, entering information into the general ledger is a necessary business practice, but it isn't a business event. Shipping an order on time is definitely a business event.

You will quickly discover that these business events repeat themselves across business processes. GTE Telephone operations did a massive business process redesign of its twelve major customer-facing business processes. Across all twelve, detailed processes, they discovered that there were just over 100 possible business events.

These business events should be handed over to the systems services designers. They will use them to specify the high-level interfaces and services required to complete each business event.

Step 6: Begin Capturing Business Objects & Rules

Define Business Objects; Specify the Rules that Govern their Behaviors & Interactions

As the new business processes take shape, your business objects and business rules teams spring into action. Their job is to capture and continuously refine all of the business objects—customer, bill, product, phone line, price, service charge, customer visit—and all the rules that govern the behavior of these objects. Rules are often triggered by business events. A typical business rule might be “if the customer has credit in good standing, open a new account.” It would be triggered by the “open new account” business event.

At the very least, this business object, business process, and business events model serves as a semantic bridge between the business community and the technologists. Hopefully, however, it's more than a set of models and diagrams, but actually informs the basic structure of the applications that will be written. Some of the process and object modeling tools on the market will actually generate code. From the business object model, you'll derive most of the database fields you'll need for the application.

Even if you have decided to use a ready-built system for your customer-facing application, it's still worthwhile to do at least some of this modeling. You'll use it to ensure that your new processes are complete. And you'll want to codify the business rules for your new processes so they can be entered into your new system.

Step 7: Begin Defining Customer Profiles

Decide What to Capture & Link

As I'm sure you've noticed from reading through all the case studies in the book, *Customers.com*, having customer profiles is going to be critical to the success of your venture. You may already have a customer database, customer information system, or

customer data warehouse. That's great. These pre-existing customer systems will probably include demographic information (for marketing purposes), customer account information, and billing information. A customer profile should either include, or be linked to, all of the aforementioned information. The profile should also be linked to the customer's order history and service call history.

In addition, the customer profile should include all the customer's preference information: which credit cards they use for business or personal use, how they want to be billed, whether they prefer an aisle or window seat, smoking or non-smoking, dietary requirements, whether or not they have children, how they want the products they buy from you to be configured, what topics interest them. This is all information that customers will voluntarily give you over time in order to make their lives easier.

There's another set of information you'll want to request from customers, or to capture as a byproduct of your normal interactions with them. That's the information that your sales and marketing organization realize they need, over time, in order to forge better relationships with customers, or to be able to make them targeted offers. For example, perhaps you've decided you'd like to send birthday cards to customers. Obviously, you'll need to begin capturing their dates of birth in some unobjectionable way. Or maybe the marketing group has decided they'd like to target all the customers who enjoy gardening, or fine wines, or skiing, with special offers. Again, you'd need to incent customers to give you that information.

Give Customers Access to their Profiles!

There are two important things to bear in mind in developing your customer profiling strategy. First, the customer needs to have access to his profile, so that he can see what you know, decide whether it's OK for you to retain this information, and update it from time to time. Second, you will never be finished. There is no such thing as a complete customer profile. These will change over time. Chances are they'll get richer and richer for the customers with whom you have a close relationship.

Step 8: Begin Defining Knowledgebase Schema

What are the Key Distinctions that Matter in Your Customer Interactions?

As you define the key business objects in your business processes and think about the different processes that touch the customer, you'll begin to see the need for much more complete taxonomies than you probably have today for categorizing and coding a variety of information: customer information, product information, marketing information, parts and price lists, and so on. Of course, some of this information will naturally be mapped to fields in database tables. But, database tables won't suffice for much of the information you're going to want to manage. You'll want pictures of products to be tagged based on all the different ways customers might need to find them. You'll want textual information tagged so that you'll be able to differentiate between detailed product specs and a marketing blurb on the same product. You'll want to code different kinds of paragraphs of marketing or product information so that they can be triggered by business rules or based on customer profile information. You'll need a way to keep track of which new products have superseded older prod-

ucts and a way to maintain all the information you need to service the old products, but not the information to market the discontinued products. You may want to code information geographically. What resources are within 15 miles of the customer's current location?

