CHAPTER 4

# Persona conception and gestation



CHAPTER OUTLINE

## WHAT IS THE CONCEPTION AND GESTATION PROCESS FOR PERSONAS?

*Conception and gestation* is the phase of the persona lifecycle in which you actually create your personas. It is the phase in which you use data to create engaging representations of individual users that your team can use for planning, design, and development. During this phase, you will face the tricky question of how many personas to create and how to prioritize them. You will process the data and assumptions you have collected (by prioritizing, filtering, and organizing) to discover information about your users. Using this information, you and your core team will create bulleted persona "skeletons" that key stakeholders can prioritize according to business goals. You will develop your prioritized skeletons into complete personas that are then ready to be introduced to your organization in the *birth and maturation* phase.

Unlike some of the other chapters in this new edition of the book, this chapter retains almost all of the detail we included in the first book, with a few exceptions; for example, we have removed the ongoing case study and a few of the additional sidebars. We've also made a more significant update to this chapter in that we put far more emphasis on *ad hoc personas* and their role in the persona lifecycle. Since our first book was published, we have both participated in many more persona efforts and both experienced first-hand the importance of the ad hoc persona creation process in:

- Developing and articulating a shared focus on project goals and priorities
- Illuminating and aligning assumptions that exist about users in the minds of key project stakeholders

In the original book, the first step in the conception and gestation process was to "describe categories of users." Like the ad hoc persona creation process, this step focused on identifying the way the organization *currently* thinks and talks about the key differences between users (i.e., *before* the persona process). The ad hoc persona workshop starts with this step, but it doesn't stop there.

Based on our experiences since we wrote the original book, we believe there are two persona creation processes you can use. They align to the ways each of us has evolved our own work.

As a consultant, Tamara works with a variety of different companies. John is still at Microsoft, where he has moved on to become a Program Manager with the SharePoint team. He continues to be consulted by teams throughout Microsoft on their persona efforts. In short, Tamara comes in from the outside and works with organizations who have varying amounts of time, resources, and data to apply to personas, and John works internally with teams who rely on data to create personas to be accepted and used. Tamara has built her process on ad hoc personas that are created collaboratively with high-level executives and stakeholders and then validated with existing and new data. John uses ad hoc personas as one step of his overall data-driven persona creation process.

If you are working as a consultant, we recommend you insist on working with people as high in the food chain as possible and rely heavily on the ad hoc persona process. This way, whether or not you move on to a full data analysis, you will end up with personas that reflect and communicate the key goals and priorities of the executive staff and are therefore supported from the top down.



If you are working internally and don't have extensive access to the executives—and are facing the task of convincing the higher-ups that personas are useful and worth supporting—we recommend you plan to use as much data as humanly possible. There is no substitute for being able to show that you have analyzed and incorporated data findings from as many sources as possible when you present the personas throughout any organization. In other words, if you are working from the bottom up, you'll need those data as you try to move the personas up the food chain.

No matter which process you intend to use, we recommend you read this chapter end-to-end before you get started. You'll see that some of the steps and methods in this chapter are appropriate for both approaches (e.g., prioritization and validation of the personas).

## THE SIX-STEP CONCEPTION AND GESTATION PROCESS

Persona creation is largely a serial and straightforward process in which you summarize, cluster, and analyze the data to discover themes (see Figure 4.2). You use these themes to generate rough persona skeletons. You then cull and prioritize the skeletons to focus on only the most important, most appropriate targets. Finally, you enrich the skeletons into full personas by making the details concrete and adding personality and a story line.

As shown in Figures 4.1 and 4.2, we recommend a six-step persona conception and gestation process that includes the following activities:

- **Conception**
  *Step 1. Identify ad hoc personas*—Work collaboratively with your stakeholder team to create quick, ad hoc personas that capture and communicate the organization's current thinking about who your users are and what they want and need. Creating ad hoc personas

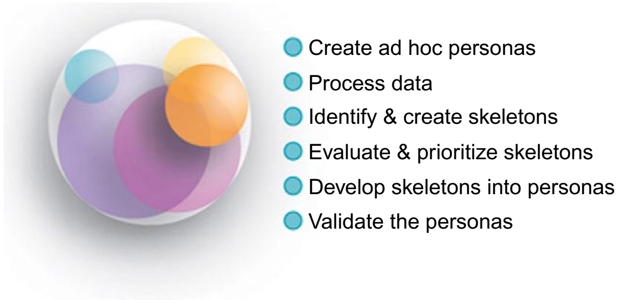



**FIGURE 4.1**
The six-step persona creation process.

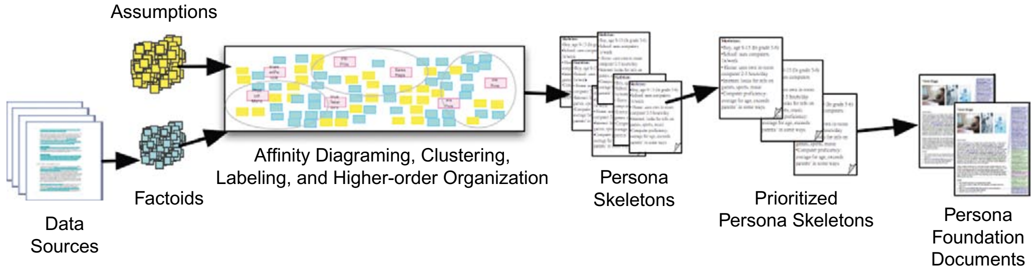



**FIGURE 4.2**
The flow of persona creation: Start with ad hoc personas to organize all of the current thinking about your users. If you are going to move on to create full, data-driven personas, you'll filter and organize your data sources to pull out factoids, assimilate the factoids into clusters, and use these to create brief skeletons. Finally, you'll augment the skeletons into completed foundation documents, which capture and communicate your personas.



now (even if they are based solely on assumptions) will help you structure your data processing and build a bridge between the ways people think of users today and the data-driven personas you will create.

*Step 2. Process the data*—Process your raw data to extract information relevant to your user and product domains and then identify themes and relationships. We suggest that you do this by conducting a collaborative data assimilation activity.

*Step 3. Create skeletons*—Evaluate your processed data to verify the categories of users and to identify subcategories of users. Create skeletons, which are very brief (typically bulleted) lists of distinguishing data points for each subcategory identified.

- **Gestation**

  *Step 4. Prioritize the skeletons*—Once you have a set of skeletons, it is time to get feedback from all stakeholders. You will evaluate the importance of each skeleton to your business and product strategy and prioritize the skeletons accordingly. Your goal is to identify a subset of skeletons to develop into personas.

  *Step 5. Develop selected skeletons into personas*—Enrich the selected skeletons to create personas by adding data, concrete and individualized details, and some storytelling elements to give them personality and context.

  *Step 6. Validate your personas*—Once you have added details, it is important to double-check to make sure your final personas still reflect your data.

Because we recommend either an ad hoc persona effort or a data-driven persona effort, we believe there are two basic variations on the six-step process listed above:

1. Ad hoc personas with either light validation (when you have very little time) or more rigorous validation (which may include some data analysis and additional data collection):
   - Identify ad hoc personas (step 1).

- Create skeletons (step 3).
- Prioritize the skeletons (step 4).
- Develop selected skeletons into personas (step 5).
- Validate your personas (step 6).

2. Data-driven personas (which incorporate ad hoc workshops, but only as a preliminary step in the overall persona creation process):
   - Complete all six steps listed above.

We know that many of you have short windows of opportunity in which to create personas that will be available and useful throughout product design. Many of you are also probably wondering how many personas you will need to create for your product. We address these important questions before describing the six-step conception and gestation process in detail.

## HOW LONG DOES THE CONCEPTION AND GESTATION PROCESS TAKE?

The amount of time you spend on conception and gestation activities will depend on your project schedule, the amount of data you have, and your goals for the persona effort. You can create useful ad hoc personas in less than a day, or you could take months to fully analyze mountains of data and create personas that link every detail back to a data source. In most cases, you and your team will compromise between these extremes and create useful data-driven personas in about one to two weeks.

In our original book, we included several sample schedules. Today, we believe that you should (and must, really) work backward from your existing project schedule.

### STORY FROM THE FIELD

*A Quick but Effective Persona-Building Process*

***Colin Hynes, Director of Usability, Staples.com***

When I was ready to create personas, I began by blocking off my calendar for two days. Then I wrote out one defining sentence on each persona. For example, "Comes to the website to research so she can buy in our store." While writing the descriptions, I recalled vividly the experiences I had while visiting offices during our extensive contextual inquiry studies and when listening to customer phone calls through customer service representatives. I used this information to build the persona descriptions, which were then reviewed with members of the Usability team.

As a team, we filled in color about the personas' motivations, goals, up-sell potential, defining quote, onsite conversion potential, and other key factors that created the whole of each persona. We started with nine personas and then cut it back to six when there seemed to be too much overlap. Even though the process wasn't as rigorous as some, it was incredibly useful to get the personas down on paper so I would have something for stakeholders to react to.

## HOW MANY PERSONAS SHOULD YOU CREATE?

This is one of the first questions we hear when we talk about personas. While the answer is, of course, "it depends," we have found that roughly three to five personas are a good number to target. However, we believe that, although you may choose to communicate just a few personas to the development team, your data and the goals of your business should drive the number of personas you create. During the conception and gestation phase, your goal is to create a set of personas that are:

- Relevant to your product and your business goals
- Based on data or clearly identified assumptions
- Engaging, enlightening, and even inspiring to your organization

Note that your goal is *not* to describe every possible user or user type nor to detail every aspect of your target users' lives. Your personas will aid decision making by both narrowing the field of possible targets and highlighting user data that are important and highly related to the product you are creating. This chapter will help you analyze your data sources, decide how many personas to create, and determine what (and how much) information to include in each persona and which personas to prioritize.

## The argument for a single primary persona

In their book *About Face 2.0* (Wiley, 2003), Alan Cooper and Robert Reimann include an axiom that states, "Design each interface for a single, primary persona." Cooper argues that you must prioritize your personas to determine which single persona should be the primary design target for any given interface. We have noticed that many people assume that this means there should only be one primary persona for the entire product. We believe this is a misinterpretation of Cooper's axiom. Yes, there should be one primary persona per interface, but many products have several interfaces (e.g., the interface you use when you read e-mail is quite different from the interface used by the administrator who maintains the e-mail server, but both interfaces are part of the same product). There are also secondary personas—perhaps those that use the product less often or use a particular interface as a peripheral aspect of their job.

Cooper recommends that we start by creating a cast of characters. We should then identify primary (preferably one) and secondary (probably several) personas within that cast. By definition, each primary persona will require a unique interface, because to be primary the persona must be satisfied, and it cannot be satisfied by any other persona's interface. If you must create more than three primary personas (and therefore three interfaces), Cooper argues that the scope of the project is probably too broad.



