CHAPTER 11

Personas

I often speak with people who tell me they have a good understanding of their users, but are puzzled because they can't seem to agree on what the product should be or do. In order for your efforts as a designer to succeed, you must ensure that every member of the product team understands at least the fundamental characteristics and needs of your customers and users, or you'll spend a lot of time talking in circles. The research methods described earlier in the book will help you gather the right information; personas will help you determine what that data means, convey that meaning to product team members in a compelling and memorable way, make better design decisions, and build consensus around a direction.

Definition and Uses

Personas are archetypes that describe the various goals and observed behavior patterns among your potential users and customers. In the terms introduced in Chapter 10, personas are a specialized type of composite model resulting from cross-case analysis, using primarily inductive reasoning.

A persona encapsulates and explains the most critical behavioral data in a way that designers and stakeholders can understand, remember, and relate to. Unlike simple lists of findings or other types of models, personas use storytelling to engage the social and emotional aspects of our brains, which helps each team member either visualize the best product behavior or see why the recommended design is good. The very name "persona"—from the Latin term for a character in a play[1]—emphasizes their roles as storytelling devices.

Regardless of the sort of product or service you're designing, you will almost always find two or more distinct types of thought or behavior among potential users. The persona description that represents each user type includes a name, a photo, and a set of goals, as well as a narrative that covers mental model, environment, skills, frustrations, attitudes, typical tasks, and any other factors that seem critical to understanding the behavior pattern. The following narrative, Katie Bennett, is an example of a simple persona description for a digital camera user.

1. Yes, the correct Latin plural is *personae*, but popular usage made the argument moot long ago.

Katie Bennett

Thirty-two-year-old Katie would have gone into fine art if she felt she could have made a living at it; now she runs the business side of her husband's small landscaping firm and saves her creative ambitions for the weekend.

A couple of years ago, Katie bought a pocket digital camera so she could post photos of completed jobs on the company's Web site, which she put together using iWeb on her Mac. As she started experimenting with getting the best images, Katie realized that photography offered many of the creative opportunities she enjoyed in painting. She was hooked. Looking for a more capable camera that wouldn't break the bank, Katie went to CNET.com for advice. After looking at a few comparisons but not reading detailed reviews, she went to the nearest Best Buy and bought a Nikon D70 with its kit lens and an inexpensive tripod, relegating her compact camera to snapshots at family events. She also considered Canon's Digital Rebel, but chose the Nikon because it "felt more like a professional camera."

Katie got home and sat down with her new camera and its somewhat intimidating manual. After half an hour of fiddling, she was overwhelmed by the options and decided to give the auto mode a try. Katie started hiking about on weekends to shoot landscapes, from sweeping skylines to dew-covered flowers. She was pleased with some of her shots, but wondered why some weren't much better than what she could do with the pocket camera; many did not meet her expectations. After reading a few issues of *Outdoor Photographer*, she decided she might do better with different lenses. Confused by all the letters, numbers, and lens specifications, Katie went to the local specialty camera shop for advice on which macro and wide-angle lenses to buy; she did not expect the staff at Best Buy to provide good advice. She was reluctant to buy the cheaper lenses made by other manufacturers because surely Nikon would make the best lenses for their own cameras.

Katie is thrilled with her new ability to capture images of the local flora as she would have composed them on canvas. Though Katie enjoys it when people admire her photos, she's more motivated by the satisfaction of achieving her own creative vision. She can now capture the compositions she wants, but still isn't quite happy with some of her photos.

Katie gets up early on Saturdays to catch dramatic sunrises, frequents every park and beach in the area, and takes the occasional day trip. She loves the excuse to get out into nature. She goes out equipped with her camera, lenses, tripod, and a couple of 4 GB memory cards. Katie takes 100 to 300 shots on the average outing. She can often take her time composing a shot because plants and scenery don't move much, but sometimes needs to move quickly to capture a butterfly perched on a flower, or a shaft of light coming through the clouds just so. She usually takes a photo on the auto settings first, pointing the auto focus at the area where she wants to capture detail in the hope that this will set the correct exposure. She then dials the aperture up and down and takes a couple of shots to bracket the exposure; she read about this technique in her magazine. She still gets overly dark areas or blown-out highlights in many photos; she's increasingly frustrated by the intricacies of correct exposure. She deletes the worst photos from the camera on the spot.

Katie brings her camera home and plugs it into her Mac using the USB cable. She dumps the images into iPhoto and sees what she can learn from the bad ones before deleting them. She makes a few minor adjustments, but is generally reluctant to manipulate her photos, believing she should be able to get the right image in the camera to begin with. She posts her favorites on her personal Web site, uses them on her computer desktop, and occasionally orders large prints of especially good images via iPhoto. Katie feels a bit limited by iPhoto's organization options, but appreciates its ease of use and integration with other tools.

Katie is considering upgrading to a higher resolution camera, but is reluctant to spend the money unless she knows she can get the results she wants.

KATIE'S GOALS:

- **Be able to capture what she sees in her "mind's eye."** Katie knows she has an eye for composition, but is frustrated when her inability to master difficult lighting makes for a lackluster photo.
- **Enjoy the scenery.** Katie takes photos of nature as a way to enjoy its beauty. She doesn't want to be so focused on the mechanics of using her camera that she forgets to enjoy what she sees.
- **Feel like a "real" photographer.** Katie is proud of some of her images, but hesitates to think of herself as a photographer because she feels she hasn't mastered some of the fundamentals.

If you read carefully, you can see that nearly everything in the description conveys or reinforces something important about Katie's attitudes, goals, and behaviors. Even the mention of specific store, Web site, and product names has a purpose: They reinforce that Katie has ambitions but isn't sure where to get the best advice. Although the fact that she runs a landscape business is clearly fictitious and not directly relevant, one or two such details can make a persona seem like a real human being instead of a sterile set of characteristics.

What personas are good for

Personas can help you design pretty much anything that will be used or experienced by a human being, such as enterprise and consumer products, Web sites, services, internal business processes, organizational structures, events, advertising campaigns, documents, courses, and environments. The contents, structure, and design of this book have been driven by several personas. I've even heard from people using simple personas to design employee benefits packages and church picnics.

Personas are helpful in accomplishing a wide range of activities, including defining and designing the product, communicating with stakeholders about your audience, building consensus and rallying a team around a goal, marketing the product, developing documentation, and even prioritizing bug fixes.

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GENERATING AND ITERATING SOLUTIONS

Personas are, above all, product definition and design tools. In the early stages of product definition, personas and scenarios will help you envision what users most need from a product or service. Later on, they'll help you generate and iterate specific solution ideas. Personas influence every aspect of the design: Navigation and workflow, color and typography, terminology, information architecture, Web site copy, and hardware form factor are all informed by what will work best for each persona. Non-designers may be surprised to see how much personas can help with technical decisions and business choices such as feature priorities and service options.

During design meetings, each persona serves as a surrogate for the thousands or millions of potential users who have similar characteristics and goals. Designers start by determining what each persona needs to accomplish. When one designer proposes a solution that seems likely to satisfy the persona's goals, the others ask questions and look for potential problems from each persona's point of view. The team iterates the solution until they all believe the personas will find it useful, useable, and desirable. Stakeholder and user feedback may drive additional iteration, but a skilled team using good personas and scenarios will only have to fine-tune the design instead of completely reworking it based on surprising feedback.

Personas help designers make decisions with a shared picture of "the user" in mind. If that understanding isn't both clear and shared, the user is an elastic being who encompasses an improbable range of needs: one minute a novice who needs wizards and extensive instructions, the next an expert who wants macros or a command-line interface. Because a persona is such a specific target, it's easy for team members to say, "Jean wouldn't know what to do with a command line, but she'd feel insulted by a wizard." Personas also help prevent self-referential thinking, in which designers make decisions based on their own preferences or usage patterns, even though their goals and behaviors probably differ from those of the target users.

COMMUNICATING AND BUILDING CONSENSUS

Personas aren't just about creating and iterating solutions. They also help with the other critical part of your job: helping the entire product team understand what users and customers need and why your design solution is a good way to provide it. Personas are excellent tools for summarizing your research data because they let stakeholders "meet" the interviewees by proxy. They also give the entire team a common language to use in discussing solutions and trade-offs; "the user" is generally an ill-defined and ever-changing type of person, but everyone knows what others mean when they refer to "Brenda" or "Ted."

Personas, once accepted by other members of the project team, also provide an effective means to defend your design decisions. Arguing for a solution based on your opinion seldom works well because there's always someone in the room with greater authority; you're pretty much doomed in an opinion-based argument with the CEO, no matter what graduate degrees or experience you have. Arguing based on design principles can work but may not offer as much credibility as you expect. Most people who have been around product development for any length of time have seen less capable engineers throw techno-speak at people to beat them into submission, so quoting obscure cognitive science and ergonomics principles may leave the impression that you're sandbagging. However, there's tremendous power in being able to say, "Yes, I can see how that approach would make sense, but we did it like this because it fits how Ted sees the world." Provided you've convinced people that the personas are an accurate picture of potential users and customers—and provided your argument is believable

based on the personas—stakeholders will usually nod their heads and move on. This is especially powerful when stakeholders are thinking self-referentially.

An entrenched set of personas can act as defenders of the design in your absence, as well. In companies where design is still relatively new, it's not unusual for software engineers to deviate from specifications when they don't see the value in something that's hard to build. Programmers who understand the rationale for the solution based on a persona's needs are more committed to building the product as designed. Once you hear the engineers and other product team members using the personas' names in discussion without being self-conscious about it, there's a good chance this kind of thinking is starting to happen.

Personas are also powerful tools for getting people to see a service or business in a new light. Most companies have separate departments or people responsible for each aspect of a customer relationship, and many of those departments don't talk to each other. Each group sees the world from its own limited perspective, so customers experience the company in disjointed and unsatisfying ways. For example, I was having problems with static on my telephone line and outages on my DSL connection. The giant telecommunications company that provides my service has a phone department and a DSL department, so they kept sending phone technicians and DSL technicians separately. Neither could deal with the whole problem, so their independent efforts could not resolve the issues. Multiple frustrating conversations revealed that their two information systems were entirely separate, so technicians in one silo didn't have any access to information about the other half of the problem, and there was no way in the system to specify that I needed both types of technician. I was literally looking up the competition's service plans when a manager finally walked across the hall and talked to someone in the other department. Had this company used personas to examine its processes from a customer's perspective, I wouldn't have run screaming to their competitor or, worse yet, ranted about their poor service to everyone I knew.

It's also amazing to see the way personas can help a team develop a shared sense of purpose. Some teams adopt their personas almost as mascots: printing T-shirts, bringing life-size persona cutouts to meetings, and even celebrating a persona's birthday as a reminder of what they're trying to accomplish. Not every organization's culture is conducive to this kind of cheerleading, but the more people understand and identify with the personas, the more unified the team seems to be.

OTHER USES FOR PERSONAS

Although personas exist primarily to support design and communication, they have a few other uses. Marketing is the most common of these. Many marketers adopt personas with great enthusiasm; after all, knowing what makes customers tick makes it easier to convey the value of the product or service. Some even use the personas (or some approximation of them) as the stars of a marketing campaign. The point of such campaigns is generally to say, "See? We really do understand you." I've seen numerous companies use their personas as characters in trade-magazine articles, on their Web sites, and at user conferences. One client even hired actors to portray the personas at a product launch party; the actors bemoaned their problems, then the CEO showed off the new solution and explained how it would make their lives easier. The audience loved it.

Employee training is another way to squeeze value out of your research and synthesis efforts. Personas help new employees learn about the characteristics of your customers. Better yet, they help employees see the world from a customer's point of view, which can result in better customer service, better products, and a stronger brand.

Personas work not just because humans are accustomed to using models, but also because they encourage us to relate to users in uniquely human ways.

Technical writers can use personas to determine what's important to emphasize in a user manual and how to approach writing help text. This is important not only to keep the cost of user manuals low, but also because few users are likely to pick up a thick book to figure out how to turn on the new gadget or log in to the application. Users are more likely to be satisfied with their out-of-box experience (and less likely to return a product) if a compact, approachable document gets them started with the basics.

Some companies have begun using personas to prioritize bug fixes. The bugs that have the greatest impact on the most important personas get fixed first, while those the personas are unlikely to care about drop lower on the priority list. This is a significant shift for many organizations, since engineers have long viewed "UI" or "design" bugs as less important than others.

Personas can also help prioritize customer feedback. Some companies expend tremendous resources addressing nearly every comment they get from a user or customer. This is laudable, but not always wise, since a fair number of the people who feel compelled to comment are edge cases. Comparing user feedback to the personas can help product managers assess whether a customer request is really something worth investing effort in.

Why personas work

To make the best use of personas, it's helpful to understand what makes them so effective. Personas work not just because humans are accustomed to using models, but also because they encourage us to relate to users in uniquely human ways, while mitigating the disadvantages of designing with live humans.

Human beings, by our nature, classify the world around us so we can understand it, predict its behavior, and respond accordingly. A child, for example, might start out thinking of every furry, four-legged animal as a dog, then learn to distinguish between dogs and cats because the cat scratches when it doesn't want human attention. We create and act on categories as easily as we breathe. We classify our fellow humans as archetypes in the same way. We use those archetypes to communicate; when we describe someone as an entrepreneur, geek, or class clown, we know that others will associate a certain set of attitudes and behaviors with that person. (When done in ignorance or taken to extremes, of course, this can become negative stereotyping, but this is easy enough to avoid if you stick to your data.) Expressing customer and user behaviors and attitudes as archetypes is a natural way to help others understand them.

What makes personas a particularly effective sort of archetype is their presentation as people rather than as abstract ideas. We recognize the hero archetype in an intellectual way, but relate to the characters of Achilles or Harry Potter in an emotional way, so we try to see the world from their point of view. The same is true of personas; where a list of bullet points about user characteristics gets an intellectual response, a persona presented as a real person engenders empathy in designers and stakeholders alike.

If the anecdotal evidence doesn't convince you to present user models as though they were people, designer Chris Noessel[2] points to a 2003 experiment by Gallagher and Frith,[3] in which MRI scans showed people using different parts of their brains depending on whether they thought they were playing a game against a human or a computer. A similar experiment comparing how we think about dogs versus people[4] supports the idea that other humans engage our minds in unique ways. This ability to help people think differently is one reason personas have been so widely adopted by design practitioners. Personas have names and photos and stories not to be touchy-feely and cute, but to help designers and stakeholders think with a more human point of view.

Unfortunately, the storytelling aspect of personas is frequently misunderstood. Novice persona enthusiasts and critics alike confuse the *presentation* of personas with their *content*. People who are new to personas may get carried away with photos and fictitious biographical details at the expense of the data; don't confuse such creative writing exercises with real personas. Others expect that appending a name and photo will turn their bullet list of characteristics into a persona, but such dry presentations lack the power of storytelling and fail to engage our human empathy. Good data, rigorous analysis, *and* compelling, human presentation are all essential to making personas work.

Of course, all this begs the question: If humans engage our empathy, why not just have real users in design meetings? Personas provide much of the value of having real users in the room, but without the drawbacks. Unlike real humans, personas don't slow the process, start to think like members of the product team, or have idiosyncrasies such as a distaste for the color blue.

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2. Noessel, C. "Ignore that designer behind the persona." *Cooper Journal of Design*. 2006. http://www.cooper.com/insights/journal_of_design/articles/ignore_that_designer_behind_th.html.

3. Gallagher, H. L. and Frith, C.D. "Functional imaging of 'theory of mind.'" *Trends in Cognitive Sciences*. February 2003, volume 7 issue 2.

4. Mason, M.F., Banfield, J.F. and Macrae, C.N. "Thinking about actions: The neural substrates of person knowledge." *Cerebral Cortex*. February 2004.

Modeling

Human idiosyncrasies are a challenge to filter out of the design process, whether you have a real user in the room or you're reviewing customer feedback. Some well-intentioned teams err on the side of incorporating every piece of feedback, but a knee-jerk response can increase development time and costs with zero (or negative) return on investment. It may also drive your development team crazy. A good set of personas can help you determine whether each customer request or suggestion is broadly applicable; if it is, it will help the personas accomplish their goals. If the suggestion does not help the personas, you can call back that customer and try to find another way to solve the problem.

Because they're constructs that "live" in the heads of the design team, personas don't struggle with understanding crude sketches that aren't yet suitable for usability testing; this allows exceptionally fast iteration. This is not to say that you should use personas as an excuse to eliminate real user feedback; rather, personas will help you get the most out of your precious time with real users by helping catch the obvious problems early on, so the real users can help you see the tricky bits you would otherwise miss.

What personas are not

Personas bear enough similarity to other sorts of models that some confusion is common. Marketers may assume that personas are just another form of market segmentation. Design and usability practitioners who are inexperienced with personas may believe they are simply roles with names and photos attached. Some stakeholders may believe that personas represent "average" users. Any of these assumptions can lead to problems.

PERSONAS VERSUS MARKET SEGMENTS

There are many ways to segment the potential market for a product or service. Most consumer segments begin with demographics, such as age, gender, race, income, and household composition. Some more sophisticated segmentation models include attitudes, values, and perhaps even preferences or self-reported buying behavior. A good segmentation model will also include an estimate of the number of potential customers represented by that segment and the amount of money they can be expected to spend. However, as discussed in Chapter 4, market research (and therefore market segmentation) tends to focus on what messages will sell a product rather than on how people will use a product over time.

Although personas can provide valuable information about attitudes and can help focus marketing messages, they also contain a great deal of information about behavior, mental models, skills, and other topics that are critical to product definition and design. Personas may still contain some demographic data, though, particularly when such data is closely tied to behaviors. Figure 11.1 illustrates the overlaps and distinctions.