This kind of knowledge and information mapping—creating, in effect, a knowledge-base—is a very different skill than traditional database design and development. And this is an area where, over time, you'll need to invest a fair amount of resources. A good place to start is with a fresh, high-level categorization of the types of products you have, and the types of information you have. We call these "information objects." An information object may be as small as a paragraph, or as large as a document. In any case, an information object carries with it an understanding of where it fits in a knowledge hierarchy (Aircraft maintenance manual/Boeing 747) tags or attributes that tell you what kind of object it is (airplane wing subassembly), what information it includes (de-icing instructions with video), and which audience it's designed for (certified airframe mechanics).

Step 9: Prototype End-Customer Interfaces and Interactions

Start this Step Early!

As the business processes are being described, you'll want to have a team of prototypers begin actually developing sample scenarios or use cases from the end-customer's perspective. (In other words, Step 9 occurs at the same time as Step 4!) This is when you really need to have real end-customers working with you. You'll want their input on how they'd like to interact with the system, and you'll need them to walk through these prototypes and critique them for you. The prototypes may be a series of Web pages, or kiosk screens, or automated voice response scripts. Whatever tasks they depict—entering a new order, adjusting a bill, getting information to make a purchasing decision, configuring a product—the prototypes should walk the customer through an entire scenario from beginning to end. Only by iterating through several of these will you discover what steps have been left out of your process description, what business objects and rules you need, what the critical business events are, and where the customer-facing application needs to link into which back-end applications.

Step 10: Prototype Customer Service Interfaces and Interactions

Build on the Customer Self-Service Scenarios

At the same time you'll probably want to develop another set of prototypes of Web pages and/or client/server screens that correspond to the functions your customer service people will be doing while they're talking to a customer on the phone or walking them through the use of a kiosk or Web site, or telemarketing to them, or closing a sale. Ideally, many of the screens that your customers can use to help themselves will be ones that customer service or sales reps can use as well, so you won't have to develop two separate sets of applications. Realistically, however, there will always be background information, competitive information, or particular "spins" you want to put on a product or offering that you wouldn't want the customer to

see. As you do these prototypes, the biggest trap you're likely to fall into is the "that's not the way we do it today," trap. As Gary Weisenborn pointed out in the Bell Atlantic case study, seasoned customer telesales professionals or customer advisors are often very proud of the amount of knowledge they carry in their heads. They have grown accustomed to finding their way around arcane set of systems, commands, and product information. They will probably resist simpler, more streamlined processes that look as if they're "too easy." So be prepared, but be firm! Remember, the goal is to make it easy for customers.

Step 11: Identify Application & Networking Services Required

Architects Spot Services & Dependencies

Throughout the design phase, you'll be identifying tasks that need to take place behind the scenes. In every prototype demonstration, there are several points at which the prototype team proclaims, "and then the order flows directly into the order entry system and the confirmation number comes right back," or "if this were the final system, now you'd see a list of all of the investment options that meet the customer's criteria." These are the beginnings of the requirements for the underlying networking and application services that your systems services architects will be capturing.

Architects Use Business Events as Key Interface Points

Your architects will also be able to use the key business events to identify many of the points at which the customer-facing applications need to interact with a variety of other systems. They'll use their own knowledge of those back-end systems and that of your existing infrastructure to flesh out the services' requirements. This is one reason why it's important to have senior-level people from your own IT organization as part of this group. External consultants may be very helpful in assisting in the design, selection, and implementation of the most appropriate middleware tools or security firewalls. But your own systems people—the ones who developed and maintain your existing operational systems—are the people who can best determine how to interact with those applications.