Cooper's insistence on clearly identified primary personas is the cornerstone of his approach, for good reason. One of the benefits of personas is that they focus and clarify communication around the qualities and needs of target users. Of course, personas are only clarifying if they are actually used by the product team. If people don't remember who the personas are and don't use them in their everyday communication, then the focus and clarity will be lost. Thus, your personas need to be visibly representative of the customer base and unfalteringly credible to your product team.

Strictly limiting the number of personas also forces stakeholders to make difficult and important decisions very early in the design process. Your work will be a forcing factor for clarifying business goals as early as possible, and the earlier you understand clear business goals the easier it is to build a product to suit those goals.

### CREATING ONE PERSON TO DESIGN FOR: GREAT IN THEORY, COMPLICATED IN PRACTICE

In many cases, you, your core team, the product team, and business stakeholders will not accept a single primary persona. This might be because focusing so specifically may simply not *feel* right. It is difficult to convince an executive team that all design efforts should target a single persona because the thought of building a product that will only appeal to one person is sometimes too difficult to combat. Top-down buy-in for your persona effort is important. If people (especially stakeholders) are uncomfortable with your cast of personas, they will not support or use them.

Even if you do have a go-ahead from the executive team to create one primary persona per product interface, you may not know how many unique interfaces (and therefore how many primary personas) you should create. Many find themselves facing a chicken-and-egg dilemma: Should you decide how many unique interfaces your product needs and then create personas, or should you create the personas first and then create user interfaces accordingly?

In addition, if it is so important to create a single primary persona for each unique interface (or for the entire product), why create secondary personas at all? And, if you do create secondary personas, how should you use them to enhance but not interfere with the design process?

Because each project, product, and team is different, there is no "right" number of personas to create; however, saying "it depends on your project" is certainly not very helpful. The type of product you are building, the nature of your target audience, the information you discover in your data, and the particulars of your business goals should help you answer the following questions:

- How many personas do I need?
- Which personas do I need?
- Which personas should be primary or secondary?
- How do I use secondary personas without designing for everyone?

## PERSONA CONCEPTION: STEPS 1, 2, AND 3

When we published our original book, we asserted that, if at all possible, personas can and should be created using data. This is certainly still true today. Over the past few years, however, we've seen and participated in many ad hoc persona projects that offered tremendous value to the products they supported, despite the lack of hard data used in the creation of the personas (see above).

Why not always create personas from data? Why create personas at all if you don't have data? The answer is simple. Sometimes you just don't have the money or the time, and sometimes a company is so far away from user-centrism that a full data-driven persona effort is a practical impossibility. If you decide to use ad hoc personas, you will complete step 1, below, and then move on to the gestation process.



### Step 1. Identify ad hoc personas

Ad hoc personas are persona sketches that you and your core team can create to articulate your organization's existing assumptions about the user population. We recommend that you create assumption personas whether or not you plan to collect first-hand data about your target users. If you cannot perform your own user research, you and your team will still realize many of the persona-related benefits for your process and product. If you are planning on collecting data directly from users, creating assumption personas first can:

- Help stakeholders understand the need for the persona effort.
- Streamline your product-related communication.
- Help you target your field research to validate (or contradict) current impressions of who users are.
- Provide some practice with persona conception and gestation methods before you need to create your "real" personas.

#### ASSUMPTIONS EXIST; AD HOC PERSONAS ARTICULATE THEM

The truth is that everyone on your team (from marketing to design to development) has assumptions about users, and these assumptions do exert influence over the design of the product. These assumptions could be based on anything from hard data to personal biases. If you articulate the assumptions—draw them out into the light, where they can be examined and evaluated—you gain more control over them and the ways they impact the product. At the very least, your persona effort will make all of your organization's assumptions about target users very explicit—a perhaps painful but nonetheless valuable outcome.

Assumptions are usually formed after data have been internalized, combined, and interpreted. Assumptions almost always reflect some misinterpreted, poorly recalled, and improperly combined aspects of original data, but they do contain some data and they do reflect the ways your company has digested and understands information about your users and your business. It is likely that some elements of your company's strategy with respect to your competition, the changing market, and your evolving technology exist only in the minds of stakeholders. Eliciting assumptions helps you understand some valid and important information affecting the design and development of your product.

### AD HOC PERSONAS ARE EASY TO CREATE AND HELP PEOPLE UNDERSTAND WHY PERSONAS ARE VALUABLE

Ad hoc personas are much easier to create than data-driven personas. In a short time, you and your core team can collect, analyze, and categorize many of your organization's assumptions and create ad hoc persona sketches. Because these sketches relate directly to your product and will contain information that is familiar, they will help everyone in your organization see the value of personas to the design and development effort. The exercise can also help your persona core team practice the techniques you will use during "real" persona creation. Ad hoc personas are excellent tools for clarifying and focusing communication in meetings. (See also "Story from the Field: Ad Hoc Personas and Empathetic Focus" later in this chapter.)

Ad hoc personas can help make it clear to your managers that different assumptions exist and that therefore a common definition of the target audience needs to be created and communicated. At the very least, making assumptions explicit will help ensure that everyone's assumptions *match*, which is no small feat! Unclear communication and mismatched assumptions can be very damaging to a product. It is actually *riskier* to allow these factors to impact your product than it is to create "bad" personas by guessing and making assumptions. Once everyone in the organization sees their assumptions collected, organized, and expressed as personas, they usually find it easier to discuss the assumptions coherently and to agree on changes as a group—or to agree that allowing extra time for data collection is a good idea.



### AD HOC PERSONAS CAN PROMPT DATA COLLECTION

Ad hoc personas can be the eye-opening catalyst that gets your team interested in some real user research. When your assumptions are exposed, so are gaps in your knowledge of your users. Ad hoc personas can lead your organization toward more rigorous user-centered design (UCD) techniques. For a nice example of how ad hoc personas can trigger interesting methods for user data collection, see "Story from the Field: Personas at Zylom.com" later in this chapter.

### AD HOC PERSONAS, COMMUNICATED AND USED PROPERLY, ARE SIMPLY NOT THAT RISKY

If you create ad hoc personas in collaboration with high-level stakeholders and executives, the ad hoc personas will reflect the business goals of the company and will therefore be extremely helpful during the design and development process. If you create the ad hoc personas without the involvement of high-level stakeholders, you must either:

- Get their buy-in during the prioritization process so you have top-down support, or
- Make it painfully clear that your ad hoc personas are based on assumptions and not on data.

The risk of assumption-based personas comes when the team *forgets* or *ignores* the fact that the information contained in the personas is based merely on assumptions and begins to treat it like data.

Ad hoc personas align the organization's thinking around a set of common referents, which makes them valuable. If you end up using ad hoc personas and never move on to data-driven personas, you can still reap many of the benefits of personas; however, the entire organization must understand and agree that ad hoc personas are there primarily to improve communication.

### WHEN ARE AD HOC PERSONAS A BAD IDEA?

If you believe that your organization harbors long-held "sacred cow" assumptions that people will be unable or unwilling to bring forth in a meeting, or you know that you will never get buy-in from high-level stakeholders, proceed with extreme caution. When you explore assumptions, you run the risk of exposing bad decisions that were made in the past and other "dirty corporate secrets" some of your colleagues may not want illuminated. If you suspect or discover this is the case, create personas only from primary data sources. Ad hoc personas are good for exposing, communicating, and aligning assumptions, but they are not effective tools for challenging highly political assumptions. If you want to challenge assumptions, do it with data.

### HOW LONG DOES IT TAKE TO CREATE AD HOC PERSONAS?

If your organization is small, you will probably be able to identify and organize existing assumptions quite quickly, perhaps in one or two short brainstorming meetings. If you have a large organization, it could take quite a long time to schedule interviews with all of the key stakeholders, to review strategy documents, and so on. In this case, the time it takes is worthwhile because you will probably find wildly disparate assumptions that are affecting both the development cycle and your finished products in negative ways.

### THE AD HOC PERSONA CREATION PROCESS

We recommend conducting an ad hoc persona workshop to create your ad hoc personas. The process is as follows:

1. Identify participants and schedule the workshop.
2. Clarify business, brand, and user experience goals.
3. Identify current language used to describe categories of users and customers.
4. Complete the assumption-gathering sticky note exercise.
5. Assimilate assumptions.
6. Identify skeletons.
7. Prioritize skeletons.



You'll need some basic supplies during your ad hoc persona workshops:

- Pads of yellow sticky notes—one pad per participant (the 3-inch-square variety works well)
- Two or three pads of sticky notes in at least two colors *other* than yellow
- Fine-point black permanent markers (one per participant)
- Easel paper (you can use the non-sticky variety, which is much less expensive than the super-big sticky note kind)
- Masking tape and Scotch tape
- Whiteboard and whiteboard markers
- Snacks

#### 1. Identify participants and schedule the workshop

If you plan to use the ad hoc personas in your persona effort (as opposed to using the process as a first step in your data-driven persona effort), try to involve senior members of the project and executive team (if possible) in your ad hoc persona workshops. The more senior the ad hoc persona creation team, the better the results.

We recommend you schedule two consecutive four-hour meetings, preferably in the mornings, for the initial workshops. It takes time to have the conversations required to get everyone aligned in their thinking. Schedule a follow-up meeting at least a week later to review the results with the core team and to plan the next steps.

### 2. Introduce the workshop and clarify business, brand, and user experience goals

It is especially important to be clear about your goals when creating ad hoc personas—for example, "Our goal is to create a temporary set of target personas that will be used for initial planning discussions but validated later with research" or "The outcome of this meeting will be that each of the stakeholders has a clear and agreed-upon vision of our most strategic customer targets." Make sure that everyone involved knows why you are doing this exercise and why you believe it is worthwhile.

In Chapter 3, Persona Family Planning, we recommended that you articulate goals for your company, your product, and your persona effort. These include:

- Business goals
- Brand goals
- User experience goals
- Value propositions
- Differentiators
- Persona effort goals

If possible, ask the stakeholder team to provide as many details as possible on these goals before the workshops. If this isn't possible, spend some time gathering this information during the workshop. Be careful, though; these conversations can take on a life of their own, and your entire workshop can be taken over. Set a time limit for the conversation, and make it clear that the objective of the current conversation is to create a rough first draft of a document that will require quite a bit of additional thinking, discussion, and iteration.