A market segment often contains multiple personas. For example, two potential car buyers may have identical household demographics, attitudes, and values, but one may constantly switch radio stations, need help with directions, and seldom transport anything other than groceries, while another might ignore the radio, never get lost, and carry ski equipment every weekend. These two people may respond to the same marketing messages, so it makes sense to represent them as a single market segment, but the detailed distinctions in their behavior are necessary for informed design.

The desire to consolidate personas and market segments is common because it's easier if everyone thinks about customers or end users the same way. Clearly, it's possible to stretch market segments more in the direction of personas or personas more in the direction of market segments. Merging the two models may even work in some circumstances when buying and usage

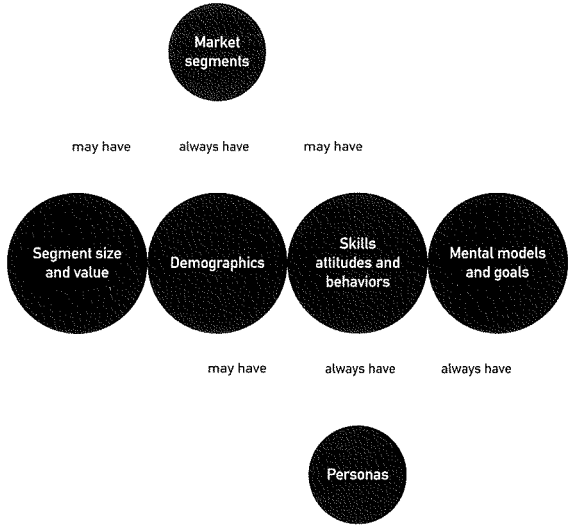


Figure 11.1. The degree of overlap between personas and market segments can vary. It's possible to stretch either tool in the other direction, but they're not entirely interchangeable.

behavior are aligned; this has been the case for some e-commerce Web sites. If there isn't a clear relationship between response to marketing messages and actual usage, though, don't force the fit and risk compromising your design tools. Also, never give up control of your design personas to the marketing department, lest they lose their utility for design.

PERSONAS VERSUS ROLES

Roles are familiar constructs in the world of enterprise software, where system permissions differ based on job descriptions and levels of authority. As discussed in Chapter 6, a role is defined largely by tasks; if there are users whose tasks will differ widely, chances are the system involves distinct roles.

The confusion between personas and roles arises because in a setting where roles are fairly specialized, it's entirely possible to have a one-to-one mapping between them. The more specialized the user population, the greater the chance that a single persona can represent a role. More often, though, two or more personas are required to represent the range of behavior within a role. For example, you might think a group of surgeons implanting the same medical device would be about as specialized as it gets, but the design

You need as few personas as possible, but as many as it takes to express the unique behavior patterns and goals you observed.

team observing them saw two distinct approaches. The surgeons who were primarily focused on ensuring the longevity of the implant always started the procedure with a particular set of tasks and made a lot of meticulous adjustments along the way. Those who were more concerned with getting the surgery done quickly—a metric for which surgeons are rewarded in some settings—performed the tasks in a different sequence and made fewer small adjustments. Their differing philosophies were based on how they first learned to do the procedure. A design that didn't accommodate the two distinct approaches would be a failure.

There are also cases where a persona may represent more than one role. This most often happens due to differences in small companies versus large ones. In purchasing, for example, a buyer in a large company places the order but doesn't process the arrival of the shipment or pay the invoice, whereas an administrative assistant in a small company may do all three. The design should recognize the expertise of the specialists and not clutter up their workspace with tools for tasks they don't perform, but shouldn't create such strict separations in functionality that it's hard for generalists to work.

PERSONAS VERSUS "AVERAGE" PEOPLE

Personas must be typical of your audience, but this doesn't mean they're "average." An average hides important differences in the data; someone with no income and someone with a $100,000 salary may average $50,000 a year between them, but their lives are drastically different. Real families don't have 2.4 children (though this fact seems to have escaped many automakers, who seem to design back seats for about 2.4 people). This is not to say that personas should represent the extremes, but it does mean they should represent the range of needs and behaviors exhibited by most of your audience.

How many personas do I need?

Personas are meant to help you hold the different kinds of users in your head; the fewer personas you have, the easier this becomes. A cast of thousands makes it hard to remember behaviors, goals, and motivations. That said, you need to have as many personas as it takes to express the unique behavior patterns and goals you observed. Single-role products or services tend to involve fewer personas, typically somewhere between two and six, but more are possible. A complex, multi-role enterprise system could easily require 25 or more legitimate personas, but because the design work generally

focuses on one role at a time, you wouldn't have to worry about more than a handful of those at once. There's no magic number of personas; the right number is dependent on the data. It's impossible to ascertain exactly how many you'll have beforehand, though a designer experienced in this method makes an educated estimate in order to plan the research phase (see Chapter 6).

Keeping your persona set to a minimum doesn't mean you should try to recycle your personas. It's almost always necessary to have distinct sets of personas for each product or service. An effective persona is focused on the goals, behavior, and characteristics most relevant to a particular type of product, which makes it useless for designing most other things. If you look at the example description at the beginning of this chapter, you can see that it's focused on Katie as a camera user. It would be difficult to design even a somewhat-related product, such as photo organizing software, based on that description. If you pack too much into a single persona to use it for multiple diverse products, you'll have to wade through irrelevant information to use it for any one product.

However, it's important to use the same personas for closely related products that are meant to provide a seamless experience, such as a portable music player and the desktop application that manages the music collection. You should also use the same personas for cross-channel experiences, such as many retail or customer service applications in which the interaction could be by mail, via telephone, in person, or online. This helps ensure that the transition from one to the other is painless.

How often do I need to create personas?

Although it doesn't take that long to do qualitative research and turn it into personas, it would be a big investment if you had to repeat that effort every time you did a new release of your product. The good news is that personas can last a long time. Because personas are focused on fundamental behaviors and goals, minor changes in procedures and technologies have almost no effect on them.

Contrary to popular belief, most technology and regulatory changes are evolutionary rather than revolutionary when it comes to influencing human behavior; for example, the fact that something used to be done in Java and is now done in .NET really doesn't matter. I recently had the opportunity to revisit some health care personas my team and I had developed about nine years earlier. Since the original personas were created, the American health care industry has been set on its ear by a privacy regulation called HIPAA, but we found that other than an increased awareness of information security issues, it hadn't affected the behavior of nurses. We also found generally higher expectations of technology based on experience with consumer products, but the behaviors and attitudes were otherwise identical to what we'd seen years ago.

This is not to say that all personas are good for a decade or more; they're not. Although technology that does the same things better seldom leads to major shifts, any disruptive technology that enables entirely new behavior can cause fundamental changes in how people see the world, and things tend to change rapidly between the time such technology emerges and the time it matures. Before mobile phones became widespread, people struggled to be accessible; now, people can be as accessible as they want to be, and we as a society are trying to figure out an entirely new set of manners. It's a good idea to do a little research now and then to make sure your personas are still in sync with reality, but you can judge the need for such efforts by the pace of disruptive change in your industry.

Because personas are focused on fundamental behaviors and goals, minor changes in procedures and technologies have almost no effect on them.

Personas who aren't users

Nearly all of your personas should exist because they represent a distinct behavior pattern observed in your user research. On occasion, though, it's useful to round out your set of user personas with one or more personas representing customers or served populations.

CUSTOMER PERSONAS

Consider adding a customer persona when you're designing a product or service that is purchased by someone other than an end user. This is most common in enterprise settings, where an executive or IT manager selects a system he will never actually use. Such people are concerned with things like ease of configuration and maintenance, total cost of ownership, scalability, and integration with other systems, though user efficiency is also a factor. The customer/user relationship can also occur among consumers, such as when a parent buys a mobile phone for a teenager but wants some way to limit its use. In either case, you won't succeed by designing the product's behavior for the customer, but you must address the customer's concerns by either including or limiting certain features and capabilities.

We first developed customer personas at Cooper in response to a client who had frequent contact with customers and very little with end users. They were having a hard time distinguishing between the needs of IT people (who wanted infinite configurability) and those of end users (who struggled with the product's complexity). The contrast between the customer and user personas helped them see how far astray the customers were leading them. Since then, we've also found that customer personas can help designers keep from focusing entirely on the end user at the expense of the customer.

Because the customers are not users of the product, you won't be designing the product's behavior with them in mind; instead, you'll be checking what you design against their needs and adjusting it if needed. For this reason, customer personas are less detailed than user personas and are focused primarily on concerns and goals rather than on behavior. *Tim Wilson, CEO*, presents an example of a customer persona for a phone system targeting small to medium businesses.

Tim Wilson, CEO

Five years ago, Tim turned his favorite pastime into a full-time job: BeSpoke Bikes, which is now a fast-growing custom cycle shop in Berkeley, California. BeSpoke's 36 employees include a small management team, a couple of designers, a few support staff, a half-dozen customer service reps who take orders and other inquiries, and the crew of the small manufacturing facility across town.

BeSpoke's office phone system is separate from the manufacturing facility, which makes for some awkwardness in forwarding calls. The customer service team is set up on a hunt group for incoming calls (though Tim doesn't know that's what it's called), but the increasing volume of calls is overwhelming this simple solution. The existing system is also expensive to maintain because Kevin, the jack-of-all-trades IT manager, is no expert in telephony; he has to place a $75 service call just to move an extension.

Tim knows it's time to replace the phone system but wants to make a good investment. Tim has heard that IP phone systems are cheaper and more flexible. He knows that quality products and good service can cost a little more, though, so he's looking for the best investment rather than the cheapest option. Kevin is investigating vendors, but Tim is as hands-on with his business as he is with his bikes—he doesn't trust such a critical decision to anyone else.

TIM'S GOALS:

- **Invest wisely.** Like many small business owners, Tim is torn between investing for the long term and keeping today's costs low. He wants a good system BeSpoke won't outgrow in a couple of years, but doesn't want to pay for capabilities or components he doesn't need yet.
- **Maintain flexibility.** Tim thinks he knows what features are important, but is aware that his communication needs could change as his business changes.
- **Minimize business disruption.** Tim wants to avoid the painful installation and the week or so of technical problems they had when the current system was installed.

Note that the description above is shorter than the user persona example presented earlier because it's focused only on Tim's concerns and goals, not his behavior.

SERVED PERSONAS

Some products exist to help users provide efficient (and hopefully pleasant) service to other humans. Examples include electronic medical records, cash registers, airline and hotel check-in systems, and the telephone and computer systems used by customer service call centers. No doubt you've experienced the result of systems that weren't designed with customer service in mind, such as when a customer

Creating personas involves identifying the critical behavior patterns and turning them into a set of useful characterizations.

service rep passes you along to someone else who asks you the same questions over and over again, or tells you that her system won't let her do that. Systems that make things difficult for users also make things difficult for the people those users are supposed to help.

Served personas help prevent this kind of shortsighted solution by reminding the whole product team of the reason for the product's existence. You won't find a need for a served persona on most projects, but there are times when one can make a big difference. The first served persona was "born" when my team was designing an electronic medical record and management system for long-term health care facilities. We created Gerta, an elderly woman with Alzheimer's, to help us avoid solutions that made life easy for nurses at the expense of patients; zapping the pill bottle and the patient's wrist with a bar code gun would make medication record keeping easy, but would be neither comfortable nor dignified for Gerta. As it happened, Gerta also served as a rallying point for the product team, who even celebrated her birthday for years after.

Served personas are much like customer personas: they're mostly focused on concerns and goals rather than detailed behavior descriptions. You won't be designing primarily for them, but you'll check each solution against their goals to make sure it won't be a problem.

Creating Personas

Creating personas involves identifying the critical behavior patterns and turning them into a set of useful characterizations. A methodical analysis of the data is essential when those patterns are difficult to identify, and is worthwhile even if those patterns seem to leap, fully formed, from the data. It's entirely possible that your initial impression of the pattern is correct, but in many cases the obvious pattern is based on demographics rather than behavior, or is otherwise missing some critical factor. Even the most experienced persona creators can benefit from a rigorous approach, which usually requires only a day or two of effort.

Like most aspects of the design process, persona creation is not strictly linear, but does follow an approximate sequence, which is detailed in the following sections and illustrated at a high level in Figure 11.2. If there are clearly defined roles among your respondents, begin the process by comparing the interviewees in only one role at a time. From your data, identify behavioral variables—ways in which user behavior differed—and any demographic variables that seemed to affect behavior. Map the interviewees against the variables, then

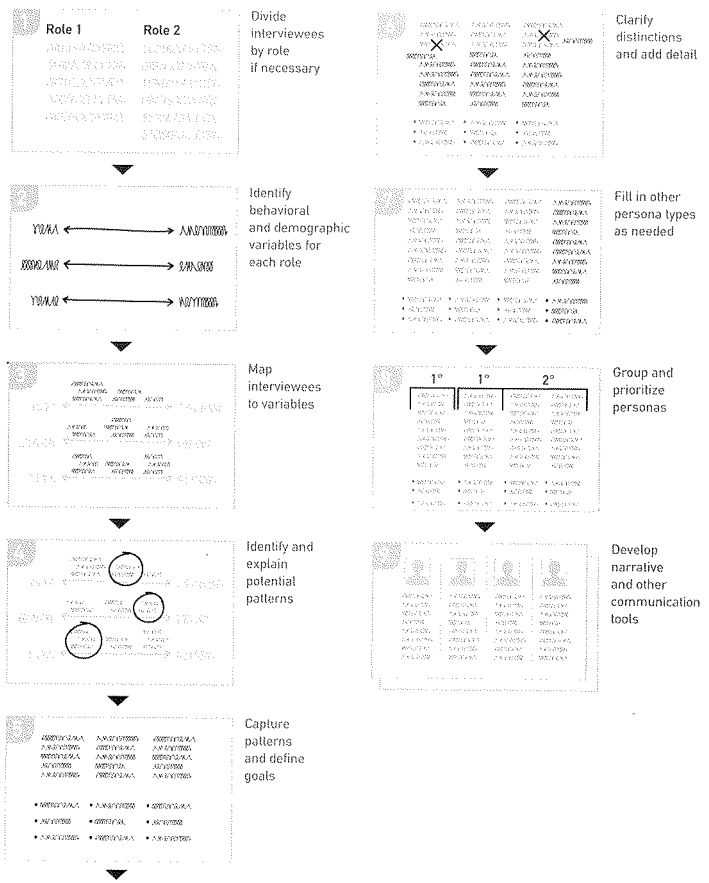


Figure 11.2 Overview of the persona creation process.

look for people who cluster together across multiple variables. Formulate explanations for that clustering to see if it really is a valid behavior pattern, then keep looking for any other patterns. Once you've exhausted the patterns within a given role, do the same for the other roles. Turn each behavior pattern into a persona by articulating goals and adding detail from the data. Fine-tune the personas as a set by clarifying the distinctions among them. Consider whether you need any other personas for political reasons before reviewing your rough drafts with stakeholders. Finally, prioritize the personas and develop the narrative and any other artifacts needed to describe them.

Simple as this all sounds, there are a hundred things you can do along the way that will make your personas either indispensable or a waste of time. That's not to say you can't experiment with how to create personas—after all, that's how they evolved as design tools in the first place—but when you're creating a real product or service with stakeholders who are skeptical, hurried, or otherwise not disposed toward design, you may only have one chance for your personas to succeed. The advice in this chapter should help you get them right the first time.

Step 1. Divide interviewees by role, if appropriate

As discussed in Chapter 6, roles are largely defined by *what* tasks people perform, rather than by *how* people perform those tasks. Roles usually seem clear in enterprise settings, such as end users versus system administrators. You can expect them to be less clear outside of a work environment, but they may still emerge; in some families, for instance, one family member primarily pays the bills, keeps in touch with relatives, or takes most of the photos.

It's often necessary to do your initial research recruiting based on job titles, which sound like roles but may differ widely among organizations. Don't be surprised, however, if it turns out that your research participants can't immediately be slotted into neat categories based on tasks. Job titles can hide specialization; for instance, a human resources manager might do a little of a lot of things, or might be focused on recruiting, staff development, or compensation and benefits. Sometimes the specialization is even less clear than this and may not be crisp enough to define separate roles. On a couple of projects involving financial analysts, for example, my team saw that some analysts were focused on routine tasks, such as monthly and quarterly roll-ups across various lines of business, while others did less predictable work, such as responding to unexpected changes or modeling various future scenarios. Many analysts did some mixture of all three, so treating these overlapping responsibilities as separate roles would have been problematic.

When the division between roles is very clear, such as between a surgeon and anesthesiologist or a loan officer and bank teller, it's best to treat the research participants in each role as a separate group for the purpose of identifying patterns. This is because large differences tend to obscure smaller differences; when you're comparing apples and oranges, for instance, it's harder to see that the apples are two different varieties, because the difference between the two types of fruit is so glaring. When you take the oranges away, you can see that one variety of apple differs slightly from the other in size, shape, and color. (See Figure 11.3.) For the same reason, customers and served populations should always be treated separately from potential users, as well. When the distinctions are muddy, as with the financial analyst example above, treat those interviewees as a single group. Table 11.1 illustrates this idea using the examples from Chapter 6, as if we've just completed the interviews.

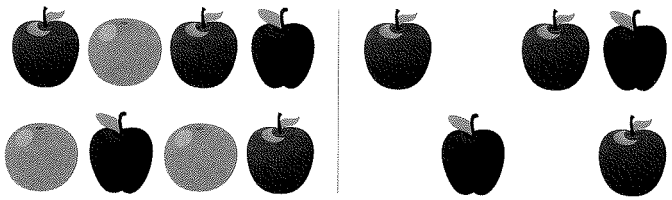


Figure 11.3. Glaring differences, such as between the apples and oranges, tend to obscure more subtle differences, like those between the two varieties of apples.