Architects Define Needed Services

This systems services architects will specify the requirements for the underlying application services, including e-mail services such as automated filtering or sending; application-to-application middleware to connect business events and data; database services such as replication or spatial data; and security services such as authentication and authorization control.

Step 12: Identify Required Instrumentation

Plan End-to-End Application Management

If you were developing a single end-to-end application from scratch, you would design it so that both you and the customer would know when each process began, when it was complete, and if any problems had arisen. However, in today's world of distributed, networked applications, it's actually very difficult to tell whether an end-to-end business process, involving a number of different systems and applications, has completed properly. That's because these networked applications have evolved

organically, over time. When you try to tie them together into a single business process, you're tying together systems that may have been designed over decades by very different architects. Therefore, you're going to need to design instrumentation into your customer-facing applications. You'll want to have logs that monitor the successful completion of each business event. You'll want to be able to tag certain items, like the components of a customer's order, so that you can track the tagged items across networks and applications. The reason you tag items is to be able to glean response time and reliability statistics to support the business events you care about. To decide what needs to be instrumented and tracked you'll want a team comprised of business people and technical people. The business people will be able to describe where things usually go awry and what's really important to satisfy customers' needs. The technologists will be able to anticipate problem areas, and to design work-arounds and proactive monitoring mechanisms.

Step 13: Select Tools & Technologies

Look for Ease of Integration

At some point in this process, you're now ready to select all the different tools and technologies you'll be working with. You'll be making informed buy vs. build decisions for applications and services. Generally speaking, you'll want to buy off-the-shelf solutions whenever possible, so that you can focus your development efforts on the truly unique requirements. But, even if you select a comprehensive relationship management system, Internet electronic commerce platform, and/or product configuration application, you'll have plenty to do tailoring the application to your needs and integrating it in to all your other systems and processes. In addition to the applications themselves, you'll be deciding which platforms you're going to deploy on (Web browsers, PCs, handheld devices, server operating systems), how much network and storage capacity you're going to need, what development tools you're going to want, which middleware products will fit the bill, and which Web and application management tools you'll be using. In each case, look carefully at how easy it will be to integrate each of these pieces into a cohesive, manageable whole, and how easy it will be to swap out layers and applications as new products and services come onto the market.

Step 14: Embark on Parallel, Iterative Development

Develop & Deploy in Bite-Size Pieces

All along, your senior programmers have been creating a comprehensive, but evolving functional specification based on all of the design input. They've begun to subset the problem space into small, manageable deliverables and to assign these to the appropriate people. I don't believe in the "big bang" theory of application development. There is no way you can design, test, develop, integrate, test, re-develop, test, and deploy everything in one comprehensive release. Instead, I favor the creeping incremental approach. As each piece of the puzzle becomes a reality, you test it and begin to use it. As issues and problems crop up, you solve them in the next release, if possible. As new business rules are needed, they're added (by the business policy makers) and tested. As you learn more about what customers are actually trying to do

and how they're doing it, you continuously refine the business processes, the object model, and the application logic.

Step 15: Integrate, Deploy

Continuous Improvement & Rework

There is, therefore, no real separation between development, integration, and deployment. You are constantly doing all three. What you need to manage this continuous improvement process are comfortable and reliable mechanisms for version and change control. You need bullet proof processes to insure that no untested code or unapproved information gets deployed. And you need a way to quickly recover from any unforeseen glitch, by rolling back to a previous state. Because you've architected and instrumented for reliability from the customer's standpoint, you won't lose an order or botch up a delivery. You'll have processes in place to monitor every event that matters to the customer and back-up procedures to insure that the customer isn't inconvenienced.

Forward to Step 1

Constant Redesign of Your E-Business "Products"

This spiral, iterative development process actually never ends. You just keep looping through all of these phases until you retire. Your business processes evolve, your object model gets more and more complete. Your business rules are constantly changing (which is why you've separated them out from the actual application code; business rules may need to be updated several times a week). Your scope expands as you tackle more and more pieces of the customer-facing fabric of your business. The underlying systems services will evolve over time. The application components will be replaced. Ten years from now, you will probably have replaced all of the pieces at least once, if not several times. What your customers see is a continuously improving, dynamically evolving, organization that becomes easier and easier to do business with over time.