Although it is possible that everyone in your organization is crystal clear on all of these goals before they walk in the door for the workshop, we've never found that to be the case. A primary reason for having this discussion as part of the ad hoc persona workshop is to allow the stakeholders to prove to themselves that they have some work to do to get to clarity within their own ranks. Because one of the major benefits of personas is to create and maintain clarity and focus throughout the organization, the personas themselves depend on clearly articulated goals and the shared focus of the key stakeholders in the organization.

### 3. Identify current language used to describe categories of users

This part of the process is usually quite quick, because your goal here is to simply list the current language used to describe the users and customers of your products. Why do this step at all? Because, inevitably, it becomes quite clear that the current language in your organization is not very helpful when it comes to making design decisions that impact your product.

When we conduct these workshops, we often hear categories of users or customers described in very basic ways. Here are some examples from our actual workshops:

- For an online commerce company:
  - Customers (people who have made a purchase)
    - One-time purchasers
    - Multiple purchasers
  - Inactives
    - Attrited one-time purchasers
    - Attrited multiple purchasers
  - Customers by category (e.g., people interested in this type of product versus another type of product)

  - Prospects
    - Highly qualified
    - Not highly qualified
- For a B-to-B product company:
  - Small to medium businesses (SMBs)
  - Enterprise
  - Education
  - Legal
  - Financial
  - IT managers
  - CIOs
  - Power users
  - Casual/ad hoc users
  - Facilities managers
  - Project managers
  - Approvers
  - Expert users
  - Novices/first-time users
  - People who want to save time
  - People who care about saving money

In the first example, the terms relate to segments of users or customers. This is one typical scenario, and you'll see it in organizations with a strong marketing focus. Marketers focus on segments to help them figure out the best ways to get the product in front of the people who are part of the purchasing funnel.

In the second example, the descriptions are more diverse. They include sizes of companies, types of companies, roles of users, job descriptions, and goals. This type of list is typical when you involve senior team members from multiple departments. For more discussion regarding roles, goals, and segments, see below.

Listing the current language used to describe users is incredibly important. After you have made this list on a whiteboard or easel pad (and it usually only takes a few minutes to do so), you can point at the list and demonstrate that there are two problems:

1. The terms are a mish-mash of descriptions that are useful to specific teams but not easily understood by the entire organization.
2. There are too many terms.
3. None (or perhaps few) of the terms is helpful to anyone trying to make a specific design decision.
4. None of the terms helps the entire organization understand the overarching goals of the company or product.

We often find that this is a very important "a ha" moment, especially when many people in a company believe they are already very user focused.

If you believe that the workshop participants simply won't believe that most people in the organization are confused about goals or don't have a good way to describe users, you should consider sending out a pre-workshop questionnaire and reviewing existing documents before the workshop. You can present your findings as part of the process.

### ALTERNATIVES TO THE WORKSHOPS: SEND OUT AN E-MAIL QUESTIONNAIRE

As an alternative to a direct, in-person meeting, you can create a short questionnaire asking members of your organization to send you their assumptions about your target users. Ask them to describe, in as much detail as possible, how they envision the various people who use or will use your product. Be prepared to follow up on the questionnaire to collect more details as necessary. Also keep in mind that e-mail is fairly easy to ignore and that you might not get many responses. Your questionnaire might include questions such as the following:

- Can you describe one or two typical users of our product?
- Can you name and describe a person you know who is most similar to the types of people using our product?
- At what times of day do our users use our product?
- Where do people use our product?
- Do our users use our product because they like to or because they have to?
- Are we trying to attract different types of users with our new product? Who are they?
- What (besides using our products) do our users like to do?
- Are the people who pay for our products the same people who use the products on a daily basis?

### REVIEW EXISTING PRODUCT VISION, STRATEGY, AND DESIGN DOCUMENTS

If for some reason you can't gather assumptions directly from your team, you might be able to find a wealth of assumptions about target users in some of your team's planning documents. Find a copy of the company's business plan, product strategy documents, design and vision documents from existing versions of the product, and marketing strategy documents. Look for any document that records strategic decisions made by your company. These decisions often hinge on expressed or implied assumptions about the target users of the product. Write down all references to users or customers and capture the exact wording as well as the implied characteristics you find. If you plan to share this analysis with anyone, be careful to be tactful and work to avoid offending any of the original authors of the documents you are dissecting.



#### HANDY DETAIL

*Categories of Users Usually Reflect Roles, Goals, and Segments*

There are two reasons to identify categories of users early in the process. The primary reason is to ensure that your data assimilation exercise produces results that are relatively easy to create personas from. The second is to establish a clear connection to the existing language used to describe users.

The data assimilation process is typically a bottom-up deductive process in which you find important relationships between and among the data sources. Using high-level categories to provide structure to assimilation adds a layer of top-down inductive analysis. The use of categories ensures that you will be able to express the information you find in the clusters of data as personas. Without categories, your clustered data will yield interesting information but you might have a difficult time using this information to form personas.

When you are ready to communicate and use your personas, you will find it much easier to do so if you can describe them in language that is already familiar—even in the case where your data suggest that the initial categories should be replaced by different ones. In the next three sections, we describe three differences between target users that can be used to discover and define the categories important to your business and product: differences in user roles, user goals, and user segments. Each of these is accompanied by an example scenario. All of the scenarios describe the same company (a bank) and project (an online banking system). In the example scenarios, we show you how differences in roles, goals, or segments can be used to create high-level categories of users depending on business objectives and the existing corporate environment.

In our banking examples, no matter which personas the team ends up creating, all of them should be traceable back to the categories of users. When people ask, "Why did you create these particular personas?" (and this question will come up), the answer will be something similar to the following:

"We created at least one persona for each major category of user. We created these categories for one of the following reasons:

- Stakeholders identified *user roles* our product had to support to be successful.
- Stakeholders identified *user goals* we had to satisfy to have a successful product.
- Stakeholders identified *user segments* we had to satisfy to have a successful product."

### Thinking About User Roles, User Goals, and User Segments

The sections that follow explore processes for thinking about user roles, goals, and segments.

#### *User Roles*

When you describe a person according to sets of tasks, job descriptions, responsibilities, or other external factors related to his or her interaction with your product, you are describing the user in terms of his or her *role.* For the purpose of software development, a user role is often defined with regard to the relationship between the user and a system. Specific roles don't necessarily map to specific users. Individual users might find themselves in any of these roles at different times. Roles are generally related to business, work, and productivity. In fact, sometimes they are directly related to job type, position, or responsibilities; however, they may also be related to an activity that defines a person as a type of consumer (e.g., the "shopper," the "browser," the "agent," or the "assistant").

**Scenario 1: Create categories based on user roles.** Your bank is large and offers many services for many different tiers of customers. Everyone at the company knows that the bank's website is going to continue to evolve over the next few years and will eventually support the specific needs of many types of customers. However, for now you have to figure out what features you need to build *first.* That is, which ones will give the bank the most bang for the buck as it tries to attract more customers and reduce its current customer support costs? You decide to create your categories of users based on various user *roles.* In this scenario, it would be appropriate to describe the following role-based categories of users:

- The new account shoppers
- The existing account holders
- The borrowers
- The investors

#### *User Goals*

When you describe a user in terms of what he or she is trying to achieve—in his or her own terms—you are describing the user's *goals.* Individuals have general goals that apply to many things they do in their lives, including the way they approach products. People also have specific goals that relate to tasks. Goals have a timelessness that roles do not. Whether or not you use goals as your primary differentiator, communicating your personas' goals will be critical during the *birth and maturation* and *adulthood* phases.

**Scenario 2: Create categories based on user goals.** Your group has been assigned to create an online banking experience to help the bank catch up with its main competitor. You also need to satisfy some of the customer requests that have been coming in for online access to account information and management tools. Your bank has been working hard to build a reputation as a trustworthy, solid financial institution, and you know that the online banking application needs to reflect this reputation. Your research shows that many people are dissatisfied with current online banking options because they are not sure the Internet is completely safe and reliable. You decide to create your categories of users based on different user *goals.* In this scenario, it would be appropriate to describe the following goal-based categories of users:

- Users who "want my financial life to be simpler"
- Users who "want my money to work for me"
- Users who "want to feel like my money gets as much attention as a millionaire's money"
- Users who "want to feel safe when I'm banking online"

#### *User Segments*

When you describe a user in terms of characteristics he or she shares with many other users, you are describing the user in terms of a segment. Segments are defined according to shared demographics, psychographics, attitudes, and behaviors. In marketing, segments are often used to create targeted messaging and advertising to increase product sales. Marketing teams, product planners, and

business development groups often define their objectives in terms of segments they have built to reflect the existing market and opportunities for innovation and new sales.

Segments can be rigorously defined through quantitative analysis of data, but they can also evolve through casual references to groups of users or customers (which, by the way, are sometimes referred to as "user classes"). Because segments are often used as shorthand when business stakeholders are talking about users and customers, they exist (are embedded) in the culture and lingo of many companies regardless of how rigorously they are defined. If segments already exist in your company's vocabulary, they will influence your persona project.

**Scenario 3: Create categories based on user segments.** The bank executives have been walking around for weeks talking about critically underserved markets for your bank's service and their desire to fulfill some of these unmet needs through the new online banking services. The executive team asked the marketing team to identify segments of consumers who would be likely to sign up for a new online banking service. The marketing team did some research and identified three main segments, which they described as enthusiasts, ostriches, and neophytes. You know that if your personas don't fit within these segments your executive staff will reject them. You decide to use the segments (as they are currently defined by market research) to describe the following categories of users: have debt and credit concerns and think of money in terms of "what I can afford today."

- *Financial enthusiasts*—35 to 65 years old, urban or suburban, professional, college educated, yearly household income of $50K to $250K, make decisions related to finances and review all account balances and activity at least once a month, aware and wary of Internet security issues, careful researchers and informed consumers of financial services
- *Financial ostriches*—25 to 40 years old, urban or suburban, professional, college educated, have children, yearly household income of $35K to $90K, busy with life and work, seldom balance checkbook, seldom review financial decisions, have several accounts at various financial institutions (including IRAs from old jobs), not entirely sure what they have at any given time, feel overwhelmed whenever they think of organizing finances
- *Financial neophytes*—18 to 25 years old, some college, yearly household income of $10K to $60K (with potential for considerable income growth), newly financially independent, tend to be interested and motivated but nervous, very aware of current financial status



No matter how your organization initially categorizes users, all of your completed personas will include information related to that persona's role, goals, and segment.

**HANDY DETAIL**

***Roles Are Not Always the Best Choice—Beware of Automating the Misery***

If you are working on a redesign of an existing product or process, be very cautious about creating personas based on existing roles. Remember that your redesign might automate some tedious chores, enable some advanced activities, and so on. If you create personas based solely on existing roles, tasks, and activities, you will miss the opportunity for revolutionary change in your product.