Table 11.1. **Examples of how to divide interviewees to begin persona creation.**

Product	Expected roles	Observed behavior and next steps
E-mail system	– System administrator – E-mail account holder – External e-mail recipient – Purchase decision-maker	System administrators, purchase decision-makers, and typical account holders were clearly distinct. All account holders were also external e-mail recipients, so they should be treated as one group.
Consumer digital camera	– Photographer – Buyer (usually the photographer)	The people who bought cameras for others also used cameras themselves, so they're not distinct enough to separate.
Camera company Web site	– Potential buyer – Current camera owner – Camera dealer – Investor – Press – Job seeker	Distinctions between buyers and owners were fuzzy, so they should be treated as one group. Dealers, investors, press, and job seekers were all distinct enough to treat as separate roles.
Inbound call center software	– Call center agent – Escalation agent – Call center supervisor – System administrator – Customer on the phone – Purchase decision-maker	Most roles were distinct, but agents and escalation agents seemed to overlap quite a bit, so it's safest to treat them as one role.

Continued

Product	Expected roles	Observed behavior and next steps
Complex purchasing application	– Person who requests things – Person who processes requests – Person who authorizes purchases – Person who receives shipments – Person who pays bills – System administrator – Purchase decision-maker	Many interviewees were clearly in one of these roles, while others overlapped two or more roles. You could include the multi-role interviewees in each of the distinct roles that applied.
Family calendaring system	– Family member – Perhaps one adult manages calendar	Some adults clearly managed the calendar, but most shared management to some extent. Children and teens did no management, so it might be best to treat them as a distinct role.
Device used to deliver intravenous medications in a hospital	– Person who administers medication – Person who prescribes medication – Person who dispenses medication – Person who monitors patients – Patient – Purchase decision maker	Patients and purchase decision makers are clearly distinct roles, as are the pharmacy staff who dispense medications to physicians and nurses. Nurses monitor patients and administer medications. Doctors may do those things once in a while, and only they can prescribe. There's a lot of overlap between doctors and nurses, but enough distinction that it's probably best to treat them separately.
Clothing store targeting women aged 25 to 40	– Woman shopping for her own clothing – Someone buying a gift	Many gift shoppers also wound up shopping for themselves once they were in the store, so it's probably best to treat all interviewees as one group.

As you can see from the examples, whether to separate interviewees at this stage is really a judgment call. When in doubt about whether a role distinction makes sense, it's safest *not* to separate interviewees by role. It's easy enough to try a different approach if your grouping doesn't work well for subsequent analysis.

When roles are so specialized and consistent that every interviewee seems like a clone of the others, you might be able to skip steps two through four, though I recommend walking through them anyway. Often, you will find two or more important differences within each role. When the roles are very broad, as with consumer products and services, I strongly recommend not skipping any steps. Identifying good personas in large, diverse audiences is sometimes more difficult than for most enterprise products because roles don't provide a convenient starting point.

WHAT YOU SHOULD HAVE AT THE END OF THIS STEP

Before proceeding to the following step, you should have a set of roles (if you have more than one) and a determination of which interviewees fit which roles.

Exercise

Determine how to separate interviewees by role, if at all, for the RoomFinder or LocalGuide. Use your own interview data or the data on the Web site.

Step 2. Identify behavioral and demographic variables

For each role, begin the cross-case analysis by identifying **behavioral variables**, which are aspects of behavior and attitude that seemed to differ across interviewees. Task frequency, mental models, and goals are all common types of behavioral variables. (If every interviewee demonstrated an identical concern or behavior, that's important information, but not useful at this stage.)

Begin the cross-case analysis by identifying *behavioral variables*, which are aspects of behavior and attitude that seemed to differ across interviewees.

Once you have covered the behavioral variables, add any **demographic variables** or other facets of your interview data, such as environment, that seemed to affect behavior. Using the biggest writing surface you can find, lay each of these out as a spectrum or, occasionally, a set of multiple-choice options. This serves as an organizing structure for comparing individual interviewees in the next step, so leave plenty of room to write respondent names. Figure 11.4 is an example of such a variable set for people interacting with the health care system.

Almost any behavioral variable can be expressed as a continuum, whether this is a range from low to high or a contrasting pair, such as liberal to conservative. When the variable is quantifiable, label one end something like "many x" or "often does x" and the other as "few x" or "seldom does x." Don't worry about specific quantities while brainstorming variables; it slows the process. You can quantify later when mapping the data to the variables. To avoid confusion, always put the low end of any quantifiable variables on one side of the spectrum (usually the left) and the high end on the other. Table 11.2 shows some examples of how you might express behavioral variables related to shopping.

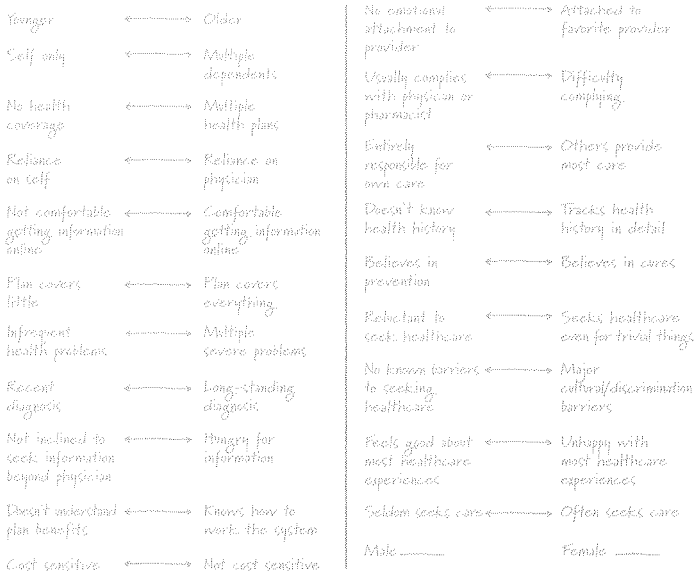


Figure 11.4. A typical display of continuum and multiple-choice variables.

Table 11.2. **Continuum behavioral variables.**

Variable	Ends of spectrum	
Frequency of shopping	Seldom	Often
Price and brand sensitivity	More concerned with price	More concerned with brand
Price and quality sensitivity	Always chooses cheapest	Always chooses best quality
Attitude toward shopping	It's fun	It's a chore

There are sometimes a few variables, such as goals, that are difficult to express as a continuum, or for which a continuum doesn't make sense because the values are mutually exclusive. Express these as multiple-choice variables. For example, if you heard that people shop primarily to buy something they need, to spoil themselves, or to enjoy the challenge of finding a bargain, each of these reasons would become a choice. Table 11.3 shows some other examples of multiple-choice variables.

It's unusual to have more than a couple of multiple-choice variables in the whole set. If you find yourself wanting to express many variables as multiple choice, or if your multiple-choice variables have more than three or four choices, you're probably focused on the *tools* people use to accomplish the behavior rather than on the behavior itself. For example, it might be tempting to list many methods for sharing photos, such as sending e-mail, posting to personal Web sites, posting to online photo-sharing services, mailing hard copy prints, showing off physical albums, showing people photos on a mobile phone, and running slideshows from a laptop or set-top box. People use such a wide variety of tools that the choices quickly become bewildering. Instead, examine what people are trying to accomplish with those tools. Some are sharing photos in a non-social way with people who aren't nearby, while others turn sharing into an interactive or social event; these could be characterized as remote sharing and local/social sharing.

In addition to focusing on behaviors rather than tools, good variables minimize subjective judgment by focusing on a single aspect of behavior. For example, whether someone is "very organized" or "not very organized" is somewhat subjective. I work with someone whose desk always looks like a disaster to me, but who can always put her hands on the desired information in about ten seconds or less, which makes it hard to argue that she's not organized. It's better to break the complex idea of "organization" down into several more objective variables, such as how many different systems someone has, how consistently he applies those systems, how much time he spends on staying organized, how often he misses deadlines, what the basic structures of his organizing system(s) are, and how quickly he can find a specific bit of information he needs.

Table 11.3. **Multiple-choice behavioral variables.**

Variable	Options			
Reasons for taking photos	Artistic expression	To share events with friends and family	To remember people and events	For business and insurance purposes
Most important criteria for choosing a car	Overall cost	Features	Emotional appeal	Environmental responsibility
Organizes messages by	Date and time	Sender or recipient	Topic	
Surgery starting point	Femur	Tibia		

By the time you're done identifying behavioral and demographic variables for a role, you'll probably have somewhere in the neighborhood of 20 variables, perhaps a few more or less. If you have considerably fewer, you may be missing important behavior. If you have a lot more, you're probably focused on mechanisms or trivial behaviors rather than fundamentals, which is problematic because it will make the critical behavior patterns harder to identify among all the noise. However, it's safer to err on the side of including a variable rather than excluding it. You'll see in subsequent steps that not every variable will be critical to identifying the behavior patterns.

TYPICAL BEHAVIORAL VARIABLES

Behavioral variables differ considerably from project to project and from role to role, so you'll have to identify many of them inductively from your data. One good way to do that if you haven't done a thorough job of coding is to pull out the notes for a couple of interviewees who struck you as very different, list the ways in which they differed, and then expand the list using other interviewees who seemed much different from the first two. In a sense, listing variables is like summarizing the answers to the questions you asked, along with the answers to questions you didn't ask. You can also get started by listing the following variables, which are almost always useful.

Mental models

As discussed in Chapter 7, understanding users' mental models of data and processes is critical to designing a system they can understand and use. Mental models are often one of the key distinguishing factors among personas. Such distinctions are usually most evident in how people organize their tasks or information. For example, an audiophile might think of albums as the fundamental organizing unit for music, since an album may tell a particular story or capture a point in an artist's career. Others might not think of albums at all, except as the inconvenient way they had to access music when their collections were stored in cabinets rather than on hard drives. Chances are this mental model difference is related to other distinctive behaviors and attitudes.

Motivations and goals

The reason someone bothers to perform a task in the first place often leads to tremendous differences in behavior, so goals and motivations are almost always important variables for identifying patterns. Self-image and relationship to brands tend to fall in this category; someone's goal for buying a certain brand might be related to status, perceived quality, or other factors. If you find only two primary motivators, whether you represent this as a spectrum or multiple choice depends on whether some people are motivated by a little of each: people who are a little of both can be represented in the middle of the spectrum. Goals are usually best expressed as multiple choice unless you saw only two.

Frequency and duration of key tasks

Identify the common and important tasks in a broad sense. If you're designing a music library, for instance, these key tasks might be listening, organizing, sharing, and acquiring new music. Consider how often your various interviewees performed each task and for how long at one sitting. If the respondents differed much with respect to any of these behaviors, turn it into one or more variables, being sure to distinguish frequency from duration, such as "listens seldom/listens often" and "listens for short periods/listens for long periods."

Quantity of data objects

Users who deal with high volumes of data often have skills, behaviors, or needs not shared by people who handle smaller quantities. It's often helpful to consider total quantity of data as well as quantity handled at one time. For example, someone importing music from a big pile of compact discs is handling a lot of data at once but may have a small library, while someone who only downloads one or two tracks a day may have an enormous library overall. Like frequency, quantity may or may not be critical to identifying the behavior patterns, but can often make those patterns more clear because of its relationship to other variables.

Behavioral variables differ considerably from project to project and from role to role.

Attitude toward tasks

Does someone perform a task because she enjoys it, because it's her job to do it, or because it serves some higher goal? This variable is often revealing; without considering attitude, it would be easy to assume that two people who both spend a lot of time on a task are similar, even if they perform the task for entirely different reasons.

Technology and domain skill

Skill and experience may be primary drivers of behavior, but sometimes they're incidental to it. Be sure to separate skill or comfort with technology from skill or comfort with the domain; a nurse, for example, might not be comfortable with a computer, but she is expert at being a nurse, whereas a call center agent—who is unlikely to have much training—might need help doing his job.

Tasks people perform

While a role is defined by similar tasks, not everyone within a role will perform exactly the same tasks. In a work setting, some users may focus more on particular stages of a process, have more freedom in how they execute their tasks, or be more likely to do ad hoc tasks rather than the strictly routine. These factors tend to be affected by environment, skill, or seniority. In a consumer setting, tasks people perform may be more related to goals; someone who isn't worried about bouncing a check or motivated to save money, for instance, may be less likely to track every expenditure.

DEMOGRAPHIC AND OTHER VARIABLES

Once you think you have the important behavioral variables covered, consider whether there are any demographic or environmental factors that seemed to affect behavior. It's rare for more than a few demographic factors to matter, so including too many will add distracting

clutter to your variable list, but feel free to include any that your gut tells you might be important. If you're listing multiple demographic variables, it might help to put them together at the bottom of your workspace.

The demographic variables that most often affect behavior are the ones described as recruiting considerations in Chapter 6: age, family structure, and geography for consumer products, and seniority, company size or industry, and geography for business environments.

Your user's height and physical strength seldom make much difference in the design of a Web site, but physical characteristics and abilities matter a great deal in designing physical products that are ergonomically appropriate. Physical characteristics should be included as a variable if you have a broad audience, but need not be considered a variable if your target population is within a narrow range of size and strength.

Physical environment is likewise a common variable for many physical products; does the respondent have a lot of space or a little, a cluttered space or a neat one? Again, use these factors as variables only when you saw distinctions.

WHAT YOU SHOULD HAVE AT THE END OF THIS STEP

Before proceeding, you should have a list of 20 or so variables that cover most of the codes in your notes, with most expressed as continua and perhaps a few as multiple choice. If you have any codes in the interviews that aren't reflected in your variable list, consider whether they should be included; you might have some codes that simply aren't useful. Compare a few pairs of respondents to one another and see if they have any differences, other than trivial ones, that aren't reflected on your list. If you have someone available to you who is experienced with this technique and at least somewhat familiar with your research, ask them to review your work for possible missing variables, variables that are too complex or subjective, variables that are really tools, and any other issues.

Exercise

Using either your own data for the Roomfinder or LocalGuide or the interview data from the Web site, develop the set of behavioral and demographic variables.

Step 3. Map interviewees to variables

The next step is to map the individual respondents to your variables as in Figure 11.5. This is easiest if you've coded your data, but not terribly difficult as long as you have a manageable data set and at least two people on the design team who've attended every interview. Team members who have attended a subset of the interviews can contribute to this discussion, but since it involves comparing each interviewee to every other, the most informed team members are ultimately responsible for the mapping.

The idea is to place each interviewee relative to the others along each spectrum (and in the appropriate multiple-choice categories, if applicable). Your placement need not be precise; this is not an exact science, so it really doesn't matter if respondent A is five or ten percent further along the scale than respondent B. What does matter is if respondent A is at one end and respondent B is toward the middle. This technique is similar to using a Likert scale, in that trying to break each continuum into more than about five zones is unlikely to be helpful. You'll find that some variables are polar, with people clustering near one end or the other and no one in the middle. Others may show clusters across the whole spectrum. If every interviewee is clustered around the same part of the spectrum, it means that variable won't be useful in distinguishing the patterns, so you can erase it from the board.

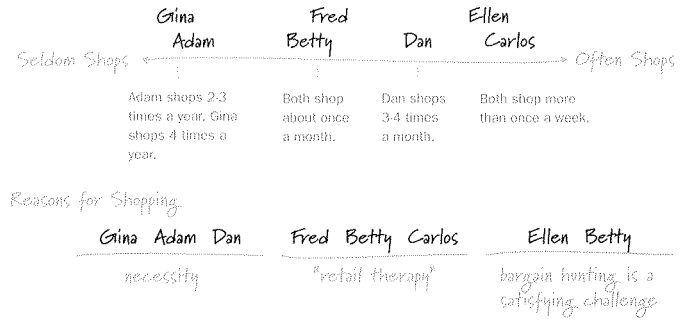


Figure 11.5. Example of interviewees mapped to continuum and multiple-choice variables.

APPROACHES TO MAPPING

There are two common approaches to mapping interviewees, both illustrated in Figure 11.6. Some people prefer to focus on one case at a time, placing a single interviewee on every variable before moving on to the next interviewee. This prevents digging through the notes for every interviewee as you consider each variable, but may mean you have to move a few interviewees you placed incorrectly. For example, you might think respondent A was close to the extreme end of a spectrum, but realize later on that he's closer to the middle when compared to respondent G. This need to erase and reposition is one of many reasons a giant dry-erase board makes a good tool for this activity. This approach can be challenging if the whole team doesn't have practice with making quick mental comparisons to other interviewees; if you're erasing and moving most people around as the process goes on, try the other technique.

You can also place every interviewee on a single variable at a time, so every variable is filled in before you move on to the next. This may prevent a lot of erasing names and moving them around, but can require more flipping through interview notes for detail on each interviewee. This approach may be slower for experienced persona creators, but seems to be an easier starting point for most people. Consider trying both to see which works better for your team.

In either case, place interviewees on each scale relative to one another, not to what you believe of the population at large. Ensure that the placement is based on the data rather than your instincts or memory alone. An interview participant who felt strongly that she did something often might also leave you with that impression, whereas an objective comparison might show that she was about average in your sample. Look for some objective observation or statement to help you judge each quantifiable variable. Look for verification of any self-reported numbers; rely on your observation over the interviewee's statement unless you heard an explanation for the mismatch during the interview.

Place interviewees on each scale relative to one another, not to what you believe of the population at large.

Figure 11.6. You can place every interview on one variable at a time or place one interviewee at a time across every variable.

For variables that are less quantifiable, such as skill or attitude, consider any work product you saw, the terminology someone used, body language, and any other clues. For example, you can tell from an interview whether a camera user has no idea what aperture means, knows what it means but struggles with getting it right, or lives and breathes exposure without thinking hard about it. Ignore the interviewee's own assessment of his skill or comfort relative to other people; his points of comparison differ from the ones in your interview set.

When one designer proposes a placement for an interviewee, refer to your notes and see if you agree with the proposed position relative to other respondents. The discussion should continue until all team members agree. At least two of you presumably sat through all of the same interviews, so if there's much controversy, this is usually a sign that either someone is relying on memory rather than referring to the data, or something is wrong with the choice or expression of the variable. Sometimes there's disagreement about the meaning of the words you've used to label the variable; you can solve this by asking what each team member thinks is meant and not meant by the term. It's also possible that your variable is too complex or subjective, as discussed earlier in Step 2; break it down into more granular behaviors.