So, think of each of these deliverables as "products," not "projects." A project has a begin time and a completion time. A product is released and then re-released over time as long as it is useful. So you need to budget to keep these products alive and well as long as they are serving a valuable function.

Customers.com[®] Consulting Services

Addendum

The Patricia Seybold Group is the premier strategic consulting firm for creating successful e-business solutions. Whether your organization is creating new e-business channels, inventing an entirely new e-business proposition, or designing products and services to help e-businesses thrive, the firm's consultants are ready to help.

The following explains the Patricia Seybold Group's Customers.com Consulting Services:

Consulting Overview

“Our core competency is the conceptual design of e-business solutions that make it easy for customers to do business with your firm, increasing customer loyalty and enhancing the profitability of your e-business projects.”

The Patricia Seybold Group is the premier strategic consulting firm for creating successful e-business solutions. Whether your organization is creating new e-business channels, inventing an entirely new e-business proposition, or designing products and services to help e-businesses thrive, the firm's consultants are ready to help. We can help with your e-business strategy, your product and market positioning, your business process design, your technology architecture, and your selection of the products, services and partners you'll use to help you implement your strategy.

We use seasoned senior consultants on each project. Each senior consultant has over ten years of experience in mapping information technologies to business strategy. All of the firm's senior consultants are adept in working with high-level executives, in bridging business and technology discussions, and in facilitating cross-functional teams in business process design and strategic planning. The Patricia Seybold Group does not design Web sites, write code, nor provide system integration services. The firm specializes in jump starting, improving, and/or salvaging e-business initiatives.

Consulting Staff

The Patricia Seybold Group's consultants have a rare breadth and depth of expertise across industries, disciplines, and technologies. This cross-disciplinary approach enhances their sensitivity to the critical issues facing business executives, technology professionals, and suppliers of systems, services and software. The group's consultants are skilled in dealing with management, technology, and organizational issues. They are particularly adept at combining a strategic business focus with deep technical knowledge and sensitivity to organizational issues.

- **CEO**—Patricia Seybold
- **Senior Consultants**—Sue Aldrich, Geoffrey Bock, Wayne Eckerson, Martha Frey, Michael Goulde, Lynne Harvey, Mitch Kramer, John Mann, David Marshak, Ronni Marshak, and Anne Thomas.

Customers.com Consulting

Based on the business best-seller, *Customers.com: How to Create a Profitable Business Strategy for the Internet & Beyond*, Patricia Seybold and her team of senior consultants have translated the concepts from the book into a Customers.com consulting methodology. Customers.com consulting engagements are designed to help organizations whose executives are passionate about implementing customer-focused, Internet-driven initiatives.

Each of the Patricia Seybold Group's Customers.com Consulting Services may be useful as a standalone offering or as part of a coordinated project plan. An entire Customers.com project, including all of these steps, will take 6 months elapsed time. Many of these steps may be done in parallel. But, you'll want and need to spend two months on strategic planning (Phases 1-3) before you begin the redesign work. At that point, the actual development work—application integration, database design, Web site development, and custom programming can be initiated.

Phase 1: Building Consensus & Momentum

- **Customers.com[®] Education & Consensus-Building.** Begin with a day of seminars and meetings held at your offices. There are two goals. The first is to educate your executives, key employees, and stakeholders about what other companies are doing to build customer loyalty through the use of the Internet and other customer-facing technologies. The second is to begin to build consensus about the steps your firm should take to remain competitive.
- **Customers.com[®] Leaders' Forum.** Next, spend two days with your peers at a hands-on executive seminar as Patricia Seybold and her senior consultants walk you through the steps you'll need to take to insure success. These strategic 2-day

forums are designed for VPs of Sales and Marketing, Interactive Marketing Directors, and their Strategic Technology Executives. You'll learn how to apply four of the eight critical success factors to your company and your situation. You'll confront the organizational issues and the technology gotcha's that derail most projects. And, you'll learn how to develop a game plan for success.