## 4. Complete assumption sticky note exercise

Distribute one pad of yellow sticky notes and one permanent marker to each participant (see supply list above). Ask each participant to use the next 20 minutes or so to list one possible target end users of your product, one per sticky note.

You'll get some funny looks when you make this request. Here are some guidelines to help smooth the process:

- Each sticky note should include a person and a situation or problem (see Figure 4.3). Alternatively, each sticky note could be written from a user's point of view—for example, "I'm looking for information on starting an account."

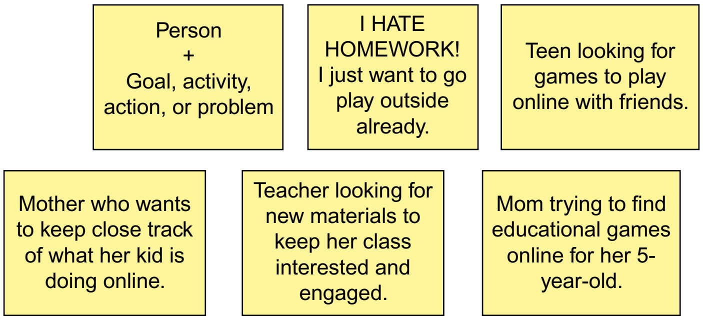



**FIGURE 4.3**
Create a slide showing examples like these to project during the sticky-note exercise.

- Remind everyone that there is a list of categories of users on the whiteboard to refer to. If they feel stuck, tell them to look at the categories and think of specific individuals who fit into each category and record one per sticky note.
- Participants will either run out of things to write quickly (see previous suggestion) or insist they could create "hundreds of these things." As a rule, we find that people will run out of steam in around 15 to 20 minutes, and that's fine.
- Remind everyone to write legibly!

As the stakeholders create the sticky notes, you should be doing two things:

- Use one of the other sticky-note colors (e.g., green) and transcribe the categories of users you identified in the previous step. If there are more than ten, consider finding ways to identify the most important or obvious categories and use those.
- Do your own yellow sticky notes! You've been thinking about users as you've prepared for the workshop. It's important to get your own thoughts into the mix.

## ASSIMILATE ASSUMPTIONS

This is when you're going to ask everyone to actually stand up and do some hands-on participation! While you might get some groans when you tell everyone to put away their laptops and cell phones, the process tends to engage people quickly and most find it both challenging and fun.

You can assimilate assumptions on a wall, table, or even the floor. If you have a large conference-room table, ask everyone to clear *everything* off of the table. Cover the table with sheets of easel paper.

If you're going to use a wall, you'll need a pretty big wall, and it would be helpful in this case to use the easel-sized sticky pads instead of plain easel paper.

Assimilating on the floor is sometimes the most practical option, given the space constraints of many offices (and has the extra added benefit of forcing very important stakeholders to get down on the floor!).

In the previous step, you used some of the time to transcribe the categories of users onto green sticky notes. When everyone is standing up and the paper is ready:

- Tell everyone that each of the green sticky notes lists one of the categories of users you identified together.
- Spread the categories of users out across the paper, leaving plenty of room for participants to place their sticky notes.

- You might want to organize the categories from left to right if that makes sense; for example, an ecommerce team might have identified users according to where they are in the purchase decision process, so you can put the "prospects" on the left and the "existing customers with questions" all the way to the right. This isn't critical, but if some kind of order makes sense then go with it.

Now it's time to assimilate. Here are the instructions we recommend you give to the workshop participants:

1. Encourage everyone to get all their sticky notes down on the paper quickly. This will make it easier to do the next step. So, put sticky notes related to each category near that category. If you have sticky notes that don't relate to any of these categories, use a green sticky note to create a new category. After all the sticky notes are down on the paper, you have an opportunity to make an important point. Ask everyone to stop and look at the paper and notice how many sticky notes there are. The sticky notes are probably placed on the paper rather haphazardly, and the whole scene will look fairly chaotic and disorganized. It's the perfect time to make the point that this illustrates a problem you are trying to address with the personas: All of these assumptions exist about users, and the ones you're looking at now only reflect the assumptions of people in the room. It's easy to imagine the confusion that exists throughout the organization regarding who the key users are and what they want and need.
2. Assimilate the sticky notes. If you are familiar with affinity diagramming, this is the same process. Ask participants to group around sections of the sticky notes and look for patterns. The sticky notes are already somewhat organized according to the categories of users, each of which is represented by a green sticky note. The workshop participants should be looking for subcategories within each category and any new categories of users. Put some green sticky notes on the table and instruct the participants to create new category or subcategory labels as they identify them. Remind them that these are just sticky notes, so they can and should be moved around. The green sticky notes don't have to be considered set in stone during the process. In other words, encourage the participants to be very actively involved with the sticky notes and to try not to get into analysis paralysis as they do the exercise. Physically rearrange the sticky notes during this exercise. We find it very helpful to array the green sticky notes across the top of the large sheets of paper, with the yellow sticky notes arranged in columns under each label. Ask your participants *not* to overlap the yellow sticky notes, as this makes the notes more difficult to read and more likely to fall off the large sheets when the whole thing is moved.
3. People will lose steam after a while. Encourage them to switch to different areas of the diagram to work on something new if you see energy flagging. Also make sure that people are talking and working together during the workshop. If you are planning to move on to create data-driven personas, plan to spend some time on this step. If you plan on using ad hoc personas, allocate around 30 minutes to this process, and stop even though there will probably still be work to do to finish the clustering.
4. Ask participants to divide up puddles of sticky notes. If you see a cluster of more than around ten yellow sticky notes, ask a few participants to find subcategories within the cluster (if possible).
5. Discuss the process with the participants.
6. Take a photo of the assimilated clusters for your records.



### If you are going to move on to data-driven personas …

If you are using this exercise as a first step in a data-driven persona exercise, stop here and move on to identify skeletons and analyze what you've found.

### If you are going to use ad hoc personas …

Reassimilate based on goals. You've just spent a lot of time clustering your assumptions according to the categories of users you identified at the beginning of the process. This is an important step; however, it will not necessarily help you create the kinds of ad hoc personas that will help your organization refocus on the differences between the goals and needs of your customers.

It's time to recluster all of the yellow sticky notes. Instead of relying on existing categories of users, you'll use yet another color of sticky notes (e.g., pink) to create new categories of users and rearrange the sticky notes accordingly. One method we suggest is to remove all of the green sticky notes from the worksheets, so you can get a fresh start. You'll get some big groans at this point. Press on!

Instruct the participants to recluster the yellow sticky notes under new category labels, all of which *must* start with the words "I want …" or "I need ….", or another similar phrase as long as it starts with "I."

**HANDY DETAIL**

***What's the Difference Between "I Want" and "I Need"?***

For the purposes of this exercise, the difference is not critically important. Encourage your participants to use whichever of the two sentence starters feels right to them. Generally, people tend to use "I need" statements for anything that is related to business, money, family, or other critical activities. "I want" statements tend to feel right for activities or needs that are related to leisure or other noncritical activities.



Demonstrate the new categories you want the team to create. Find several sticky notes that are related in terms of "I want …" or "I need …." They will probably be scattered across several of the existing clusters; for example, after the earlier exercise, you might have clusters that look like this:

- New account shoppers
  - Freshman arriving at college
  - Businessman switching banks to escape fees
  - Man who has too much in one of his other accounts and is worried about FDIC limits
- Checking account customers
  - Person setting up online bill pay
  - Woman who wants to know if the bank is open in the evenings
  - Someone looking for the customer service phone number
  - "What was this charge on my statement?"
- Savings account customers
  - Person who wants to transfer money from savings to checking
  - "I need to talk to a real human about this transfer fee!"
  - "How much are wire transfers?"
  - "Did my wire transfer go through?"
  - "Do you insure savings accounts?"
- Loan customers
  - First-time home purchasers looking for info on mortgages
  - Person who has a mortgage with this bank that has been sold to another bank
  - "Do you do student loans?"
  - "I want to pay off my loan right now."
  - "What are your fees?"

Here are examples of recategorization according to "I want …" or "I need …" statements:

- "I need help."
  - Someone looking for the customer service phone number
  - "I need to talk to a real human about this transfer fee!"
- "I have a general question."
  - Woman who wants to know if the bank is open in the evenings
  - "How much are wire transfers?"
  - "Do you insure savings accounts?"
  - First-time home purchasers looking for info on mortgages
  - "Do you do student loans?"
  - "What are your fees?"
- "I have a question about my statement/account."
  - "What was this charge on my statement?"
  - "Did my wire transfer go through?"
  - Person who has a mortgage with this bank that has been sold to another bank
- "I want to make a payment/move money."
  - Person who wants to transfer money from savings to checking
  - "I want to pay off my loan right now."
- "I want to set up new services on my account."
  - Person setting up online bill pay
  - Person who wants to transfer money from savings to checking
- "I want to find out how you are better than other banks."
  - Businessman switching banks to escape fees
- "I need a new bank account."
  - Freshman arriving at college
  - Man who has too much in one of his other accounts and is worried about FDIC limits



Note that a single yellow sticky can show up in more than one category. If this is the case, simply copy the yellow sticky and place it in both categories on your worksheet.

## The magic, and pain, of this exercise

This recategorization is both painful and fairly miraculous. It's painful because it is a transition from an old way of thinking about users and customers to a new way of thinking about users and customers.

In many cases, it is a transition from a company-centric way of thinking about the needs of users (e.g., we have a mortgage department, so all mortgage customers are in a category, and all checking account users are in another category) to a user-centric way of thinking (e.g., from the *user's* point of view, what do your company, products, and services do for *me*?).

There will be a few categories and sticky notes that will cause the team trouble and require a lot of conversation, but be persistent. Once you get through this process, the magic happens.

What's the magic? Almost inevitably, this process results in a *major* epiphany for the workshop participants. They suddenly realize that they have been thinking about their users in the wrong way. They see that the existing categories of users and ways of talking about users don't help them or the rest of the organization really understand and address what users actually want and need.

## But how do you know these needs and wants are real? You haven't used any data!

Yes, it's true that this process doesn't use any hard data. What it does use is the embedded knowledge of the company and product's users that exists in the minds of the workshop participants. The people you are working with have been thinking about the business for months or years; there is a lot of very relevant and very accurate information in their heads about their users and customers. The participants know why the business exists and what problems it should be solving for people. Additionally, most businesses are *not* rocket science; for example, we wrote the categories and recategorization in the example above ourselves, and we are not bankers. It's impossible to argue, however, that these categories of users are not important just because we didn't use data to create them.

The truth is that most companies and teams are far from being user centered at all; simply recategorizing assumptions based on the users' point of view yields seemingly obvious insights that simply didn't exist before the workshop.