If you feel it might be helpful to go through this process partway through your interviews, give it a try. Because each part of the analysis and design process builds on the earlier ones, it can shed light on what you could have done better in the previous step. If you find you're unable to map every interviewee to nearly all of the variables, it's a good indication that your interviewing or data-capture skills need work.

TRICKY MAPPING SITUATIONS

Not every mapping situation is straightforward because there's no such thing as a perfect data set. The following sections outline how to deal with some tricky (but common) situations.

Behavior that varied by circumstance

If can be difficult to place an interviewee on a spectrum if her behavior varied by circumstance. What to do about that depends on whether one behavior was clearly dominant. If someone almost always behaves one way, but there are very rare exceptions, it's usually best to ignore the exceptions. For example, imagine that your multiple-choice variable is "motivation for taking photos" and the options are "artistic expression," "memories," and "sharing." Someone who sends photos of the kids to relatives once a month is clearly motivated by sharing. Someone who never shares, except for giving a framed landscape photo as a gift every few years, really doesn't belong in the sharing category; yes, she does share once in a great while, but it's not the reason she takes photos.

If the interviewee's behavior is consistently varied by circumstance, though, it's sometimes useful to note that interviewee on the scale in two positions, with a note about the circumstance that drives that behavior. Figure 11.7 is an example of this. If your spectrum ranged from "organizes photos by content" to "organizes photos by time or event," for instance, you could put me in the middle because I do some of both. However, it would be more informative to put me in two places because I always assign attributes (such as species, location, and the pose or behavior) to my wildlife photos, but I always organize photos from family events by time. Thankfully, this sort of thing isn't that common because it can clutter up the display. If it happens with more than one or two interviewees, consider dividing the problematic variable into some finer categories.

Speculation about behavior

At some point, you probably heard interviewees describing what they would *like* to do if they had more time, if their tools were better, or if they themselves were better in some way. The emphasis in mapping is on each interviewee's real, current behavior, not on speculation or wishful thinking. People who are strongly motivated to do a certain thing find ways to do it, regardless of their tools or the time they have available. Someone who only wishes your Web site made it easy to compare prices with other sites doesn't belong in the same category with someone who spends the time to look up multiple sites, bookmark them all, and make a spreadsheet comparing prices and shipping costs across all of them. Mind you, she also doesn't belong in the same category as someone who didn't seem to care about price at all; words carry some weight, but not nearly as much as behavior.

Third-party behavior

As a general rule, you should exclude the behavior of third parties from consideration. If someone

Figure 11.7. You can note behavior that differs by circumstance this way.

tells you his wife performs a certain task, that's not helpful in profiling *his* behavior. The exception is when multiple people, such as the members of a family, will share a single device or application. Don't record this behavior on the spectrum as if it were your interviewee's, but consider how you might incorporate it if it seems to have a significant impact. One way might be to add another variable or two dealing with whether a device or application is shared, and the extent to which a third party's data or preferences interfere with your interviewee's tasks.

Missing data

It's possible that you will encounter missing data, especially in your earliest interviews or as your interviewing skills improve. If your notes don't contain the right information to help you place an interviewee on one of the scales, the best option is to avoid introducing potentially incorrect assumptions by not placing that interviewee on that spectrum at all. You might feel the need to fudge this a bit if your interview set is thin. Only do so if you're very confident in your conjecture and know that no major business decisions are dependent on the personas; otherwise, consult with your stakeholders to decide whether to get a little more data or go with your best guess. If you feel you must speculate about where to put an interviewee, indicate this visually, as shown in Figure 11.8; this will help you see what parts of your conclusions are built on shaky data.

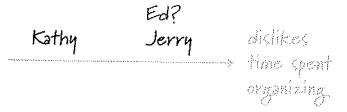


Figure 11.8. If you must incorporate questionable data, indicate it visually so you can see where your analysis may be weak.

WHAT YOU SHOULD HAVE AT THE END OF THIS STEP

Before going on to identify patterns, make sure your display captures every interviewee in this role in relation to every variable you can fill out. If your data has a lot of holes in it, consider whether you need to do more research. Be sure that the whole team agrees with the placement of each interviewee. Capture the current state of your diagram; a digital camera is a convenient way to capture the contents of a whiteboard without doing a lot of tedious copying.

Exercise

For the Roomfinder or LocalGuide, map your data (or the data supplied on the Web site) against your set of variables.

Step 4. Identify patterns

The whole point of developing a set of variables and mapping your interview data to them is to facilitate the identification and verification of potential behavior patterns. What comes out of this step is a set of proto-personas: two or more behavior patterns defined by the correlation of multiple variables. Patterns are usually easy to spot in narrow roles (especially with a small set of interviewees) and more difficult to identify in unspecialized ones.

SPOTTING POTENTIAL PATTERNS

You might have a hunch about what the patterns are, but you might also have to look hard. Look at your entire set of variables at once. Rather than trying to find large clusters of people, start by looking for two or more people who frequently occur together. As in Figure 11.9, circle them with a colored marker so it's easy to see where their behavior and attitudes coincide. They almost certainly won't occur together on every variable, but if

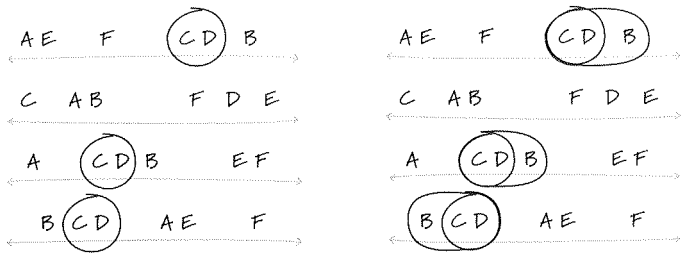


Figure 11.9. Start by circling the two people who show up together most often. Next, expand your circles to include anyone else who seems to appear with them most of the time.

they show up together on more than a third of the variables, they might represent a pattern. Step back and see if anyone else seems to be occurring frequently with your first pair. If so, expand your initial circles to include them. You might then find that these people appear with one of your original pair, but not the other, on some variables; circle these, too.

If the people in your possible pattern don't show up exactly together, but aren't all that far apart on the scale, these variables might still provide insight. Indicate these more tenuous relationships in a way that lets you see them, but with less emphasis. A dotted line is one good way to do this, as shown in Figure 11.10.

Figure 11.10. Use a dotted line to indicate more tenuous relationships.

Once you've circled everything that looks like it might be part of this first pattern, look at all of the variables where these people occur together. Try to explain how the variables are related (see Chapter 10, the section "Explanations and relationships," for more on explaining relationships in your data). Do you see one or more of the variables that seem like they might be the root cause for the other behaviors you observed? How is each variable related to at least one other? Is there a plausible explanation for that relationship, or does it seem like a coincidence due to your small sample? For example, it makes sense that a shopper's budget would affect how much time she spends comparing car models, but it's harder to believe that the amount of time she spends would be affected by the city she lives in.

After you've identified the variables that are legitimately related, consider the variables where these people did not appear together. Do any of them seem like they should be related, even though the results seem inconsistent with the rest of the pattern? If so, does that mean your potential pattern isn't really valid, or is there some reasonable explanation for the apparent mismatch?

Let's look at an example to see how this works. The mappings in Figure 11.11 are from interviews with investment advisers. As is often the case with narrowly defined roles, an apparent pattern is easy to spot: Sandra and Anton appear close to one another more often than not. Carlos and Tom are often close by, as well, but differ with respect to several variables, so their relationships to this possible pattern are unclear so far. Both Sandra and Anton:

- Are less inclined to do extensive, independent research on stocks
- Rely on a small number of tools for the research they do
- Believe it's important to speak in terms clients understand
- Spend more time educating their clients
- Are well versed in Modern Portfolio Theory (MPT), which focuses on optimizing portfolios through the weighting of various assets
- Are experienced
- Have a small number of large accounts
- Tend to focus on diversification and risk management rather than riskier, potentially higher-return investments
- Focus more on the client's goals and relationship than on constant portfolio tweaking
- Use a handful of portfolio structures with limited customization
- Trade less often
- Communicate less often with their clients
- Are likely to provide advice beyond the allocation of the assets they manage
- Are inclined to argue with clients who want to act on "hot stock tips"

So, how might these variables be related? These two interviewees see themselves as stewards of their clients' wealth, and their grounding in MPT leads them to believe that proper allocation of assets across a diverse portfolio is the best way to balance risk and return. Their focus on a client's life goals allows them to find the proper allocation of assets. Given their long-term view, it makes sense that they would be reluctant to make frequent trades in response to client worries about short-term market fluctuations. Less frequent trading also explains why they're less likely to communicate often with their clients. They don't feel the need to do constant research because they're responding to trends rather than individual bits of data, so the analysis they have access to covers most of what they feel they need to know. They believe educating their clients and talking about financial matters outside the portfolio encourages long-term thinking. Clearly, there's a strong relationship among most of these variables.

Two of the variables are a bit more difficult to explain. Does having a lot of experience lead Anton and Sandra to take the long view? Maybe, but maybe not. Denise is also very experienced but has a different philosophy. Carlos seems to share many similar views in spite of his much shorter tenure. This variable doesn't really seem to fit. The fact that Sandra and Anton each have only a few, large accounts might explain how they have the time to look beyond the portfolio, but this variable also seems to have a tenuous relationship with the rest of the pattern.

The differences between Sandra and Anton don't seem to contradict anything in the pattern. There's no clear reason that working in a team would affect the behaviors and attitudes they have in common. Their differing views on technology don't seem related, either.

When you're confident you've got a solid pattern, capture the characteristics of that pattern based on the variables that define it. Don't worry about the variables that aren't included in the pattern. This list of common characteristics is your first proto-persona. In the preceding example, the list minus the two characteristics that don't seem to have a clear relationship would be your proto-persona.

Once you have one pattern captured, look at your mapping and see if you can identify another pattern. The things that define the other patterns are often based on the same variables that defined the first, so it's easiest to start by looking at those. Find another pair and circle them in a different color. Look for others who might be part of the pattern, see if you can explain how the variables are related, and turn this into another proto-persona.

In the financial adviser example, the obvious thing to do is to see which people occur together and are clearly different from Sandra and Anton. Again, it's pretty easy to see in Figure 11.12 that Denise and Hugh appear close to one another more often than not.

Both Denise and Hugh:

- Are inclined to do extensive, independent research using many tools
- Use a fair amount of jargon, even if clients don't understand it
- Spend little time educating their clients
- Are only somewhat versed in Modern Portfolio Theory
- Tend to focus on higher-return investments over diversification and risk management
- Focus less on the client relationship and more on constant portfolio tweaking
- Customize extensively
- Trade often
- Communicate often with their clients
- Seldom provide advice beyond the allocation of the assets they manage
- Are inclined to make portfolio adjustments at the request of clients

Unlike Sandra and Anton, Hugh and Denise believe clients hire them to make the most lucrative investment choices by picking the right stocks and buying and selling at the right times. They use plenty of jargon to reinforce their expertise. They know some diversification is a good thing, but they're reluctant to buy mutual funds and index funds, as these don't require their skills. Denise and Hugh use a variety of sources for extensive research. They have little time or inclination to educate clients or deal with broader financial issues. They do communicate often with their clients, though, since frequent trading makes this necessary.

The list of common characteristics that define a clear pattern is your first proto-persona.

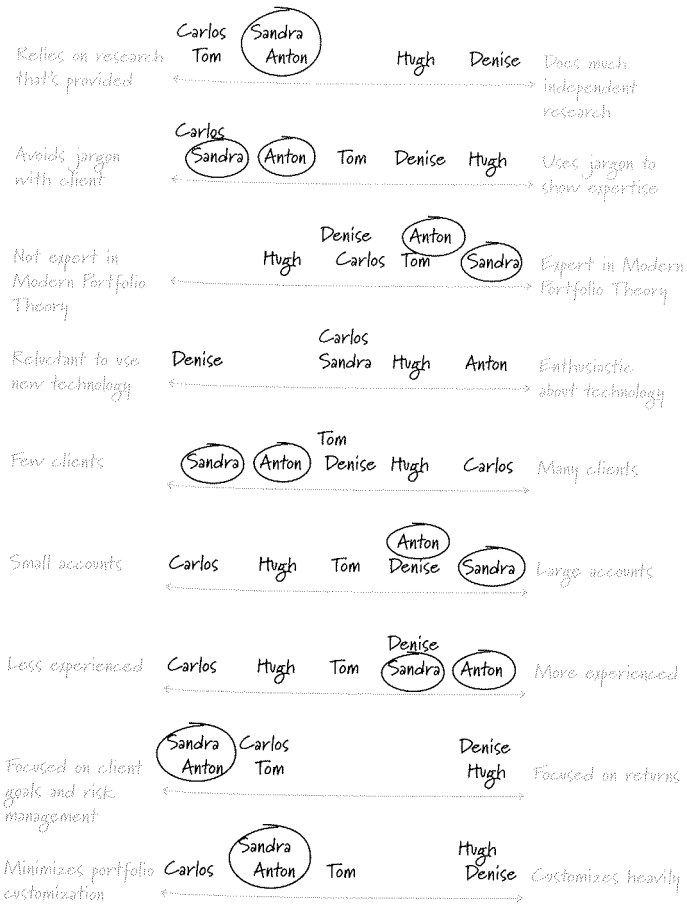
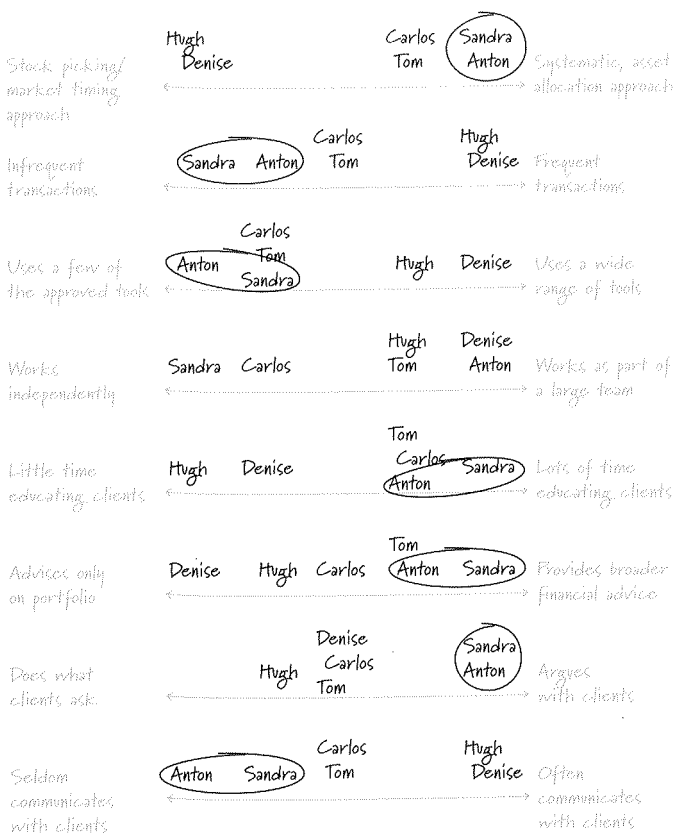


Figure 11.11. A possible behavior pattern among investment advisers.



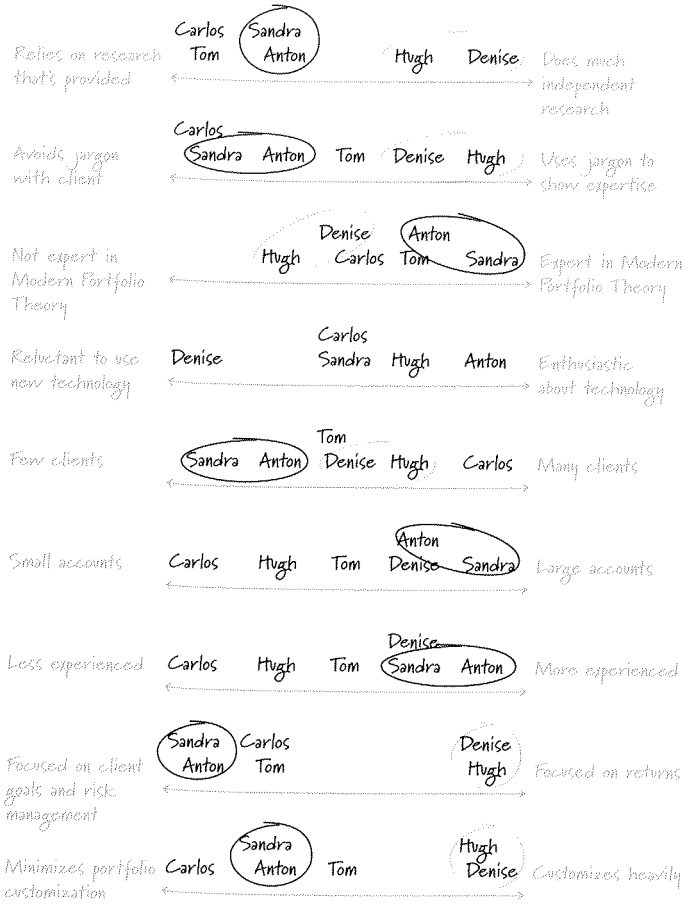
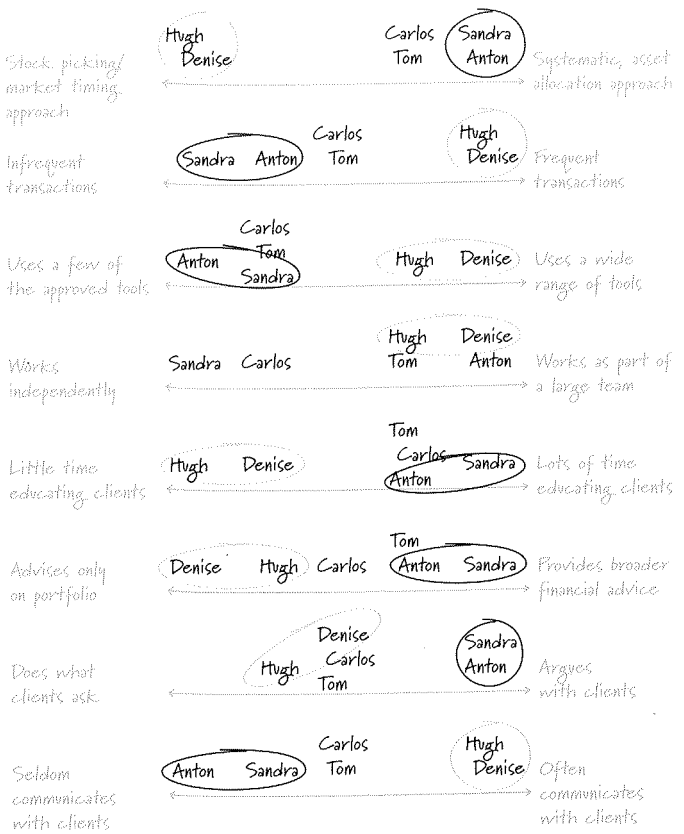


Figure 11.12. A second potential pattern among the financial advisers.