Phase 2: Assessing Current Reality

- **Web Site Usability Audit.** Our senior consultants will critique your current Web site from a customer usability standpoint. How easy is it for your customers and stakeholders to do business with you? Where are the bottlenecks? Where are the dead-ends? Are you promoting your wares effectively?

The usability audit will compare and contrast your Web site with best practices gleaned from other sites. The recommendations will include short-term quick fixes, as well as more fundamental changes.

- **Customers.com[®] Assessment & Business Planning Sessions.** Next, you'll want to assemble your team, roll up your sleeves and get down to business. These assessment and business planning sessions are the fastest, most cost-effective way to focus your priorities. In these on-site meetings, our senior consultants conduct group interviews with all of the key stakeholders in your customer-facing business processes. Together, your team will focus on key customer segments, identify the key business processes that impact those customers, identify the issues that make it hardest for those customers to do business with your firm, and map out a set of priorities for action.

The group working sessions are supplemented with more detailed information-gathering where required. We prepare a report for your team, assessing the strengths and weaknesses of your current executive sponsorship, business processes, information assets, and enabling technologies. We provide a report and present recommendations prioritizing both the easiest and the most strategic set of next steps your organization should take. The report includes estimated budget and staffing recommendations.

- **Develop a Business Plan.** Our senior consultants can work with your business team to develop a business plan for your Customers.com/E-Business initiative.
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Phase 3: Customer Involvement

- **Host a Customers.com[®] Workshop.** Using the workshop methodology described in the Customers.com Handbook, our senior consultants will design and facilitate a workshop in which your end-customers will work together with your employees, partners, and executives to design streamlined business processes. This hands-on customer involvement is more effective than traditional focus

groups or customer surveys. Customers tell you exactly how they'd like to interact with your firm and work with your team to design those interactions.

At the end of the workshop, you will have prototypes, high-level business process maps, and a high-level architecture. You'll also have an implementation plan with milestones for each of the interdependent initiatives you've chosen to address. Companies typically shave six months off their projects' implementation time when they jumpstart them using a Customers.com workshop.

Phase 4: Technology & Information Architecture

- **Map out an IT and Information Architecture.** Based on the customer-centric business process designs, and the technical information gathered in the assessment and planning sessions, our senior consultants will provide an IT architecture plan and/or an information/knowledge architecture. The technical architecture will include a migration plan from your current information technology platforms to any new platforms required, the key technology services you'll need, and business process diagrams with key business events and business objects mapped out.

The information architecture will include proposed information tagging and information flow, and a description of the information assets you'll need to develop and maintain, (e.g., customer database, product information, business rules, and so on).

Phase 5: Implementation & Continuous Improvement

- **Develop RFPs.** Our senior consultants can help you develop Requests for Proposal for technical solutions (platforms and products), for technical work (Web site development, application integration, application development, database design and development), for Web site graphic design, and for Web hosting services.
- **Assist in Vendor Selection.** Our senior consultants will help you evaluate proposals, rank candidates and select a winning team of partners to help you and your team implement your vision.
- **Transfer Process Designs, Architecture, and Priorities to the Implementation Partners.** Our senior consultants will insure that the implementation partners have all the information they need to jumpstart their implementation, leveraging all of the business planning, process design, organizational planning, and IT architecture that has been done by your team and our consultants.
- **Mentoring Project Implementation.** Our senior consultants will review the implementation work, insuring that it meets the agreed upon priorities and that the

inevitable trade-offs are made using the standard: “make it easy for customers to do business with you.”

- **Executive Coaching & Continuous Improvement.** Throughout the first one to two years of the project, our senior consultants will remain involved to coach your team and to suggest next steps as you move from initial implementation into continuous improvement mode.