If you plan to use ad hoc personas as your final personas (that is, not continue on to data-driven personas), skip steps 2 and 3 and move on to step 4 (create persona sketches).

### IDENTIFY CATEGORIES AND SUBCATEGORIES

After your reclustering exercise, you'll probably have 20 to 30 pink "I want/I need" sticky notes arrayed across your worksheet. Ask someone to read each pink sticky as you write it up on the whiteboard or on easel paper. Though this process does take a few minutes, it's important to do it while the whole team is assembled. The process allows everyone to step back and see the results of the work they've done.

After you've written all the pink sticky labels up, review them as a team. Usually, you will find that there are categories and subcategories that arise from the pink sticky notes. In our banking example, we might identify the following category/subcategory combinations:

- "I have an account, and want to do something new."
  - "I have a question about my statement/account."
  - "I want to make a payment/move money."
  - "I want to set up new services on my account."
- "I am shopping for a new bank."
  - "I want to find out how you are better than other banks."
  - "I need a new bank account."

And so on.

In step 3 (below), you'll use these categories and subcategories to create your ad hoc persona skeletons.



#### STORY FROM THE FIELD

*Ad Hoc Personas and Empathetic Focus*

***Donald A. Norman, Nielsen Norman Group***

**Personas as a Communication Tool**

Design is in many ways an act of communication, but to communicate effectively the designer must have a clear, cohesive, and understandable image of the product being designed and the user of the product must be able to understand that communication. By emphasizing the several types of unique individuals who will be using the product, personas aid the designer in maintaining focus—concentrating on design aspects individual personas require and eliminating from the design things they will find superfluous. Personas are tools for focus and aids to communication, and for this they only need to be realistic, not real and not necessarily even accurate (as long as they are appropriate characterizations of the user base). Although it is often fun to read the detailed descriptions of personas and to pry into their private and social lives, I have never understood how these personal details actually aid in the design process itself. They seem completely superfluous.

Thus, a major virtue of personas is the establishment of empathy and understanding of the individuals who use the product. It is important that each persona seem real, allowing the designer to ask, “How would Mary respond to this? Or Peter? Or Bashinka?”

Personas also play an important communicative role within the design community and within the company producing the product. When one discusses the product in terms of its impact on the individual personas, the language of the discussion is automatically based on that of the people who use it and the benefits (or difficulties) that would accrue to them. This is in contrast to the technical language so often applied when talking about the features and attributes of the product. Personas make it easier to be human centered. As others have noted, personas provide a common language regarding experience so that designers, engineers, and marketing people can unambiguously communicate when they talk about the product. The same tool is valuable when the product is being designed by different groups within the company—and this is always the case with any large, complex product. The use of personas helps standardize the approach of each group, so there is continuity of level and function in the different parts of the product.

**Empathetic Focus**

Another purpose of the persona, I believe, is to add empathetic focus to the design. By focus I mean that the design must be clear and coherent. It is not a collection of features added willy-nilly throughout the life span of the product, even if each feature by itself makes sense. Rather, it is having a clear image of what the product is meant to be—and what it is not meant to be—and rejecting features that do not fit. By empathy, I mean an understanding of and identification with the user population, the better to ensure they will be able to take advantage of the product and to use it readily and easily—not with frustration but with pleasure.

**Using Ad Hoc Personas**

As a consultant to companies, I often find myself having to make my points quickly—quite often in only a few hours. This short duration makes impossible any serious attempt at gathering data or using real observations. Instead, I have found that people can often mine their own extensive experiences to create effective personas that bring home design points strongly and effectively.



In one case, for a major software company, one of their major customer bases was American college students. We quickly identified several classes (called *cases*) of students:

- *Case 1*—A student attending a two-year community college while holding a full-time job
- *Case 2*—A student in a four-year institution who wants to have a successful business career
- *Case 3*—A student who is only in school for lack of anything else to do and who has few desires other than to have a good time

We quickly invented one relevant persona per case: a hard-working, single mother (case 1); a serious full-time student with no outside experience or responsibilities (case 2); and a lackadaisical, laid-back goof-off (case 3). Unlike traditional persona studies, these were not based on data, but each was described in sufficient detail (including names) so that the group all agreed they felt like people they knew.

I have found that an excellent way of using a persona is to have someone role play the part. In this way, only one person has to develop an in-depth knowledge of the persona, and everyone else uses the role player as an expert informant in activities such as participatory design.

In this case, I divided the attendees at my workshop into three groups to do a design exercise, with someone role playing the relevant persona as expert informant. The result was wonderful to behold.

The teams all produced highly user-centered designs based on the products of their respective companies. The designs were all very different in type and spirit from the products of their company, even though some of the designers of those products were in the workshop. The differences were striking.

In regard to case 3, the student kept saying, “I don’t care,” when asked about choices, while simultaneously making it clear that he wanted a system that required no effort or thought on his part and that gave him his preferred outcome (receiving a degree, but with minimal impairment to his preferred lifestyle). In regard to cases 1 and 2, students were more involved, but because of their different requirements imposed different demands on the software. Everyone agreed that this simple exercise had altered their perspective on what a product ought to do and how they should approach design.

Another consulting job was for a major publisher of city-information products. This group of attendees consisted of the executive team for the company, and although none of them actually designed products, the product groups were all under their control. For this workshop, I had the group invent two couples. One couple was young, newly married, and about to have their first child. They had only a small apartment and did not have much money. Their task was to use the city guide to find a crib for the expected child. The other couple was older and retired, with significant discretionary income. All of their children were away from home, living independently. My original intention was to have this older couple book a travel adventure, but because we were running out of time I switched the exercise. I announced that the older couple were the parents of the expectant mother, and they wanted to purchase a crib for their new grandchild.

The new exercise was extremely rewarding because it demonstrated how the two couples approached the task very differently, with different emphases, different search characteristics, and very different values. Having the workshop attendees work on the same problem was serendipitous, for it revealed the deficiencies in the existing city guide. Interestingly enough, after the conclusion of the exercise several of the executives admitted that their own behavior mimicked that of the older couple, including the observation that they seldom turned to their own city guide as a first step. This sensitized them to the fact that their own behavior with their company's product was a relevant datum. "Realize that others might behave the same way you do," I admonished them. "Take your own behavior seriously."

### The Final Assessment

These two different examples of personas are very different from the traditional usage of the concept. They were created quickly, did not use real data, and were employed without much background information and attention to detail. But, even so, they serve as wonderful tools for building understanding and empathy into the design process in a way that would be impossible with any other method.

Do personas have to be accurate? Do they require a large body of research? Not always, I conclude. Personas must indeed reflect the target group for the design team, but for some purposes that is sufficient.

A persona allows designers to bring their own life-long experience to bear on the problem, and because each persona is a realistic individual person the designers can focus on features, behaviors, and expectations appropriate for this individual. This allows the designer to screen off from consideration all those other wonderful ideas they may have. If the other ideas are as useful and valuable as they might seem, the designer's challenge is to either create a scenario for the existing persona in which these attributes make sense or to invent a new persona for whom the same applies. The designer then needs to justify inclusion of this new persona by making the business-case argument that the new persona does indeed represent an important target population for the product.

### STORY FROM THE FIELD

*The Benefits of Creating Assumption Personas*

***Laura Grange, Program Manager, and Rahul Singh, Software Developer, Amazon.com***

At Amazon.com, we decided to create a quick set of assumption personas as the first step before creating data-driven personas—in this case, for a particular product being built for the software developer community. The product manager sent out an invitation to the entire team, inviting them to participate in the brainstorming session. She got a reply from her boss asking why we were creating personas in a brainstorming session. He thought, quite rightly, that “You don’t brainstorm personas. You put them together through customer information, analysis, and feedback.”

The product manager replied, “This is a valid point. We’re using assumption personas as a method of jump-starting persona development. The team gets together to get all assumptions about the target user population out on the table. We create assumption personas out of these, which we can do quickly—in one or two two-hour meetings.

“We then use these assumption personas as the basis for evaluating the research and data we have, so the persona data effort becomes centered on validating the (usually) fairly accurate assumptions. Why do it this way? For several reasons:

- “The assumptions about the target user population typically reflect significant contributions from teams that have been working on products for a while. Creating assumption personas capitalizes on this rich but unarticulated information and quickly aligns all of the assumptions. This alignment is valuable even if the persona effort goes no further. There is value in creating the assumption personas simply for the benefits derived from aligning the team’s assumptions.
- “Using data to validate assumption personas is a lot easier and quicker than creating personas from scratch (from data).
- “If you create personas from scratch without surfacing the assumptions first, you end up with personas that are more difficult for the team to use. Building assumption personas helps build buy-in.”



This quick explanation was enough to give the manager confidence that the exercise was worth the limited amount of time it would take. It was great to hear that he already knew about personas and their relationship to data! After the first assumption persona session, we got the following e-mail message from one of the developers on the project, who was dubious at the start of the meeting but soon became an active and enthusiastic participant:

> *I was one of the people in the persona brainstorm and I just wanted to say that it was really quite a good exercise IMHO [in my humble opinion]. I went into it thinking it was going to be a waste of time, but it wasn’t. In fact, parts of it were quite scary and a bit too close to home.*

This quote is especially interesting because I was working with developers to create assumption personas who were also developers! It was easy for the development staff to assume they knew the users because the users in this case share the same job description as the development staff. During our first two-hour session we identified several assumption personas that we were able to discuss and invite stakeholders to prioritize.

## Step 2. Process the data

During the *family planning* phase, you collected and reviewed many data sources, including research reports containing summaries, highlights, and significant details extracted from raw data of some sort. Your next task is to process these research findings, pulling out the bits and pieces that are relevant to your team and product domain. Once you have isolated these relevant factoids, you and your core team will process them (through an assimilation exercise) using the user categories you agreed upon in step 1.

### DATA PROCESSING METHODS

There are many ways you can go about processing your data to create personas, and we strongly recommend a specific approach: affinity diagramming (which we and others often refer to as *assimilation*). We use the assimilation method because it is quick, easily understood, and is overtly collaborative. It also works well across a variety of data types and formats.

As an alternative, you might consider doing quantitative analysis (such as factor analysis, cluster analysis, or some other multivariate statistical procedure) or qualitative analysis (with a tool such as Atlas.ti, HyperQual2, HyperRESEARCH, NUDIST, or Xsight, a trimmed-down version of NUDIST). These tools are quite useful for extracting the underlying themes from any type of data, as you possibly did with raw data during the family planning phase. For example, Rashmi Sinha [2003] describes a persona creation process using principal components analysis to identify the critical underlying dimensions. Her analysis uncovered independent clusters of needs (very similar to goals), which were then used in combination with other information as the basis for creating distinct personas. Such an approach is similar to cluster analysis and other statistical techniques typically used in the creation of quantitative market segments. Although we believe that analyses such as these can be a great starting point, we recommend that you also conduct a data assimilation exercise as the primary method of persona creation, particularly when combining data from a variety of sources.