There's a clear explanation for most of the ways in which Hugh and Denise are similar. The fact that they both work in a team setting doesn't seem particularly related to the rest, however, so that may not be essential to the pattern. Denise's reluctance to use new tools doesn't seem to invalidate the pattern. Hugh is a bit less experienced than Denise, but because the difference in experience doesn't seem to affect either person's behavior, perhaps it's not essential to the pattern, either.

Keep going until you don't find any more potential patterns. It's common to find only two or even one in a very narrow role, but you might find several in a broader role. If you have some interviewees who don't quite fit any of the patterns, it may not be a problem, but it is cause for closer examination.

HANDLING OUTLIERS

If you have an outlier who appears completely unlike the other interviewees, consider the composition of your interview sample. It's safe to ignore any outliers who simply don't fit your target market. These are recruiting errors; it's best not to map such people at all unless you're truly desperate for data. If the outlier fits your recruiting criteria but is simply very different from your other participants, talk with your project owner to determine whether such people are interesting enough to warrant extending your research. Your project owner should include other stakeholders in the decision as needed.

It's normal to have a couple of interviewees who mostly fit a pattern but have one or more unique needs. For example, imagine that you interviewed a group of managers who travel a lot and depend on constant access to their communication tools. If you have one or two people who are mostly like that pattern but have assistants, this introduces some significantly different behaviors and needs with respect to telephone communication, so this should be a separate persona.

Carlos the financial adviser is another, more complex example. He seems philosophically aligned with Sandra and Anton, and most of his actions are consistent with this. However, he's more likely than they are to act on a specific stock purchase request from a client, which also makes him more likely to trade often and communicate with his clients about that trade. This happens because he has many more accounts and less experience than Sandra and Anton, so he doesn't have the confidence, skill, or time to argue his clients out of short-term thinking. Does Carlos represent a distinct persona? Big differences in skill level and quantity of data objects are usually significant design considerations, so as long as you're confident that Carlos isn't a fluke, it would be best to develop an additional persona.

It's also common to have one or two interviewees who are a little like one pattern and a little like another, but don't have any unique characteristics. Such people would be completely happy with a product or service designed for the people who fit the patterns, so they don't need to be represented as distinct personas. For example, Tom is a financial adviser whose philosophy and behavior seem like a blend of Sandra and Anton with Hugh and Denise. Unlike Carlos, he doesn't appear to have any unique needs that wouldn't be satisfied by designing for the others, so you wouldn't need another persona to represent people like Tom.

WHAT YOU SHOULD HAVE AT THE END OF THIS STEP

Identify patterns for each role before moving on to the next step. At this point, you should have a set of pattern descriptions, each comprised of perhaps a dozen characteristics. Make a note of any characteristics that seem questionable.

Table 11.4. **Example summary behavior patterns for financial advisers.**

Senior asset allocators	Junior asset allocators	Stock pickers
– Limited research with a few tools	– Limited research with a few tools	– Lots of research, many tools
– Speak in terms clients understand	– Speak in terms clients understand	– Lots of jargon
– Spend time educating clients	– Spend time educating clients	– Little client education
– Understand Modern Portfolio Theory	– Understand Modern Portfolio Theory	– Somewhat versed in MPT
– Experienced	– Relatively inexperienced	– Focus on higher-return investments over diversification and risk management
– (Small number of large accounts?)	– Many small accounts	– Extensive portfolio customization
– Diversification and risk management focus	– Diversification and risk management focus	– Frequent trades
– Relationship focus	– Relationship focus	– Frequent client communication
– Minimal portfolio tweaking or customization	– Minimal portfolio tweaking or customization	– Seldom advise on anything but portfolio
– Infrequent trades	– Somewhat frequent trades	– Don't argue with client requests
– Infrequent client communication	– Somewhat frequent client communication	– (Variable experience?)
– Advice beyond portfolio	– Little advice beyond portfolio	– (Work in a team?)
– Argue when necessary	– Argue when time and skills permit	

If you have a large number of proto-personas, you might want to give each one a temporary descriptive designation (such as the bargain hunter, reluctant shopper, social shopper, and so forth); this will make it easier to keep track of them while you flesh them out.

Exercise

Use the mapping from the previous exercise to identify the behavior patterns.

Step 5. Define goals

Engineers, product managers, and designers often spend so much time thinking about tasks that it's easy to lose sight of users' goals. You can spend a lot of time improving the usability of your file-management dialog, or you can realize that managing files has nothing to do with your user's goal and get rid of the task altogether. That's why the method in this book is called Goal-Directed Design; persona goals drive every solution.

Goals are an integral part of personas; the clear focus they provide is a big part of why personas

are so effective as design and communication tools. An explicit statement of a persona's goals is useful in everything from prioritizing features to determining what piece of information gets emphasized on the display.

For each of the proto-personas, there's usually at least one goal evident from the mapping exercise. To fill out the rest, you'll need to refer back to your notes for the interviewees who are the basis for the persona; see the "Goals" section of Chapter 7 for more on identifying goals from an interview. Frustrations, observed behavior, and answers to questions about what makes a good experience are all good sources for goals. Most personas have three or four goals. You can articulate these either before or after you outline each persona's characteristics in detail.

GOAL TYPES

Getting goals at the right level is tricky. Overly ambitious goals are hard to design for, but if a goal isn't ambitious enough, it won't cause you to stretch the design. One way to help get your goals at the right level is to think about them by type. The boundaries between these types are fuzzy, but they're meant as a way to calibrate your internal "goal-appropriateness meter," not as a strict classification system.

Nearly all of us share a set of **basic human goals**, such as being safe and healthy, being treated with respect, being comfortable, and feeling good about ourselves. It's reasonable to assume that these are true of any persona, but because knowing that people want full bellies and warm feet doesn't help you design a better e-mail application, it's seldom necessary to state them explicitly. Once in a while, though, you may have a persona who feels more anxiety about one of these goals than most people do. For example, someone unfamiliar with technology might be uncomfortable using a computer in a public place for fear or embarrassment. In these cases, stating "avoid embarrassment" as an explicit goal underlines a fear that will influence how you design.

Most people also have certain **life goals**: retire at age 60, raise wonderful children, be a movie star, graduate from college, be the best chess player in school, discover a new species of plankton ... the list is as varied as you can imagine. Fascinating as such goals are, they're seldom relevant unless the product or service has the potential to help accomplish them. A financial-planning product, for example, could help someone retire at a particular age, but wouldn't do much to help her improve at chess or find an undiscovered protozoan. It's unusual to have more than one persona goal at this high level, and many personas don't require a life goal.

Most persona goals should be just a notch below life goals. Since "product goals" would be a confusing term, I call these **end goals**: aims the personas could accomplish, at least in part, by using the product or service. Examples might include things like taking better photos, beating a sales target, or seeing trends before they become problems. It's typical to have two or three end goals for each persona.

A good end goal is usually something the product can *help* people accomplish, but can't entirely accomplish *for* them. For example, a product can help someone be more organized by providing reminders, tools for managing lists, and so on, but it can't accomplish that without some effort on the user's part. If the product can accomplish the goal entirely on its own, there's a good chance (though not a guarantee) that the "goal" is really a task or a product feature.

To determine whether what you've articulated is really a goal, ask yourself, "Why?" For example, imagine that your teammate has proposed that Ted's goal is to "get driving directions verbally." You ask, "Why does Ted want to get driving

directions verbally?" Your teammate says, "So he doesn't have to look at the screen while he's driving." When you ask why Ted doesn't want to look at the screen, your teammate says, "So he can keep his eyes on the road and not get into an accident." Now you're getting somewhere! Keeping Ted's eyes on the road is something you can help with, but can't be entirely responsible for.

Phrasing can be a clue that you don't have an effective goal. Any statement that specifies a mechanism, such as "Do X wirelessly," is probably both a task and a feature but not a goal. Anything phrased as "Do X more easily" is almost certainly a task.

In addition to end goals, it's often a good idea to articulate an **experience goal** for each persona; this describes how the persona wants to feel while using the product or service. This is arguably an end goal, but I find that describing it as a separate type helps people remember to consider feelings and aspirations. This is especially important in branded visual or industrial design. Someone who wants to feel like her money is safe, for example, will respond better to a bank Web site that uses navy blue and white than to one that uses orange, purple, and lime green.

Goals are most memorable and effective when they're short, pithy, and expressed in words the persona would use. Feel free to quote directly from your interviewees if someone phrased something in a memorable way. Start each goal with a verb, and make it a sentence; "avoid hassles" is much more clear than "no hassles." Try to convey the hope, frustration, or other emotion behind the goal. "Maintain a good work/life balance" sounds clinical. "Have a life" hints at a touch of frustration and implies that the balance is skewed too far toward work right now. "Clear my desk by 5:00" implies that most tasks can be accomplished in a day and illustrates a nine-to-five, work-stays-at-the-office attitude. "Get everything done," by contrast, lacks this nuance.

WHAT YOU SHOULD HAVE AT THE END OF THIS STEP

When you're done, you should have about three or four crisp, memorable goals for each persona, including any customer or served personas. If you have a lot of goals, consider whether they're really tasks, or if they're all necessary. If you only have one or two, keep looking, because you're probably missing something.

End goals are aims the personas could accomplish, at least in part, by using the product or service.

Exercises

1. Develop goals for your LocalGuide or RoomFinder personas.
2. Critique and improve on the following sets of goals:

FOR AN ONLINE SHOPPER:

- Register easily
- Save money
- Fun

FOR A RECEPTIONIST:

- Answer every call
- Transfer calls easily
- Be seen as a professional
- Get that modeling gig

FOR A TEENAGE MUSIC LISTENER:

- Keep my music organized
- Enjoy my music
- Rebel against my parents

Step 6. Clarify distinctions and add detail

You can see that it will take some effort to turn your proto-personas into the real thing; they still lack details about behavior, frustrations, environmental factors, and other information needed to make them effective design and communication tools. This next step involves not only filling out such details, but also sharpening the distinctions among the personas; the more distinct they are, the easier they are to remember and use.

Start by referring once more to your mappings. You'll see at least a few variables that weren't critical to defining the patterns, but may still represent important information. Demographics, such as age or gender, are often among these leftovers, but comfort with technology or a few other behavioral variables might also be unaccounted for. Because there was variation with respect to these behaviors, that range should be represented in your persona set. You need to determine which of these various characteristics best matches which pattern. There are two criteria that drive these decisions: which characteristic is most believable with which pattern, and what choices will make the personas the most distinct and useful as a design tool.

For example, which of the following should be female: someone who frequently sends photos of the kids to relatives, or someone who seldom does? Even if the data doesn't show any strong link to gender, most people would assume the persona sending photos is female, since women are generally seen as more likely to stay in touch with family. The other persona will therefore be more distinct (and easier to remember) if it's male.

This is where the research purists usually jump out of their seats in shock and say, "But...you're just *assigning* these characteristics with no regard for the data?!" Yes and no. Yes, you are just assigning these characteristics based on what will make your characters more believable and memorable, but no, it's not without regard for the data. These characteristics aren't coming out of nowhere—they're typical of the sample. Your data is what told you there's no apparent relationship between the assigned characteristics and the ones that are essential to the behavior pattern, so there's no contradiction. It's important to remember that although personas do represent key patterns in the research, their function is to promote empathy for users and to facilitate discussion about design decisions, not to be exact statistical representations of the user population. It's entirely possible that men are two percent more likely to be the ones keeping in touch with families by sending photos, but this is irrelevant for the purposes personas are meant to serve.

You also have to think about any potential problems with an assigned characteristic, which may involve consultation with your project owner. In the financial adviser example in Table 11.4, the stock-picker pattern indicates variable experience because there was inconsistency with respect to this characteristic. The fact that experience level doesn't seem to cause differences between Denise and Hugh means it can be an assigned value. What experience level will be more believable and more useful as a design tool? The other two patterns cover the range of experience from low to high, so there's not a gap to fill, and industry demographics don't provide a clear answer. However, if you imply that anyone who relies on market timing is inexperienced, it may make stakeholders less inclined to take that part of the user population seriously, so it might be best to lean toward experience.

After you've accounted for all of the variables, fill in additional details. Review your notes for the interviewees who contributed most heavily to the pattern. Start with anything that's common to all of the relevant interviewees. You probably won't find 100 percent overlap, so you will again have to fill in gaps by deciding which details are most typical of the pattern and most distinct from other patterns.

As with every step of this process, collaboration will help you stay as true to your data as possible. Each team member should have interview notes available. One team member should have a marker in hand to capture the agreed upon characteristics. When someone proposes a characteristic, consider how well it fits the data or, for assigned characteristics, what is most believable based on other data sources and stakeholder perceptions. Also keep your eyes open for anything that crosses the line into negative stereotyping.

COMPONENTS OF A PERSONA

The idea is for each persona to answer every research question described in Chapter 7. There will be details unique to the personas for each design problem, but several categories of information are important in any good persona. Whether you capture these as bullet points or prose is up to you; bullets are usually a better starting point for team collaboration, since crafting a sentence by committee can be contentious.

Behaviors

To understand how a product or service can improve someone's life, you have to understand what that person's life is like now. Every user persona (but not customer or served personas) should incorporate a "day in the life" description of current behaviors relevant to the design problem. Note that "day in the life" is a loose term; the relevant behavior might only happen during the course of an hour. What tasks did people like this perform? How? Where do they start, what are their subsequent actions and decisions, and what affects those? What reasons can you provide for this behavior? Some of the details presented earlier in this chapter for camera user Katie Bennett, for example, would look like this:

- 100 to 300 shots per outing
- Takes time composing most shots
- Occasionally captures subjects that might move or change (animals, light)
- Starts with auto settings (auto focus, metering)
- Brackets exposure if she has time

Chances are good that the interviewees who contributed most heavily to the pattern weren't quite identical in their process, so use the behavioral details that best reinforce the rest of the pattern. For example, imagine that your persona is a car buyer who tends to do a lot of research. Of the five interviewees who contributed most to the pattern, all read articles from a variety of sources. Three only read information online. The other two also bought automotive magazines. Which detail best fits the behavior pattern? If what you're trying to

It's important that people accept the personas as a description of the current state before you start talking about the implications for the future.

convey is the extensive nature of the research, then mentioning both online reading and purchased magazines will be more effective.

The exact situations you describe for your personas don't have to be identical to those in your data as long as they're consistent with the behavior and motivations. For example, parents in your sample may have mentioned taking photos of soccer games and school plays, but it doesn't matter if your persona's child is on the baseball team and giving a piano recital—in either case, the persona is recording important events that other people can relate to.

Cover each type of current persona behavior that the product or service *could* accommodate; just as in your interview questions, don't limit yourself to current functionality. Describe the whole ecosystem of which your product is a part. If your current product is an e-mail system but the persona's conversations are usually carried out over e-mail, voicemail, and live conversation, describe the interaction among these tools. However, don't turn this into what the persona would want from a new product. It's important that people accept the personas as a description of the current state before you start talking about the implications for the future.

When you're developing an entirely new product category, describe behaviors that are as close to the purpose of the product as you can get. For example, if you were designing a tiny handheld television device and content service before anything similar existed, you would describe the related behavior you observed in your interviews: how your personas watched television at home, what kind of information or entertainment needs your personas had when not at home, and how your personas used other mobile devices.

If you have difficulty coming up with these descriptions, it's a sure sign you didn't get enough detail in your interviews. You will need to fill in any gaps by calling up your interviewees or at least talking to a subject matter expert.

Frustrations

Along with every set of behaviors comes a set of frustrations. Even if their processes differ a bit, the people who make up a behavior pattern usually have similar problems. Review your notes for each person to see what they mentioned. Look over the description of the behavior and recall what about the process annoyed your interviewees.

Environment

It's usually worth mentioning (and sometimes illustrating) anything about the persona's surroundings that might affect usage. For business tools, this sometimes includes the industry or size of company where someone works. Factors for most products include interruptions or lack of privacy, as well as noise, lighting, distance from the screen, or other ergonomic challenges. Environments involving temperature extremes, moisture, and mess may be important to mention if you're designing a physical product. The personas aren't the only opportunity to represent such things, but they're a good way to highlight problems in any of these areas.

As with behaviors, you may have seen variation in environments among the interviewees contributing to each persona. Consider which environment details are most believable and best reinforce the persona's other characteristics.

Skills and capabilities

Each persona includes some description of skills, experience, and, when useful, physical capabilities. This often includes a mention of relevant education or where someone worked before coming to his current position. You can also describe specific tasks or concepts someone has difficulty with. Your field study data should give you a good idea of what's typical, but consult quantitative studies or subject matter experts as necessary.