## COLLABORATIVE ASSIMILATION HAS SIDE BENEFITS

Because the entire core team is involved in the assimilation exercise, everyone has an opportunity to see the factoids from all data sources. By the time the assimilation exercise is complete, everyone on the core team will have been exposed to the data and to the inherent patterns, themes, and relationships in the data. This shared understanding is priceless. As a side benefit, through your assimilation exercise you create a core team that is fully cognizant of a huge amount of data from a wide variety of sources. Armed with your clustered and labeled data, you and your team are perfectly prepared for the next step: identifying and creating skeletons.



## ASSIMILATION WORKS WELL, BUT IT DOES HAVE A FEW DRAWBACKS

Assimilation does have a couple of drawbacks you should be aware of before you begin:

- During an assimilation exercise, you and your team will group factoids that have been extracted from their original contexts. Factoids that are unrelated when you read them in context may seem related (and end up grouped) after they have been extracted from their sources and copied onto sticky notes. This opens the possibility for misrepresenting the original data in your final personas.
- Identifying relationships between factoids is a subjective exercise. Two different teams might group factoids in different ways and end up with different conclusions.

Because affinity diagramming does open the door to misrepresentations of your data, we encourage you to schedule enough time to validate your personas after you have created them. However, it is also important to remember that personas can never fully express or represent the data in the same way it is expressed in the original sources, and that this is not the point of the personas. Rather, personas will help you communicate the essential and helpful information the data contain. The danger that some aspects of the personas *may* misrepresent some aspects of the data is outweighed by the guarantee that the personas *will* convey important and data-driven information to your product team.

## PLAN YOUR ASSIMILATION MEETING

An assimilation meeting typically lasts two to four hours. It should include all members of your persona core team. These meetings work best in medium to large rooms that have plenty of wall space (or floor space). Before the meeting, make sure you have plenty of sticky notes, markers, tape, and large sheets of paper on hand.

If you have a relatively small to medium amount of data, you should be able to assimilate all of it in a single meeting. If you have a large amount of data, consider distributing the data sources and request that your colleagues identify relevant factoids before the meeting. Alternatively, simply schedule multiple meetings that focus independently on each identified user category. If you do the latter, make sure to have a final meeting in which the assimilation results for all user categories are reviewed together. Generally, the agenda for an assimilation meeting should be as follows:

1. Describe the rules, goal, and outcome of the meeting.
2. Identify key data points (factoids) in the data sources.
3. Transfer key data points (factoids) to sticky notes.
4. Post user category labels in various locations in the room.
5. Assimilate the key factoids.
6. Label groups (and do some higher order organization).

### DESCRIBE THE GOAL AND OUTCOME OF THE MEETING

Your goals for this meeting are fairly simple:

- Filter and prioritize the data down to the most important and relevant bits of information, or factoids, for your specific product and team.
- Organize these factoids into meaningful, related groups, paying attention to the user categories you identified in step 1.

These groups of factoids will serve as the core content and structure for creating personas, but note that when this meeting is over you will not have personas in hand.



### IDENTIFY KEY DATA POINTS (FACTOIDS) IN THE DATA SOURCES

The first step in processing the data is to review and filter the information in each of the research reports. You do this because not every data point in a given study or report is relevant to the definition of your target audience or to the design of your product. Whether it is done before or during the meeting, ask your core team members to highlight findings they think are key in understanding your target audience or that are highly insightful toward defining aspects of your product. In other words, you want them to look for findings that are relevant to your market, industry, or domain. Highlight any facts that seem important to your product's audience or to the product itself. Figure 4.4 shows example highlighting in a market research report.

Determining what pieces of information are important may seem daunting at first. Don't fret too much over this until you have tried it. When in doubt, be inclusive. It is better to start with too many factoids than too few. You might be tempted to develop criteria ahead of time (e.g., criteria for factoids that are irrelevant, too detailed, too broad, or otherwise not very helpful). We recommend that you do not. In our experience, such criteria are not easy to come by and are difficult to apply. Attempting to generate them consumes valuable time that could be used more directly with the data. In fact, because your core team consists of key individuals across your organization and from different disciplines, each person will have different insights and perspectives on what is important. This is good. You will find that agreement on the importance of any individual piece of data actually happens through the assimilation process.

In the end, even your full personas will *not* include or reference all of the data you find and cluster. If you find yourself drowning in data or your team stuck in "analysis paralysis," just force yourself to move on to the next step and trust that the process will still work. Be willing to try things out, and plan to use your time on iteration (not initial perfection).

### TRANSFER FACTOIDS TO STICKY NOTES

After everyone has had a chance to comb through the assigned research documents, it is time to go back through the items they highlighted, reevaluate their importance, and then transfer

**HANDY DETAIL**

*What to Do if You Are Drowning in Data*

If you have collected a lot of data during the *family planning* phase, you might find it difficult to get started with your data analysis. Staring at a huge stack of printouts can be incredibly intimidating. If you are having a difficult time getting started, try sorting your printouts into three stacks: very relevant (to your product domain and intended users), moderately relevant, and not very relevant. Conduct an assimilation exercise with only the very relevant documents and see what types of clusters you get. After you run your first assimilation exercise—even if it is just with a subset of the data resources collected—you will find that it is easier and much quicker to identify interesting factoids in future exercises. If you are then still dissatisfied with the depth of insights revealed initially, and have the time, you can continue assimilating with less relevant data.

**Create quick data-driven personas**

If you have had time to collect data but need to create and introduce personas on a tight schedule, you should spend as much time as possible understanding and assimilating your data to create meaningful and relevant skeletons (there is always time to add more detail after the personas are introduced). If you decide to create quick, data-driven personas, your process during the conception and gestation phase might run as follows:

- Step 1 (1/2 to 1 hour)—Meet with your core team and product stakeholders to identify categories of users that are important to your business and product domain.
- Step 2 (2 to 4 hours)—Process the data. The core team should thoroughly read the data sources, identify important factoids, and complete an affinity exercise to cluster the factoids around the categories of users.
- Step 3 (2 to 4 hours)—Identify and create skeletons (either in a meeting with your core team or independently). Evaluate your processed data to verify the categories of users and to identify subcategories of users. Create skeletons from the key data points for each subcategory you have identified.
- Step 4 (2 to 4 hours)—With your core team and product stakeholders, prioritize the skeleton personas. Add concrete details and personal facts to enrich and personalize the skeletons. If you need to speed up the conception and gestation process, spend your time making sure that the skeletons from which you create the sketches reflect the assimilated data and your conclusions about the resulting categories.

If you do need to create your personas quickly, be aware that the stakeholder review and prioritization can be an unpredictable and a time-consuming process. To get these done quickly, you will have to be well organized and very proactive; for example, you will need to provide clear goals, explicit instructions, and time lines to your stakeholders.



them to another medium to enable assimilation. Each important factoid should be copied or cut out of the original document. We prefer to do the factoid assimilation using sticky notes, though larger sheets of paper (e.g., 8-1/2 × 11 or easel sheets) can be useful for readability and easier collaboration. Figure 4.5 shows an example of some facts being pulled from a field study report (qualitative findings) and transferred to sticky notes. It may be more practical to simply physically cut the data points out of the research document with scissors and glue them onto 3 × 5 index cards. (You could also use printable sticky notes or 3 × 5 cards and have someone type them in and print them during the meeting.) Either way, remember to note the source and page number on each factoid. Remember to include the source and page number on every sticky note.

## POST USER CATEGORY LABELS AROUND THE ROOM

Before starting your assimilation exercise, it is important to seed the room with the user category labels you identified in step 1. If your categories are based on quantitatively

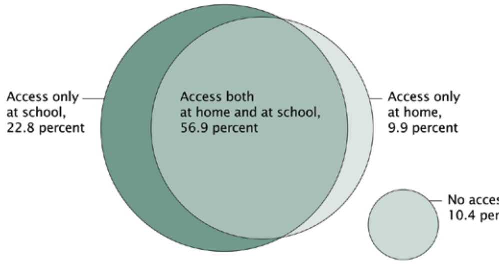
While 38 percent of White non-Hispanic children and 35 percent of Asian and Pacific Islander children used the Internet at home, just 15 percent of Black children and 13 percent of Hispanic children did.[5]

**More school-age children use computers at school than have access to them at home.**

School is a major influence on children's access to computers. Among children of school age (6 to 17 years), 2 in 3 had access to a computer at home in 2000. However, 4 in 5 actually used a computer at school.

More than half of school-age children had access to computers both in school and at home (57 percent). However, many children had access in only one location or the other. Of them, far more had access in school than had access at home. Twenty-three percent of school-age children had access to a computer only at school, compared with just 10 percent who had access only at home. Adding all three groups together, 9 in 10 school-age children had access to a computer somewhere, leaving just 10 percent of children who had no access to a computer in any locale (Figure 2).

Figure 2.
**Access to Computers Among School-Age Children: August 2000**
(Civilian noninstitutional population)




Source: U.S. Census Bureau, Current Population Survey, August 2000.

**Schools level the playing field by giving computer access to children who have none at home.**

For children 6 to 17 years old, computer use at school was more nearly equal across different income, race, or ethnic groups than computer access at home (Figure 3).

School-age children in family households with incomes of $75,000 or more had the highest rates of home computer access, at 94 percent, compared with those with incomes below $25,000, at 35 percent (a difference of about 60 percentage points). But at school, while 87 percent of those with the highest incomes used a computer, 72 percent of those with the lowest incomes did so, a difference of only 15 percentage points.

Figure 3 illustrates a similar equalizing effect observed among children of different racial or ethnic groups. At home, access varied from high to low by 41 percentage points. However, at school the range was much smaller, just 14 percentage points.

The net result of the effect schools have in giving computer access across income, racial, and ethnic groups is a leveling of the computer access that children of different groups have compared to what they would have had if home were the only place available for them to use computers. The absolute percentage-point gap in total computer access between children from family households with the highest and lowest incomes was only about one-third as large as the gap in home access between these two groups. Similarly, the overall computer access gap between White non-Hispanic school-age children and Black or Hispanic school-age children was just over one-third the size of the gap between these groups in home computer access.[6]

**ADULT ACCESS TO COMPUTERS AND THE INTERNET**

**More adults have computers and use the Internet at home than ever before.**

More than half of all adults 18 years old and over, 55 percent, lived in a household with at least one computer in 2000, compared with only 46 percent in 1998. Thirty-seven percent of all adults used the Internet at home, compared with just 23 percent in 1998 (Table C).