Feelings, attitudes, and aspirations

When you did the user research, you got a visceral sense for whether interviewees enjoyed various activities or viewed them as chores. You might also have a good idea of what their hopes are, how they see themselves, and how they want to be seen. This information can help stakeholders understand that an existing product or service is making people miserable. It can also help everyone on the product team see how emotions, self-esteem, and other "touchy-feely" qualities affect how people perceive brands and interact with products. This understanding is important to interaction design and essential to visual and industrial design. You can describe feelings and aspirations directly. You can also mention well-known products and services to reinforce those feelings, or use a collage to depict the persona's interests and personal style.

Interactions with other people, products, and services

Outline the ways in which the persona's tasks involve other people, products, and services. If you can't think of any, keep thinking; the vast majority of products and services involve some negotiation or interaction with other human beings, whether this is as complex as online collaboration or as straightforward as opening a document sent by another person. Even the lowly alarm clock may involve negotiation about what time you're going to get up and what music you and your significant other can both tolerate at six in the morning. Describe shared information and tasks, dependencies, and the ways in which other people drive your persona crazy. Diagrams can sometimes be useful for explaining relationships.

Demographics

It's impossible to look at another human and not have some mental estimate of age, gender, ethnicity, and perhaps other demographic data. For this reason, your personas won't seem real if they lack this information. You may have a good sense for the demographics from your field studies, but don't hesitate to pull in whatever quantitative data you have available.

You may be tempted to use the persona set to paint the world as it "should" be. For example, most people expect a CEO in any Western country to be a white man over 50, and they'd be correct more often than not. Much as I believe this

shouldn't be the case. I know that many people will have more trouble accepting a persona who does not fit this profile. Any part of your persona that feels wrong to stakeholders will cause them to question the validity of every other part, which can make the whole design process more difficult. You should certainly make your persona set as diverse as possible, but use demographics that are typical of the market.

If you, like many designers, feel strongly about accessibility, you may be wondering how your persona set can account for differing abilities. It may sound insensitive, but personas are seldom the right tool for this unless accessibility is a problem for a large number of your users. It would take so many personas to account for the range of differences (such as in sight, hearing, speech, dexterity, learning, and mobility) that these would overwhelm the number of personas for most projects. Incorporating those differences into the other personas would also make them demographically atypical, causing them to become ineffective. It's better to incorporate these important issues into the design process in other ways, such as by following appropriate guidelines, having your design reviewed by accessibility experts, and incorporating a wide range of users in testing.

Relationships among personas

No doubt you've noticed that every persona example used so far has been an individual. This is because humans think and act as individuals, and most products are used by only one person at a time. However, there are instances when multiple people use a product together, or at least attempt to; battling over the television remote may come to mind. Technology also serves to mediate some interactions between people, such as on a social networking site or video chat. In these cases it's important to acknowledge that more than one mind, and perhaps more than one hand, guides the interaction with the product, and that the relationships among people can affect their behavior.

This issue was especially vivid on a project for the J. Paul Getty Museum. The design team found that for many visitors, a trip to the Getty Center was partly a social occasion; friends and families visited not only to enjoy and learn from the art, but also to take in the beautiful architecture and gardens together. If one visitor stopped at a kiosk, the others would be likely to stop, too. The interests of the group would drive the interaction. Two adults together might enjoy wandering through the digital collection at length, while an adult visiting with her family might be distracted from browsing by a squirming child. To address these different group dynamics, the team arranged their personas to represent typical groups of visitors: a young couple, a small group of women at the Getty for a leisurely outing, and a family with two children. The resulting scenarios could then address, for example, the tug-of-war between a parent hoping for an enriching cultural experience and a child who wants to find the nearest food.

You might consider putting your personas in the same family or company if your product will be shared among family members or span several roles. There are pros and cons to this, of course. Having the personas exist in a shared environment makes it easier to express relationships. It's also convenient for storytelling later on, as you develop scenarios to drive the design process. Shared environments can also help emphasize the contrasts in user needs among companies of different sizes or types (for more on this, see the sidebar on **organizational archetypes**).

However, putting all your personas in one group can be limiting if you saw variation in your data based on things like family structure, industry vertical, geography, or company size. Sometimes it's possible to address company size and geography issues by having the personas in different offices of the same company, but don't obscure important differences in your data for the sake of easier storytelling.

Organizational Archetypes

Just as there are patterns in human behavior and demographics, there are patterns in organizational characteristics and needs. You might have found, for example, that government agencies and private businesses handle their accounting rather differently, and that this has led to some important behavioral distinctions in your personas. In such a case, you'd place your personas within two distinct **organizational archetypes**, which are simply persona-like models representing types of organizations. Each organizational archetype generally gets a name and a brief one- or two-paragraph description covering the topics most relevant to persona behavior. Organizational archetypes are not always necessary, but when they are, you'll always have at least two.

Here are examples of two brief archetypes for a restaurant reservation-and-table management system; it's possible to do slightly more elaborate archetypes for complex design problems:

Pizette
Pizette is a small but hip neighborhood restaurant run by its founding chef. To keep up with popular demand last year, Pizette had to institute a reservation policy for its 15 tables, but its ten bar seats remain available on a walk-in basis. The hostess and three servers all work from a paper reservation book, wait list, and laminated-paper seating chart to estimate table availability. The bartender, who also serves food for those seated at the bar, doesn't use the system. Although the regular hostess has things under control, chaos ensues if she's out sick or away from her post and someone else tries to handle a reservation or table assignment. All tabs are figured manually and rung up on the cash register.

Down Home
Down Home is a fast-growing regional chain of 56 family-oriented restaurants in six states. Each restaurant has between 30 and 50 tables with a manager, one or two hostesses, and three to six servers on duty at any time. Most accept reservations only for large parties; the hostesses use a paper wait list when things get busy. The current touch screen system allows the hostesses to assign tables and estimate wait times. The servers use one of two touch screen kiosks to enter orders and ring up tabs.

Note how these two examples contrast: The organizations are different sizes and have entirely different issues with managing reservations and table occupancy. Quick organizational sketches like these help provide context for a set of personas so you don't have to explain the environment in each persona's description. More than this, they serve to highlight for stakeholders the connection between organization type and user behavior.

Organizational archetypes are persona-like models representing types of organizations that drive difference behavior.

Names

Every real human has a name; most of us, except for the occasional eccentric rock star, have at least two. Personas are most effective when they seem like real people, so each persona should have a realistic first and last name. Never use silly or alliterative names, such as Eagle-Eyed Ed, Shirley Shopper, or Fannie the First-Time User. These undermine the value of your personas by emphasizing that they're not real. If you don't take the personas seriously, no one else will.

That said, you can use a name to reinforce something about a persona's personality as long as you're subtle about it. People will be surprised if a construction worker goes by William Smith III, but not if the head of a successful law firm does. A persona meant to seem like the friendly and approachable sort might be Tom or Tommy rather than Thomas. This is a fine line to walk; be careful not to use stereotyped names. Also consider whether a name is appropriate to the age of your persona; Madison was a popular name for American girls starting in the 1990s, but Edith was far more popular in the 1950s.[5]

Baby-name books are one source of name ideas. The local telephone directory is even better, but may not be a good source of names from other countries. Searching for international names online (e.g., typing "Finnish baby names") generally yields plenty of options. Choose names that are easy for your team and stakeholders to remember, though; names that are long or difficult for team members to pronounce tend not to be adopted. Western audiences may get confused when family names come before personal names, so you may want to transpose these.

Don't use the names of any product team members, interviewees, or anyone whose name carries strong associations; a persona at Microsoft shouldn't have either Bill or Gates in its name. Also avoid names that might be confused with states or cities (such as Georgia or Savannah), or have strong associations (such as Disney, Porsche, or Clinton).

What not to include

Persona creation can be fun, so it's easy to get carried away. Don't insert a bunch of fictitious details about your personas unless you have a clear argument for why they're important; for most products, it almost certainly doesn't matter what color the car is, what the dog's name is, or what show is currently on the television. One or two of these touches can be helpful in polishing the narrative later, but this sort of thing can take over your persona descriptions if you start adding it now.

WHAT YOU SHOULD HAVE AT THE END OF THIS STEP

When you've filled out each persona, you should have a longer bullet list for each that includes activity descriptions, frustrations, skills, environment, demographics, feelings and attitudes, and names. Customer and served personas should have frustrations, concerns, and company or family demographics, but not activity descriptions. Some people may be most comfortable beginning to express some of this detail in prose.

Exercise

Fill in details for your RoomFinder or LocalGuide personas. Be sure to cover behavior, frustrations, skills, environment, relationships, feelings, and aspirations. Give each persona a name.

5. If your personas are American, there's a great source for this information (and a nice bit of information design) at http://www.babynamewizard.com/namevoyager/lnv0105.html.

Step 7. Fill in other persona types as needed

Once you have a rough outline of every persona that seems necessary from a design perspective, stop and ask yourself how stakeholders will receive your persona set. If stakeholders tend to confuse customers with users, then a customer persona may be necessary if you don't have one yet. You might need a served persona if you're worried that product team members may forget about the people their users are supposed to help.

The more difficult situations arise when stakeholders expect to see types of users you haven't represented as personas. If you're lucky, these are just people who differ slightly from your personas with respect to job title or some other characteristic. Otherwise, you might find yourself arguing about a type of user who simply didn't exist in the data, or who is so different from other users as to be a bad design target.

SUPPLEMENTAL USER PERSONAS

Stakeholders occasionally have strong assumptions about the importance of certain types of people, even though your research shows that such people don't have unique characteristics from a design point of view. Although it's best to limit your persona set to the smallest number of personas you can use to express the behavior patterns you observed, you won't get anywhere if people believe your persona set is missing critical parts of the user population.

Consider adding a **supplemental persona** or two if you believe you won't convince stakeholders that your personas cover the necessary ground. Though they're not useful from a design perspective, these are still realistic portraits drawn from the data. For example, I've designed multiple health care products that were used primarily by nurses, but also used occasionally by physicians who did exactly the same things in the same ways. In each case, there was a strong belief among some stakeholders that it was important to consider physicians in the design, so my team trotted out a supplemental physician persona to demonstrate that we were considering his needs. We quietly ignored the unnecessary personas during design meetings, and everybody was happy.

Of course, supplemental personas introduce a small risk that stakeholders will want the wrong users to be the design focus, so think twice before introducing them, and make sure they're based on good data just in case.

NEGATIVE USER PERSONAS

If stakeholders are focused on a type of user who is so unlike the rest of the market that designing for them would make the product unappealing, you may need to develop a **negative persona**. With enterprise systems, your internal users might be very loud (and hard to ignore because they're just down the hall), but their needs are often quite different from those in the mass market. In the consumer realm, such problematic users are typically at the extremes of the user population, such as very technically skilled users. For example, my team once created a negative persona when an executive wanted to ship a mass-market consumer product but insisted that we please people who could build their own computers. The negative persona made the contrast so clear that the executive immediately agreed it would be a mistake to design for him.

Negative personas are seldom necessary because most groups of stakeholders understand the difference between a reasonable design target and a bad one. If you do decide to use a negative persona, base it on data just as you would your other personas, and make sure it's not a caricature. Present the negative persona as a choice, i.e., "Here are the trade-offs we'd be making if we focused on this persona," rather than,

"We can't focus on this persona because it will kill the product." Stakeholders can see that for themselves.

NONEXISTENT PERSONAS

At some point, you may run into a stakeholder who insists on a persona you couldn't find in your data. This usually happens because someone got attached to a product idea before doing any research, and is trying to justify the idea by retrofitting personas to it. On one project, for example, a client wanted to build a software development application for users who were deficient in a particular skill. The team couldn't find any such people in their research; new programmers were all being trained in that skill, and experienced programmers had either gotten training in it or gotten out of programming entirely. Even if there had been a market window at one time, it appeared to be closed. The design team expanded their research at the client's suggestion and still couldn't find any such people. However, they found types of users who provided other opportunities, so the client was eventually persuaded to shift the focus of the product.

When a stakeholder insists on a persona you believe doesn't exist, say that although you haven't found any such people, perhaps you simply need to expand your research. Review what you've done so far to find them and ask where else the stakeholder suggests you look. If you still don't find them, any reasonable stakeholder will see that his assumptions were wrong.

WHAT YOU SHOULD HAVE AT THE END OF THIS STEP

If you're lucky, your set may be unchanged at the end of this step. Otherwise, you'll have an extra persona or two that you'll need to present very carefully to avoid having the design get sidetracked.

Step 8. Group and prioritize user personas

By the time you're done outlining your personas, you might have just two or three, or you might have a dozen or more. Now imagine trying to design with all of these personas in mind. Even with just two personas, you may face a dilemma when they each need slightly different solutions. If you've decided beforehand that one persona will win such arguments, the dilemma goes away. This is why it's important to prioritize the personas within each role.

Personas are prioritized within roles because each role needs its own **interface**, with a distinct set of tools and data laid out in a specific manner. Users are most effective when all of the tools they need for a task are close at hand, but none of the tools they don't need is in the way. This is why most people keep the mixer and food processor in the kitchen and the drill and jigsaw in the garage; you'd never use a food processor to build shelves, and hopefully your baking efforts don't require a jigsaw to cut through. The same basic idea is true in software: People who have clearly distinct tasks should have their own sets of tools and not be forced to stumble over everyone else's.

A **primary persona** is the best design target within a role; if you designed a product for the primary, the other personas would be mostly (but not completely) satisfied. You will generate your initial design ideas from the primary persona's point of view. **Secondary personas** have similar needs but require some small difference, such as an extra tool or a different level of sophistication. Once you have a design solution for the primary persona, you'll modify it as needed to accommodate each secondary persona, as long as your modification doesn't cause problems for the primary persona. Supplemental personas (which you might also consider "tertiary") are not considered in the design because they have no distinct needs.

Multiple factors will affect your choice of primary. The first consideration is how representative the primary's needs are. You can follow a process of elimination to determine which persona best satisfies the range of needs. For example, if you design first for persona A, persona B will be mostly happy, but persona C will be unhappy. If you design first for persona B instead, personas A and C will mostly be happy, so persona B is the better candidate. Skill and experience are often factors in this comparison. If you're designing an airport check-in kiosk, should you think first about frequent fliers or about people who have never seen a check-in kiosk before? If you start with frequent fliers, they might swipe a membership card and immediately get a boarding pass based on their usual seating preferences. It could be difficult to add on to that process for a novice. If, on the other hand, you start with the level of instruction and reassurance a novice needs, it's easy to streamline for frequent fliers from there, so the novice is the better target.

However, starting with the lowest skill level can be a bad idea. If you're designing a tool for customer service agents in a call center, efficiency is important because the more calls an agent can handle, the fewer agents are needed. Designing for a brand-new agent would place the emphasis on instruction and support over speed. It would be hard to streamline such complex activities for more-experienced users. Also, agents don't stay new for very long; even if they only stay for a year, they'll be using the system like pros in less than a month.

Also consider breadth of tasks in designating your primary. Sometimes the persona with a slightly broader set of tasks makes the better choice. Consider a nurse persona who works in a general hospital ward, where patients might have nearly any condition, versus one who works in an oncology ward, where she treats only a limited set of conditions. If you were designing a medication delivery system, the nurse persona with the broader tasks would make a better starting point for design because her solution would need to be more flexible. You could then satisfy the oncology nurse by stripping out the options she doesn't need.

Of course, the broadest tasks don't always make the best primary, either, particularly when the person with broad tasks crosses roles. When we redesigned a purchasing system, for example, my team designated the specialized users as primary for each of three interfaces (purchasing, receiving, and accounting). The generalist persona, an administrative assistant who sometimes placed orders, verified their receipt, and approved invoices for payment, was designated as secondary for all three. Starting with her would have put too many useless tools in the way of the specialist users and would have focused us on occasional use instead of intensive, daily use, which was more important to optimize for.

Market proportion or value can also be a consideration. A persona who sounds like a good primary target from a design point of view might be a poor choice if only five percent of the target market is like that persona. If those five percent are potentially worth 80 percent of your revenue, though, perhaps that persona would be a wise choice of primary, after all. However, remember that your personas represent the range of behaviors in your market; some real users will be partly represented by persona A and partly by persona B, so this kind of assessment can be problematic.

Timelines and budgets ideally should not drive your choice of primary. However, in rare cases, it may be that your budget prevents the inclusion of functionality critical to satisfying an otherwise likely primary persona. This might (or might not) mean it makes better sense to target a persona who is easier to satisfy so the product gets traction in the market.

As seems to be the case with most aspects of persona creation, this step is often easier for enterprise applications than with a set of consumer personas. This is partly because tasks and skill level can provide easier decision criteria than attitudes and more subtle behaviors, and partly because the breadth of a consumer persona set provides so many more options. If you can't find a single primary whose needs mostly overlap with every other persona, it's possible that you need more than one product.

If you're designing a Web site, you may be able to find a single primary, but this can be a challenge. Instead, you might need to designate an overall primary for the site, but have distinct primaries for particular sections. For example, consider the following personas for a mid-range auto manufacturer's Web site:

- Lydia, a middle-aged buyer who doesn't want to make a bad deal, but isn't overly concerned about cost. She wants to get a car she loves without putting too much effort into the process. She tends to make buying decisions based on aesthetic and emotional appeal.
- Jake, who reads automotive magazines and wants a new car with tight handling and more valves and horsepower than his buddy's. He sees himself as a rational decision-maker who likes data, though he focuses only on performance information.
- Ryan, a young adult buying his first new car. He's tired of trying to haul his mountain bike and other outdoor gear in the ten-year-old compact car he bought in college. Cost is an important consideration, but he doesn't want to feel like he's getting the budget model.