The oldest adults had the lowest rates of home Internet use. Only 13 percent of those 65 years old or over used the Internet at home.

[5]The proportions of home Internet users among Asian and Pacific Islander and White non-Hispanic children were not significantly different. The proportions of home Internet users among Black and Hispanic children were also not significantly different.

[6]The proportions of overall computer access among Black and Hispanic school-age children were not significantly different.

U.S. Census Bureau 5

**FIGURE 4.4**
Data highlighting in a quantitative market research report. (Adapted from U.S. Census Bureau, 2001.)

derived segments, include the major defining characteristics of the segments as well. These labels will serve to direct your initial placement and high-level organization of the factoids. We recommend that you do this with larger sheets of paper instead of sticky notes to ensure that they are salient and visible (see Figure 4.6). Be sure to leave room between and underneath each label for the multitude of sticky note factoids that will be placed in relation to them. Your assimilation and prioritization activities, detailed in the following, will revolve around these predefined categories, so make sure everyone in the room is intimately familiar with them.

## ASSIMILATE THE FACTOIDS

Now the interaction (and fun) begins. To do the assimilation, everyone will get up (at the same time) and place their factoids around the room, positioning related factoids near each

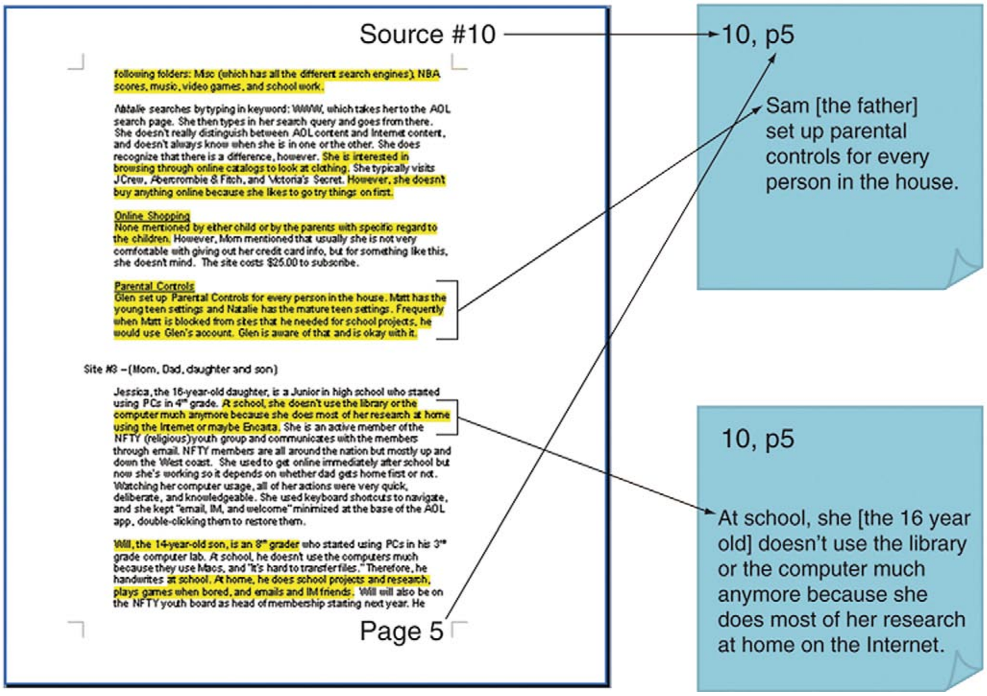



**FIGURE 4.5**
An example of two factoids identified in a qualitative research document (field study report) and transferred to sticky notes.




**FIGURE 4.6**
Seed the walls with your user category labels. (Photograph courtesy of Jonathan Hayes.)

other to form groups or clusters. Ask everyone to review their factoids and start putting them on the wall or floor in relation to other people's factoids (and in relation to the predefined categories).

For example, if one person has a factoid about children's Internet use behaviors after school and another has a factoid about children's daily entertainment activities in the home, these


**FIGURE 4.7**
An assimilation exercise in progress. In this case, the factoids are written on larger sheets of paper to facilitate collaboration. (Photograph courtesy of Jonathan Hayes.)



two factoids might be placed near each other. As everyone adds their factoids, similar or related factoids will cluster, and factoids that are not related will end up far apart. Figure 4.7 shows an assimilation exercise in progress.

During your assimilation exercise, you might find factoid "islands" of sticky notes that turn out to be difficult to cluster. If you find factoids that cause extended arguments or that you feel you have to force into a cluster, put them aside and return to them later. You won't use every factoid you have created and clustered in your finished personas.

You might also find that a single factoid fits well in more than one location. Make copies of the factoid and put it everywhere it belongs. As the assimilation progresses, you will find that your opinions on how to cluster factoids evolves. Your team will probably want to redistribute factoids and even move entire clusters as the exercise progresses, and you should encourage them to do so until they feel that the clusters make sense.

*Look for "puddles" of factoids.* If you see more than five to ten factoids clustered closely together (in a "puddle"), try to find additional distinctions between the factoids on those sticky notes. Instead of a single large cluster, try to create several smaller clusters that reflect these distinctions.

## LABEL THE CLUSTERS OF FACTOIDS

As the clusters of factoids become stable, begin labeling the clusters with sticky notes. Be sure to use a different color for the labels (see Figure 4.8). Remember that assimilation is given structure by the categories you initially identified, but at its core the resulting clusters are determined by the data (i.e., it is a bottom-up process). Not all of your clustered factoids have to fit cleanly into your defined categories. When you label your clusters, you will identify supporting data related to your categories, distinctions in categories (subcategories), and new information about your targeted users (see Figure 4.9).

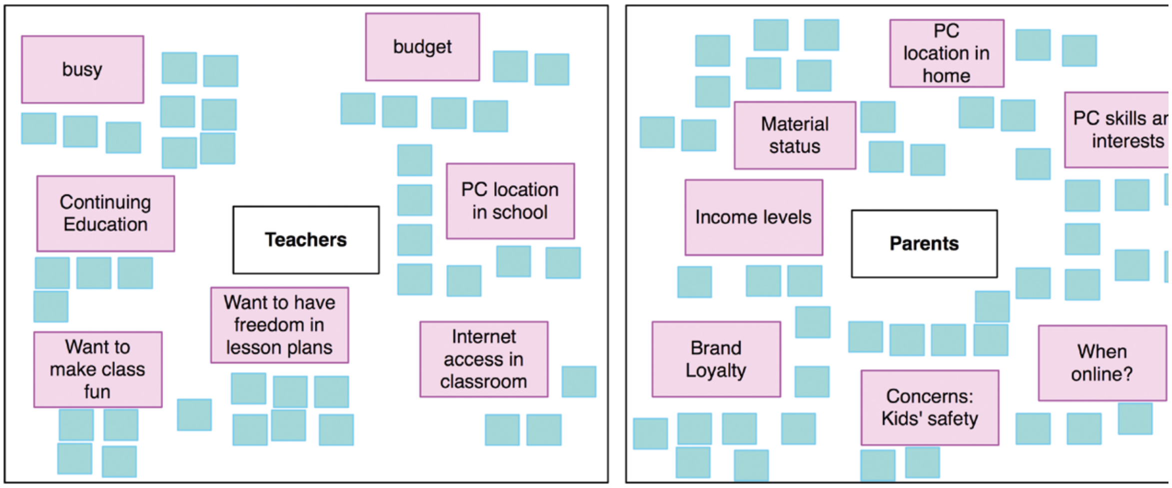



**FIGURE 4.8**
Categories of users (white), cluster labels (pink), and factoids (blue) after an assimilation exercise. In this illustration, we show the labels (pink) much larger than the sticky-note clusters. This is simply so you can read the cluster labels. We recommend that you use sticky notes to label the clusters of factoids (in this example, blue sticky notes) and assumptions (in this example, yellow sticky notes; see Handy Detail, below) you find during your assimilation exercise because this facilitates moving and changing the labels as needed.

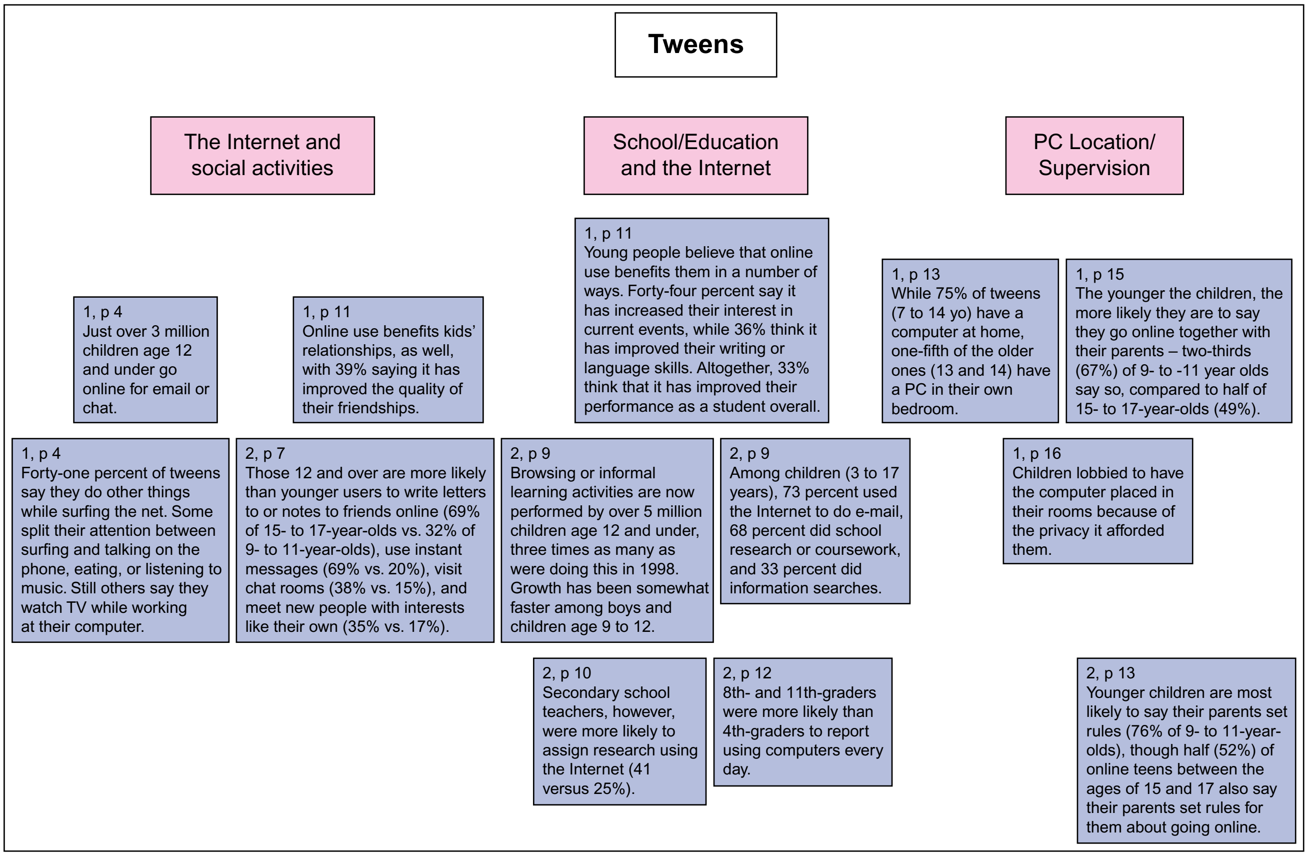



**FIGURE 4.9**
Some example clusters of factoids.

### HANDY DETAIL

***You Can Include Collected Assumptions in Your Assimilation Exercise***

If you collected assumptions during family planning (or to help you identify categories of users), you can assimilate these along with the factoids. Assign one sticky-note color to indicate assumptions so you don't confuse them with factoids. Assimilating assumptions along with your factoids allows you to easily see which assumptions are supported by data (those that end up clustered with factoids) and which ones are not (those that end up alone or in small clusters with other assumptions).