(Note that in reality, there would be more personas than this, but I'm trying to keep the example simple.) Lydia would make a good **site primary** because nothing about her needs will annoy the others, and her emphasis on emotion and aesthetic will be a good guide for the site's visual design, which has to feel consistent and coherent throughout. Jake's focus on performance data would overwhelm the others. Focusing on cost would annoy Jake and Lydia, and wouldn't even make Ryan entirely happy. However, any specification pages should be aimed primarily at Jake, and cost comparison or financing information could target Ryan as primary.

As you can see, there's no easy formula for selecting your primary. It's a matter of comparing the personas and thinking through the design and business implications of focusing on each. On some projects, the choice of primary persona is really about which is the easier starting point for design. In such a case, the design team should choose the primary, then confidently present that choice and rationale to stakeholders. If, however, choosing one primary or another has significant business implications or will lead the product in different directions, it's imperative that stakeholders participate in the decision. (See the section "Delivering the presentation and leading the discussion" in Chapter 13.)

WHAT YOU SHOULD HAVE AT THE END OF THIS STEP

Before you move on, you should have either prioritized your personas as primary, secondary, and supplemental, or come up with a clear set of consequences for stakeholders to consider if the choice of primary persona(s) is unclear.

Exercise

Prioritize your LocalGuide or RoomFinder personas. Discuss the rationale for your decisions.

Step 9. Develop the narrative and other communication

Because personas are in large part communication tools, you're not done until you've put together the materials you will need to communicate about them. The persona description is the essential communication tool, but there are several others that can be helpful.

The right persona photo can help make the difference between a cold, static profile and a seemingly real person.

DESCRIBING INDIVIDUAL PERSONAS

An effective persona description includes, at minimum, a name, a photo, and a one- to two-page narrative that encompasses each persona's important behaviors, frustrations, environment, skills and capabilities, feelings, attitudes, aspirations, relationships, demographics, and goals. Each persona may also include illustrative quotes, diagrams, or other information.

Photos

The right persona photo can help make the difference between a cold, static profile and a seemingly real person. The photo should, of course, be acceptable from a technical perspective: in focus, well composed, and with good contrast. Just like the persona description, the photo should portray the persona in a sympathetic light and not seem to poke fun in any way. An effective photo shows a likeable, normal person in an appropriate context of use, not a perfectly groomed model in an artificial pose against a white backdrop. While some graphic designers might argue for the latter, it's clearly stock photography rather than a "real" person captured in the course of her normal activities.

It's important that the photo includes a good view of the person's face, since we humans tend to imprint on faces. The image also should not contain anything that doesn't make sense in relation to the persona description. For example, an image that's supposed to be of a physician would seem false with a row of test tubes in the background. Careful cropping can sometimes turn an unsuitable photo into something believable by eliminating the inappropriate elements. Table 11.5 shows some good and bad examples of health care persona photos.

It's usually possible to find a reasonable set of persona photos using a stock photography service, though you might need to look in more than one place. (You won't always be able to get a perfect persona photo, though; the photo of Katie Bennett earlier in this chapter, for example, would ideally not show her face partly obscured by her camera.) Your team or marketing department may already have a stock collection licensed, so start there. Traditional stock services like Getty Images can

Table 11.5. **Good and bad persona photo examples.**

 This is not a sympathetic portrayal of a persona; it looks like someone you'd make fun of.	 This woman is more believable, but having trees in the background is strange; does she practice medicine in the park?
 It's better without the fisheye lens effect, but the exaggerated expression is still a bit much.	 Watch for elements that just don't make sense. There's no reason for doctors to wear masks while reviewing films.
 This image doesn't work because you can't see the persona's face.	 This one isn't bad. The background is more realistic. It would be better if she weren't so obviously posing for the camera.
 "I'm not a doctor, but I play one on TV." This woman is too beautiful, polished, and posed.	 This woman is in a realistic environment, her hair is a little mussed, and she's in the middle of a task instead of posing. The composition is a little distracting, but might be salvageable with cropping.
 This looks like someone's fantasy of a hospital, not the real thing.	 This is a good persona photo. The doctor's face is visible, she's in a realistic environment but without a lot of distractions in the background, she's attractive but not perfect, and she's engaged in a realistic task instead of smiling for the camera.

be expensive to license image by image, generally ranging from about $50 to $300 for royalty-free images. Microstock sites such as iStockPhoto offer less-expensive licenses of anywhere from $1 to $10 or so. In either case, use is nonexclusive, so you might see your persona advertising a product on the side of a bus. If you plan to make use of your personas outside the product team, consider using rights-managed or commissioned photos for which you can get an exclusive license.

Avoid using photos of your interviewees. They're real people whose quirks you will remember, so they're not terribly effective as archetypes. Also, you would need to get a model release allowing you to publish any such photos outside your team.

If you're having difficulty finding the perfect photo, you might have to consider changing the gender, age, or ethnicity of your personas unless these characteristics are essential.

Illustrations are usually not the best way to represent your personas because they seem more abstract and less realistic; remember that the more real they are, the more they will engage the empathy of product team members. (Yes, people empathize with illustrated characters, such as Bambi or Buzz Lightyear, but only after they've seen at least a few minutes of anthropomorphized behavior.) Doing reasonable illustrations may also take more time than finding a handful of photos. However, there are two situations where you might consider illustrations. One is when you're designing a tool for a group of internal users who will all be exposed to the personas. Such people may accept the personas more readily if they are slightly abstracted. The other situation is when you anticipate drawing a lot of storyboards showing the personas moving around in a physical environment. In that case, it's easiest if the people reviewing the storyboards don't have to translate between the persona photos and the drawings. Figure 11.13 shows an example of a persona illustration.

Figure 11.13. An example persona illustration.

Depicting your personas as cartoon characters or dolls moves them even further from reality. One user experience team tried depicting their personas as custom-made action figures because they believed these would be more memorable. While people seemed able to remember the personas, probably due in part to alliterative names like Multitasking Millie, the team was not able to demonstrate whether the personas were effective at helping people think differently. In the long run, I suspect these representations will not have the desired effect, and that they will do more harm than good.

However you choose to depict your personas, try for a consistent style and dimensions across the images. If some photos are head shots and others are full body, or some are on white backgrounds while others are not, it can be distracting when you lay out the photos on a summary page or other materials. This is not as important as getting the right images, but is nice to consider if you can.

A good description is mostly comprised of narrative because storytelling is what breathes life into the personas.

Narrative

A good description is mostly comprised of narrative because storytelling is what breathes life into the personas. You can say that someone is busy and frequently interrupted, but this dry statement of fact doesn't have the same impact as saying that the sandwich her assistant brought her for lunch two hours ago is still sitting, uneaten, on her desk. The first invokes our intellect, while the second invokes our empathy. Think about the details you observed in user interviews that helped create your impressions of the interviewees, then use similar details to reinforce those impressions in the persona descriptions. A great persona description manages to pack tremendous meaning into nearly every sentence. Read the bullet-list persona description below and then compare it to the narrative version that follows.

Carla Ramirez

- 32
- Graphic designer
- San Francisco
- Last car: Honda Civic hatchback base model
- Computer: Mac
- Media influence: Metropolis
- Web site influence: Amazon
- Reasons to shop now: current car is paid off

CURRENT CAR: 2006 MINI COOPER

- Likes that it: gets good mileage, has cargo space, is easy to park in small spots
- Also considered: Ford Focus, VW Beetle
- Financed for: 2 years
- Started looking when: Saw car in movie
- Test drove after: 1 week
- Purchased after: 2 weeks
- Picked up after: 3 weeks
- Decision criteria: Finds reasons to rationalize emotional choice
- Desired features: sun roof, stereo upgrade, leather seats
- Purchased features: sun roof
- Research tools: MINI Web site, others recommended by boyfriend

MANUFACTURER WEB SITE USE

- Visits before purchase: 3
- Reasons: explore, reconfigure for lower cost, find dealer stock
- Time of day: lunch, evening
- Likes: attitude, initially playful experience
- Dislikes: slow loading, less fun the second time, no maintenance suggestions, no dealer inventory, not sure when car was arriving
- Visits after purchase: 1
- Reasons for visit after purchase: maintenance recommendations

GOALS

- Have reasons to get the car she wants
- Get it now
- Enjoy the buying experience
- Be taken care of after she buys

The bullet description is compact and makes for a nice reference, but it helps you understand Carla only on an intellectual level. This kind of thing is suitable for a slide presentation or persona cheat sheet because you can cover the storytelling aspect verbally. The narrative description that follows is much more effective for a document because it helps you get inside Carla's head.

Carla Ramirez

The last time 32-year-old Carla Ramirez decided it was time for a new car she bought one within two weeks. Not long after she paid off her first car—a base model Honda Civic hatchback—in 2006, she watched *The Italian Job* on DVD and fell in love with the MINI Cooper's spunky design. Driving around San Francisco the next week, she found herself looking longingly at every MINI she passed.

Taking a lunch break at the office after laying out the latest batch of ads, Carla decided to check out the MINI Web site instead of reading *Metropolis* as she usually did. The site's attitude encouraged her to keep looking; it felt like play rather than research. She began to find reasons that the car she was drawn to would be a rational choice, too. It was small enough to make city parking less painful, had enough space to fit several bags of groceries, and had good enough mileage that she wouldn't have to feel guilty about not getting a hybrid. As she assembled her dream car online, though, she realized that it might be a little much on a graphic designer's salary.

When she mentioned her disappointment to her boyfriend Todd that evening, he booted up her Mac and looked at several automotive sites, then suggested other cars with comparable features, including the Ford Focus and VW Beetle. Carla dutifully looked at the others, but found herself back on the MINI site before long.

A great persona description manages to pack tremendous meaning into nearly every sentence.

Goals shouldn't be just tacked on at the end of the description; they should be implied throughout it, as well.

She tried another configuration without the sun roof, stereo upgrade, and leather seats. When she saw that the new total wasn't much more than the Ford, she decided to test drive the MINI that weekend. She saved the configuration for later to avoid going through the process again; what had seemed fun the first time was annoying the second.

A test drive convinced Carla she had to have the car (and the sun roof). Ready to buy, she was frustrated that the dealer didn't have many cars in stock. She went back to the Web site to see what other nearby dealers had. If Amazon could tell her what's in stock, surely a car dealer's Web site could do the same. Unfortunately, the dealer sites didn't have much information, so she called the one with the least annoying page. They told her they were getting a shipment in a few days, and that most dealers had very few cars in stock. Carla hung up, wondering whether she should take another look at the Beetle. Eventually she called back and gave them a credit card number to hold the red one with the sun roof. When the dealer finally called to say that her car was there, she waited to pick it up until Friday afternoon so she and Todd could celebrate with a drive down the coast.

A couple of months later, Carla wondered when to get her car serviced, so she logged on to the owner section of the site. She was disappointed to find that even when she entered all the information about her car, it did not recommend what service to have performed and when. She has not returned to the site since.

Much as she has enjoyed her MINI, it's been paid off for six months and Carla's eyes are starting to wander again.

CARLA'S GOALS

- **Have reasons to get the car she wants.** Even if her decision is about the style or emotional appeal of the car, Carla likes to see herself as a rational person.
- **Get it now.** When Carla is ready for a new car, she's going to act quickly.
- **Enjoy the buying experience.** Car shopping should be fun, not work; a new car is a treat.
- **Be taken care of after she buys.** Poor support regarding delivery or ownership issues can tarnish the experience.

The narrative description puts the actions in sequence and in context, portrays Carla's emotions at various points in the process, and uses other clues to reinforce aspects of her attitude and behavior. Every sentence and every detail has a purpose. Note that the description captures key points in the action, but not every tiny detail. It would take a lot of space to describe every click. It's also difficult for a persona to serve as an archetype if you get too specific. When possible, explain the reason for the behavior, especially if it differs from what you or the stakeholders might expect. Goals shouldn't be just tacked on at the end of the description; they should be implied throughout it, as well. Table 11.6 dissects the persona description in more detail.

Be unapologetic in your description; don't be afraid to say that Carla makes decisions based on emotional appeal rather than logical criteria. However, never use any language that implies a negative view of the persona; perhaps your car shopping process differs, but that doesn't make Carla flighty or silly. Describe each activity, frustration, and goal in terms the persona would use. A technology expert might say there was a problem with the Web browser's cache, while a novice would say the Web page was very slow to load when she used the back button.

Table 11.6. **Analysis of a persona description.**

What it says	Why this is useful
The last time 32-year-old Carla Ramirez decided it was time for a new car, she bought one within two weeks.	The first sentence sets the stage for what to expect from this persona: She bought a car because she felt like it, and she moved fast.
Not long after she paid off her first car—a base model Honda Civic hatchback—in 2006, she watched *The Italian Job* on DVD and fell in love with the MINI Cooper's spunky design.	Implies that she feels the need for a new car almost as soon as she can afford it. Anyone familiar with cars knows that a Civic is a common first car, so she's ready to move up to something less generic. She responded to the emotional appeal of the car, and it was opportunistic; another car could have grabbed her attention.
Driving around San Francisco the next week, she found herself looking longingly at every MINI she passed.	Tells you she didn't look long before acting, and an immediate, emotional bond has formed.
Taking a lunch break at the office after laying out the latest batch of ads, Carla decided to check out the MINI Web site instead of reading *Metropolis* as she usually did.	Tells you that she browses opportunistically, not in some long-planned research session, and that she responds to good, modern design.
The site's attitude encouraged her to keep looking; it felt like play rather than research.	Reinforces her response to emotional appeal.
She began to find reasons that the car she was drawn to would be a rational choice, too.	Tells you what function the Web site served for her.
It was small enough to make city parking less painful, had enough space to fit several bags of groceries, and had good enough mileage that she wouldn't have to feel guilty about not getting a hybrid.	Tells you what features appealed to her and why.

Continued

What it says	Why this is useful
As she assembled her dream car online, though, she realized that it might be a little much on a graphic designer's salary.	Implies that she had a level of commitment to the product before she saw the price tag, and that cost is a concern but was not her first thought.
When she mentioned her disappointment to Todd that evening, he booted up her Mac and looked at several automotive sites, then suggested other cars with comparable features, including the Ford Focus and VW Beetle.	Describes how someone else influenced her search and what other brands seemed comparable.
Carla dutifully looked at the others, but found herself back on the MINI site before long.	For all their logical value, the others lacked the same emotional appeal.
She tried another configuration without the sun roof, stereo upgrade, and leather seats. When she saw that the new total wasn't much more than the Ford, she decided to test drive the MINI that weekend.	Tells you what features appealed to her, what she was willing to get rid of, and how she was able to rationalize the cost.
She saved the configuration for later to avoid going through the process again; what had seemed fun the first time was annoying the second.	Indicates frustration with the experience over time.
A test drive convinced Carla she had to have the car (and the sun roof).	Reinforces the emotional nature of her decision-making.
Ready to buy, she was frustrated that the dealer didn't have many cars in stock. She went back to the Web site to see what other nearby dealers had.	Another roadblock provides another opportunity for the Web site to help.
If Amazon could tell her what's in stock, surely a car dealer's Web site could do the same.	E-commerce sites have set her expectations for the information that should be available...
Unfortunately, the dealer sites didn't have much information, so she called the one with the least annoying page.	...and the site failed to meet those expectations.
They told her they were getting a shipment in a few days, and that most dealers had very few cars in stock. Carla hung up, wondering whether she should take another look at the Beetle.	Another roadblock tests her resolve. This is not strictly a design issue, but is the kind of service issue you should still be pointing out.

What it says	Why this is useful
Eventually she called back and gave them a credit card number to hold the red one with the sun roof.	The emotional attachment to the product overcomes it. The transaction takes place entirely outside the Web site.
When the dealer finally called to say that her car was here, she waited to pick it up until Friday afternoon so she and Todd could celebrate with a drive down the coast.	Picking up a new car is a special event, and the Web site doesn't take part in that event right now.
A couple of months later, Carla wondered when to get her car serviced, so she logged on to the owner section of the site.	It took a while before she thought to check the site again.
She was disappointed to find that even when she entered all the information about her car, it did not recommend what service to have performed and when. She has not returned to the site since.	She put in effort in anticipation of a certain value in return. Failure to meet that expectation effectively ends her relationship with the Web site...
Much as she has enjoyed her MINI, it's been paid off for six months and Carla's eyes are starting to wander again.	...and the brand has failed to win her loyalty.
Have reasons to get the car she wants. Even if her decision is about the style or emotional appeal of the car, Carla likes to see herself as a rational person.	Reinforces the need for rationalizing the emotional decision.
Get it now. When Carla is ready for a new car, she's going to act quickly.	Reinforces the impatience.
Enjoy the buying experience. Car shopping should be fun, not work; a new car is a treat.	Reinforces the desire for specialness and fun.
Be taken care of after she buys. Poor support regarding delivery or ownership issues can tarnish the experience.	Reinforces how to win her loyalty.

It's essential to keep your persona descriptions firmly grounded in the present. You need to get agreement that the personas are good representations of your users, and that they're the people you should target. Introducing interpretation of what the personas need from the product only weakens the persona's perceived basis in data (rather than opinion) and may introduce controversy. Save any projection into the future for your scenarios.

Quotes, collages, and diagrams can enrich your persona descriptions and make them more memorable.

Here's an example of what *not* to do:

> When she mentioned her disappointment to Todd that evening, he booted up her Mac and looked at several automotive sites, then suggested other cars with comparable features, including the Ford Focus and VW Beetle. Carla would have appreciated having comparisons on the MINI site. She dutifully looked at the others, but found herself back on the MINI site before long. Carla tried another configuration without the sun roof, stereo upgrade, and leather seats. She would like a more flexible way to try turning different combinations of options on and off. When she saw that the new total wasn't much more than the Ford, Carla decided to test drive the MINI that weekend. She saved the configuration for later to avoid going through the process again; it would be nice if the site just did this for her using a cookie.

You can also add other touches to make your personas more memorable. One common addition is a quote that embodies each persona's top frustration, goal, or view of the world. For example, a persona challenged by money management might have a quote under his photo that says, "My whole paycheck seems to be spent before I get it." Another persona who's great at saving money might say, "Credit cards are for convenience, not for credit."

Adding a collage of photos depicting each persona's environment and activities can also enrich a description (see Figure 11.14). These hint at the types of visual and industrial design language that resonate with the persona; someone whose environment consists of pale pink walls and wicker furniture clearly values a different aesthetic from someone whose house is filled with modern art and Eames plywood chairs.

Diagrams

Though not necessary for many personas, visual representation of particular persona characteristics, such as workflow, data needs, or physical environment, can also further everyone's understanding of the behavior patterns and the differences among them. See the examples in Figures 11.15 and 11.16.

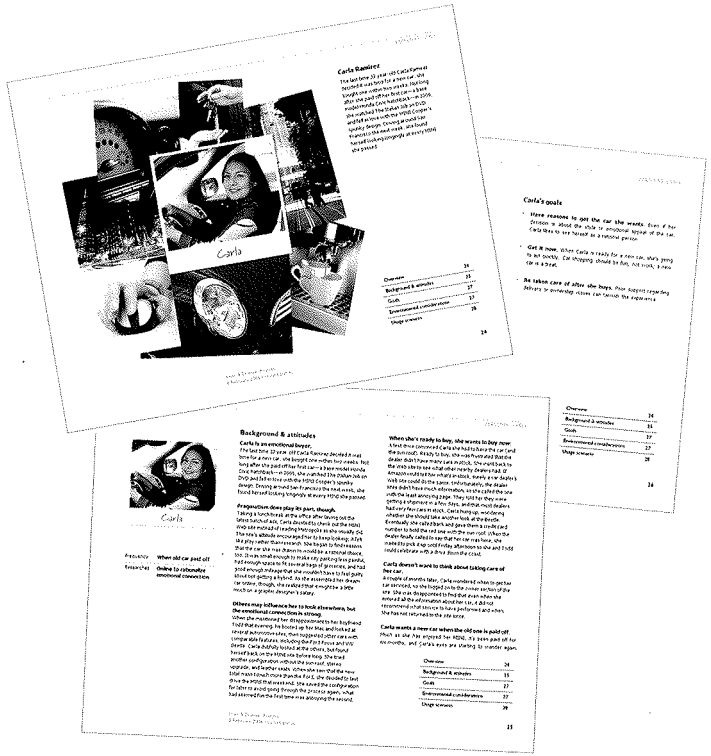


Figure 11.14. This persona description is enriched with a photo collage depicting her usage environment and activities.

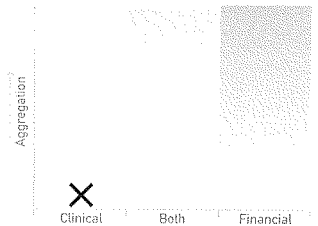


Figure 11.15. This very simple diagram shows what type of data a persona in a health care facility needs.

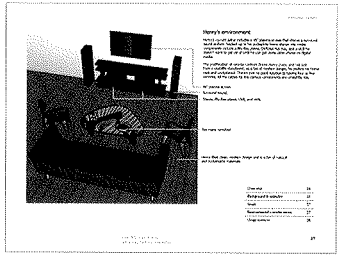


Figure 11.16. This illustration shows the persona's home, which provides context for how a product will fit in.

Exercise

Write a description for one or more of your LocalGuide or Roomfinder personas.

HELPING PEOPLE UNDERSTAND THE PERSONAS AS A SET

In addition to helping everyone understand the personas as individuals, you should develop ways to communicate about them as a **set** that represents a range of behaviors and needs. The first artifact to consider is some kind of persona summary document that serves as a quick reference. The design team may know the personas so well that they don't need such references, but other project team members find them helpful. The simplest version of this is a persona summary table laid out on a single sheet (or two, if you have a large persona set). Each column represents one persona and typically contains the persona's name, photo, goals, and a few key points (generally the ones that distinguish each persona from the others). It's helpful to group large persona sets by role, with each primary persona visually emphasized. More elaborate versions of this idea could include tri-fold brochures, table tents, or rings full of persona "trading cards," but simplest is usually best. Figures 11.17 and 11.18 offer some quick-reference examples.

Figure 11.17. Several examples of persona quick-reference-material formats.

Springfield Small Animal Clinic

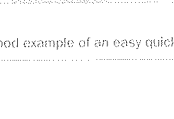
Clinical	Administrative	Clinical	Administrative
Maureen Keller DVM	**Amanda Lee** Vet Tech	**Tina Lopez** Office Manager	**Carol Martin** Receptionist	**Pete Harvey** DVM	**Laura Brown** Office Manager and Receptionist
			
Co-founded clinic. Prides herself on having specialists and the latest equipment. Sees 10–20 patients a day. Thinks 10 minutes of charting is too much. Missing chart info is a pet peeve.	At WWH for 3 years. Preps pets for vets. Takes care of up to 25 hospitalized pets a day. Has difficulty tracking what treatments and measurements to do when. Sees herself as a nurse for animals.	8 years at WWH. Has to satisfy 4 vets who own clinic (and 8 who think they do). Knows everything. Has accounting and purchasing under control. Current focus is maximizing appointment efficiency.	2 months at WWH. Mostly makes appointments and collects payments. Feels out of her depth when callers ask for advice. Still learning her way around. Wants to feel like a healthcare pro, not an admin.	Bought the practice 4 years ago. Hasn't entirely mastered running a business, is grateful for Laura. Not comfortable with picking the right computer system. Has little patience for charting.	Joined SSAC shortly after Pete bought it and has become his right arm. Does everything from taking calls to purchasing and basic bookkeeping. Likes that every day is an adventure, but could sometimes use less excitement.
Maureen's goals · Focus on care, not record keeping · Know she has the right information · Minimize administrative time · Feel like she has a world-class clinic	**Amanda's goals** · Provide the best care · Know she's doing the right thing at the right time · Avoid mistakes	**Tina's goals** · Keep the vets happy · Maximize billing per hour · Keep track of all the details	**Carol's goals** · Keep clients happy · Keep her cool · Avoid mistakes · Feel professional	**Pete's goals** · Minimize administrative time · Have instant access to information · Know the practice is running smoothly · Have confidence in his tools	**Laura's goals** · Stay calm · Keep clients and clinical staff happy · Keep track of all the details

Figure 11.18. A good example of an easy quick-reference sheet.

When a room full of experts in an industry can review the work you've done and think it makes sense, that's a pretty good sign that you're on the right track.

A quick reference is always a good idea, but may not be enough to help people grasp the relationships among the personas. It may be necessary to include diagrams that illustrate the relationships and differences among your personas, or between your personas and market segments. See Figures 11.19 and 11.20 for examples.

Validating your personas

One question I sometimes get from designers is, "How do you know your personas are right?" It's reasonable to be anxious that your persona set will somehow miss the mark and cause a product disaster; this is why you should take a rigorous approach to crafting your personas. If you follow the process outlined here, chances are good that your personas will be true to your data, so the better thing to worry about is, "How do I know I got the right kinds of people in my research sample?" The short answer is: by getting as much background and stakeholder participation in interview planning as you can, and by keeping your eyes open during the research for things you didn't expect. (For the long answer, read Chapters 6 and 7.) No amount of rigor in persona creation can make up for an overly narrow research plan.

The most common form of validation is a simple gut check. When a room full of experts in an industry can review the work you've done and think it makes sense, that's a pretty good sign that you're on the right track. If the outspoken skeptic in the room agrees, that's even better. This level of validation is usually good enough for most stakeholders, including top executives at the biggest companies. Perhaps this is because most business people know that sometimes you have to make decisions with the best data available, and the results of qualitative research usually provide better, more actionable data than they've ever had. People who balk at the accuracy of the data are often balking about something else entirely, such as a failure to include them in the process, or evidence that an idea they've championed may be wrong.

There are a few authors, including Steve Mulder and Ziv Yaar,[6] who argue that you can't be certain you have good personas unless you validate them with quantitative data. This point of view represents a fundamental misunderstanding about personas: A survey cannot tell you whether your personas are effective design tools. It can only tell you whether your personas are good market segments, which is not what personas are intended to be. That said, if you're designing

6. Mulder, S. and Yaar, Z. *The user is always right: A practical guide to creating and using personas for the web*. New Riders, 2007.

Figure 11.19. This diagram illustrates how the personas cover the full range of needs in the market.

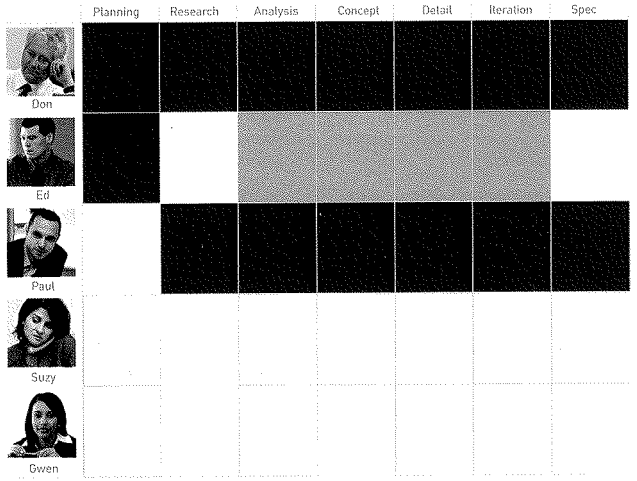


Figure 11.20. A chart showing what parts of a business process the various personas cover.

an e-commerce site, there is value in knowing whether a particular persona is insignificant from a revenue standpoint; if so, why build an expensive tool just for that persona? Don't hesitate to draw on any quantitative sources you may have, but don't obsess over quantifying your personas; mathematical cluster analysis is as reliant on human interpretation and explanation as any qualitative analysis.

The only real validation of your personas is the success of your design, as measured by usability tests and, more importantly, by success in the market. By that measure, any persona that helps you get a better product to market in a more efficient way is a good persona.

When Time Is Limited: Provisional Personas

This whole process works well when you have a data set from which to extract patterns, but designers are all too often asked to create or improve something with no time or budget to gather data. This doesn't mean you have to give up on personas altogether; it just means you'll have to create cruder versions of them.

Gather some knowledgeable stakeholders (and especially subject matter experts) in a room for an afternoon. Ask for their hypotheses about how users differ, using much the same questions you would ask in user interviews. To the extent you can, get stakeholders to tell you specific stories about any processes, frustrations, and so forth. As agreement emerges, develop a list of characteristics and goals for each presumed type of user. These lists serve as **provisional personas**; see Figure 11.21 for an example.

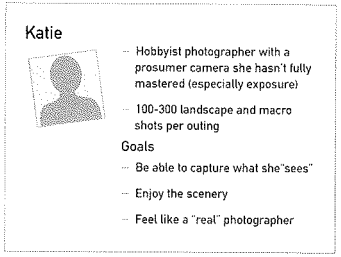


Figure 11.21. An example of a provisional persona description.

Clearly, provisional personas comprised of stakeholder knowledge and assumptions can't give you the kind of solid foundation for design that real personas do, but they still provide two important benefits. First, a provisional persona still gives you a target, even if it's a little off; you'll never hit anything useful if you don't aim at *something*. Second, the process of developing the provisional personas helps build consensus; by getting the stakeholders together to talk about user characteristics and goals, you're probably encouraging discussion that hasn't happened yet. Even if two stakeholders disagree, they can at least agree to make a reasonable assumption and let the process move forward.

Naturally, you don't want people to confuse provisional personas with the real thing. It helps if your communication about provisional personas is much lower fidelity. Use an empty oval or a quick sketch instead of a photo, use only a first name, and limit the description to a list of points without the detailed narrative. The distinction is helpful when you introduce real personas later, or when you have to use both real and provisional personas on the same project; see Figure 11.22.

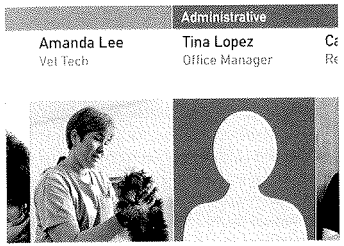


Figure 11.22 The visual distinction between data-backed personas and the provisional one clearly indicates the lower level of certainty.

Exercise

Develop a set of provisional personas for a product and service that compete with iTunes and the iPod product line.

Persona Pitfalls

Like any other tool, personas are subject to misuse. Sloppy or biased personas can be abysmal failures that sour every project participant on the very idea of user archetypes. Some people use this as a criticism of the method, but this is like saying no one should use desktop publishing just because some people do horrible things with page layout tools. Any professional has to take responsibility for mastering any tool he uses.

You should be able to avoid the most common mistakes in persona creation if you follow the methods described here, but there are still a few things you can do that would endanger the acceptance of personas on your project.

One common mistake is to introduce requirements or wish list items into the personas. Remember that personas represent current behavior, frustrations, and goals, regardless of whether your product ships in ten days or ten years. It's essential that people accept the personas as accurate user and customer representations *before* you start debating features and functions.

Getting carried away with biographical detail is another typical error. Including a lot of clearly fictitious detail about irrelevant topics will make it hard for people to accept the persona, and it can ruin your credibility. Focus on the behaviors and goals derived from your data.

The third problem is a disturbing trend in the industry to treat personas as either panaceas or as ends in themselves. People approach me at conferences and tell me they know everything will be great now because they finally have personas at their companies. I congratulate them on their progress, but remind them that scenarios, design skills, and various issues beyond the control of the design team are still essential to success. Personas are expected to solve every problem, so people are inevitably disappointed in them when they fail to do so.

Some practitioners also invest unreasonable amounts of effort in their personas. I know of at least one company that created a department just to manage their ever-expanding persona collection. One Web consultancy even went so far as to create actual living rooms that are decorated according to each persona's tastes and constantly updated with whatever magazines the personas are "reading" this week.[7] No doubt the novelty of the rooms generated some attention and excitement, which is always a good thing. In the long run, though, this kind of three-dimensional mood

7. Manning, H. "*Persona rooms: What, why, and how.*" April 5, 2006. http://www.forrester.com/Research/Document/Excerpt/0,7211,39260,00.html.

board seems like a poor investment for designing a Web site; at San Francisco rents, that's about $20,000 a year just for space, not to mention the furnishings and effort to keep them up. Cost aside, portable artifacts are more effective because you can share them with distributed teams who can't hang out for a beer on the persona's couch.

This trend toward gold-plated hammers is a problem for a couple of reasons. First, it eats up resources that would be better applied to research or design. Second, this trend indicates that people are thinking of personas as the whole point, and not as convenient tools we create in service of design. Even Alan Cooper, who originated the persona concept, calls personas "the bright lights under which we do surgery." In other words, they help us see more clearly, but they're no replacement for a sharp scalpel and a skilled surgeon; no patient was ever healed by sitting under the lights in the operating room.

By all means, get excited about your personas and market them internally to get others excited, too. Print mouse pads or posters, play persona trivia, send people e-mail from your personas... whatever works. Before expending a lot of effort and money on a novel communication method, though, ask yourself what that method will accomplish that text, photos, and illustrations won't, and whether the gain is really worth it. Also ask yourself whether that method will obscure the behaviors and goals, which are the most important aspects of your personas.

Project Management for Creating Personas

Involved as the persona creation process sounds, it generally happens in anywhere from a day to a week, depending on the number of roles and amount of data you have. The initial mapping and pattern extraction seldom take more than a couple of days; developing the descriptions and any other communication tools takes another two or three.

If you were to observe a design team meeting at this stage, it would be hard to distinguish between the two interaction design specialties (the generator and synthesizer). These two roles generally drive the persona creation process largely because they're usually the only ones who attended every user interview. The visual designer, industrial designer, and team lead may or may not be in the room for most of these discussions, depending on their level of participation in the interviews. At a minimum, all team members should have a chance to review and suggest improvements to the personas before they're shared with anyone outside the design team.

The team lead should review how the designers arrived at their conclusions, and should look for any missed or questionable patterns or personas that are not very distinct from one another. She should also help the team consider how stakeholders will receive the personas, ensure that the details are credible, and offer suggestions for improvement on any details such as names and goals.

Both visual and industrial designers tend to have a strong interest in the goals, especially any experience goals, and any details about how the personas relate to various aesthetics or brands. They're also good at making sure the persona descriptions include any important ergonomic issues, such as poor eyesight, arthritis, or unusual lighting. Both may also identify the same kinds of opportunities for improvement that the team lead does. Visual designers can often come up with elegant solutions for depicting the relationships among the personas, as well.

Once you have rough outlines of your personas, run them by your project owner in an informal meeting before spending time on the detailed descriptions. The project owner can usually provide a useful validity check and may anticipate stakeholder concerns you haven't considered. Even if the project owner doesn't identify any issues, he will be better prepared to back you up in a meeting with the larger group of stakeholders. If for some reason your project owner feels the persona set is off, you'll need to have a discussion about whether this is a flaw in your research set, or whether the project owner's concern is based on assumptions that simply aren't borne out in the data.

The IxD synthesizer usually takes the lead on writing persona descriptions, but unless the IxD generator is spending a lot of time on visualizations, it's probably a good idea for her to pitch in. A visual designer is often responsible for identifying potential persona photos and any collage photos, which are reviewed by the whole team. He generally puts together any visualization of persona relationships, environments, and tasks, as well, though this is usually in close collaboration with the interaction designers.

Summary

Done well, personas are incredibly useful tools for product definition and design. There are many ways to encapsulate the key findings from your user research, but only personas effectively engage the parts of your brain that think in human terms. That unique way of thinking results in better decisions and faster consensus than most product teams would otherwise achieve.

The key to doing personas well is to focus on finding and expressing the behavioral patterns in your data, and then expressing those patterns in ways that are clear, memorable, and likely to invoke empathy. It will probably take you several persona sets before you're getting the most out of the technique.

Important as personas and their goals are, remember that they're just one of many tools you need to be an effective designer. Put in the time and energy to do them well, but don't confuse the means with the ends.