Assimilating assumptions in with your factoids can produce some very interesting results; for example, you can create your categories, assimilate your assumptions (perhaps using yellow sticky notes), and then assimilate your factoids (using blue sticky notes). After your assimilation is complete and you have labeled all of your clusters of factoids (see material following), you will probably find that some clusters include only blue sticky notes (factoids) or only yellow sticky notes (assumptions). This is helpful information. If a cluster includes only factoids, it could mean:

- Your organization doesn't have any assumptions about this topic.
- Your organization does have assumptions about the topic but you have not surfaced these assumptions yet.

To find out, you can ask your stakeholders to tell you their assumptions about the topic in question. If a cluster includes only assumptions, it could mean:

- The data do not support the assumptions.
- You did not find and use the data related to these assumptions in your exercise.

If you find a cluster with only assumptions, look for more data to either support or specifically contradict the assumptions. You know that the assumptions exist and therefore could exert influence on the design of your product. It is worth looking for data now.



## DATA TEND TO CLUSTER IN EXPECTED AND UNEXPECTED WAYS

The data you have assimilated had many different authors with many different purposes. It is not possible to determine before you assimilate it what truly insightful and compelling relationships in information you will find. Factoids will not all naturally cluster in ways that seem immediately relevant to your persona effort. This information may not map neatly to user types or goals, but it may contain domain-related insights that prove invaluable to your effort. If you find "odd" clusters developing, don't try to force them to fit. Examine them for insights into your user base. You may want to follow up any perplexing questions with additional user research.

## KNOW WHEN TO STOP

Continue the assimilation and labeling exercise until:

- Everyone has placed their set of factoids on the floor or wall in relation to other factoids.
- The groups or clusters have started to settle.

Note that you may have to just force yourself to stop, as the organization of factoids, labeling, and reorganization can go on for a long time. One way to force the issue is simply to stop once every group has a label (even if you don't have agreement on the current organization and labeling).

## IDENTIFY SUBCATEGORIES OF USERS

When you listed current language around categories of users in step 1, you thought about the differences in user roles, user goals, and user segments among the groups of your target users. To identify subcategories of users, you will now think about these differences *within* each of your categories based on key findings across the clusters. For example, if you created categories of users defined primarily by differences between user roles, you can now examine each of those categories for important differences in user goals and user segments. You may also find that there are specific subroles that form subcategories. You should create a subcategory to describe any product-significant differences you find within your categories that seem important and are clearly indicated in the assimilated data.

### CLUSTERS IDENTIFY GROUPS OF FACTS; SUBCATEGORIES IDENTIFY GROUPS OF PEOPLE

Look at the data clustered under each of your user categories. As a team, evaluate and discuss the possibility that each category should be divided into two or more subcategories. Consider roles, goals, and segments in this assessment. As you identify subcategories, you can write them on a whiteboard. You might also find it helpful to transfer the subcategory names onto sticky notes and place them appropriately in your assimilated data. In doing this exercise, you are simply exploring the possible groups of users that have emerged from your data.

### WHEN DOES A DIFFERENCE MERIT A SUBCATEGORY?

The most difficult part of this process is determining whether a difference is *meaningful and useful*. Step back and see if subcategories are bubbling up out of your assimilated data.

Your goal is to express what Bob Barlow-Busch (in his contributed chapter "Marketing Versus Design Personas" in *The Persona Lifecyle: Keeping People in Mind Throughout Product Design*) calls "the differences that make a difference" between the types of people described in your data sources. As your core team discusses the results of your assimilation, consider the following questions in determining which merit the creation of subcategories:

- *Does this subcategory represent a group of users important to the design of our product?* Does this subcategory likely require different features from other subcategories and different ways of interacting with our product?
- *Does this subcategory represent a group of users important to our business?* Does this subcategory produce revenue, bring mind share, or influence other people regarding your product?
- *Is this subcategory clearly unique compared to the other subcategories?* Is the subcategory different enough to warrant a separate and distinct persona?

### WHAT IF WE END UP CREATING A LOT OF CATEGORIES AND SUBCATEGORIES?

As long as you feel you can distinguish the categories and subcategories you discover in the data, it is fine (and often a good idea) to create subcategories. Create as many categories and subcategories as it takes to capture your data. You will not necessarily create personas for all of them. The product design and development team will likely not be able to embrace more for consumer-facing products to have a minority of customers account for a majority of profits. It therefore makes sense to highlight their needs. (It might also be the case that noncustomers, who the company hopes to attract, want more out of the product than it currently delivers.) But the principle is the same as designing for the neediest users: See if, by satisfying a design problem for the most demanding users, you can satisfy a much larger group of users. Thus, this can be valuable complementary approach, but just use it with care.

## Step 3. Create skeletons

By the time you get to step 3, you have identified important categories and subcategories of users. If you are planning on using ad hoc personas, you identified the categories based on logical groupings of your "I want" and "I need" statements. If you moved on to step 2, your categories and subcategories are based on the patterns you found in your data.

Once you have identified and agreed upon the categories and subcategories of users, you are ready to create *skeletons.* Skeletons are very brief, typically bulleted, lists of distinguishing data ranges for each subcategory of user. Skeletons help your core team transition from thinking about categories of users to focusing on specific details. They also allow your team to present the key findings of the assimilation exercise to stakeholders.

### AD HOC PERSONA SKELETONS

Use the groupings of pink sticky notes described at the end of step 1 (above) as your skeletons. Tape sheets of easel paper to the wall, and write the skeleton description at the top of each sheet. Under that, add the cluster labels that you used to create the skeleton. Continuing the example we started in step 1:

- Skeleton 1—"I have an account and want to do something new."
  - "I have a question about my statement/account."
  - "I want to make a payment/move money."
  - "I want to set up new services on my account."
- Skeleton 2—"I am shopping for a new bank."
  - "I want to find out how you are better than other banks."
  - "I need a new bank account."

You'll likely have 10 to 20 (or even more) of these skeletons from your assumption exercise. Don't worry about the numbers; we'll cull these down to a reasonable amount later. Also, you may feel the need to further elaborate some of these skeletons, but resist the temptation at this point. For now, simply number them so they are easy to identify during the prioritization exercise.

### DATA-DRIVEN PERSONA SKELETONS

Create one skeleton for each of the subcategories you identified. On each skeleton, list the cluster labels that relate to that subcategory. These cluster labels will become headings in your skeleton. Because you will be comparing and prioritizing skeletons against each other, it is important that each contain at least somewhat comparable information. Consider including common characteristics or headings across all of your skeletons. If you do this, you may find that you are missing information for some skeletons. In these cases, either leave that information blank, perhaps marking it as "need data," or make an informed estimation



**Skeleton**

**Boy, age 10–13**

**Computer use at school**
- Has access to a shared computer in his classroom or a computer lab shared by the whole school
- Has at least one computer-related assignment a week
- Finds computer use at school boring

**Internet use at home**
- Shares a home computer with family
- Uses Internet to play games and (sometimes) do school work

**Interests/Activities**
- Likes to talk about games with friends
- Likes video games more than computer games
- Participates in multiple organized sports

**Sketch**

**Danny**
Danny is 12 and he just started 6th grade, which is very cool. He has computer lab once a week and he likes it a lot. He usually spends recess in the computer lab looking for info about the Lakers and for new games to try. He thinks he's a computer pro; his mom's been coming to him for help with silly stuff for years now.

**FIGURE 4.10**
A skeleton versus a sketch persona. Note that the skeleton includes headings derived from cluster labels (from the assimilation exercise) and data points. For now, avoid any narrative details that might distract stakeholders as they try to prioritize the skeletons.

about what it might be. If you do the latter, be sure to indicate that it is an assumption to be followed up on.

Under each heading, create a bulleted summary of the information you found in the data. You are not exhaustively including every aspect of the associated factoids. Try to identify the key points that capture the essence of the subcategory. Do not give the skeletons names or other personal details that make them feel like people (which may relate to but are not specific to the data). As shown in Figure 4.10, skeletons are not sketch personas; they are selected facts that define and distinguish your subcategories of users.

### How many skeletons should I create?

We recommend that you create skeletons only for subcategories of users you believe are interesting or important to your product. If you create a large number of skeletons, you can use the prioritization exercise following to narrow in on the few you will evolve into personas. However, it is much easier for stakeholders to prioritize fewer skeletons. Use the criteria listed previously in the "When Does a Difference Merit a Subcategory?" section to discuss each skeleton as you create it and to combine, augment, or discard skeletons.

**HANDY DETAIL**

***Think About Your Users***

Earlier in this book, we reminded you to think about the users of your own work products. Skeletons are a perfect example of the importance of this. Skeletons are documents you use to communicate with your business stakeholders. You will ask these stakeholders to prioritize the skeletons in accordance with business objectives. This is precisely why you do not want to include fictional details (such as a name, favorite color, or favorite activity). Any information in the skeleton document that is not obviously derived directly from data will distract the stakeholders and invite debate on details—and this is not the appropriate time for that debate.



**HANDY DETAIL**

***What if You Find "Scary" Information in the Data?***

What if you have some data that make you create a persona that inherently will not like your product? For example, maybe you are building a product for television and the data indicate that people in a key set of target users are too busy to watch television. What do you do? If you run into this type of problem, you can:

- Escalate the data you have found to the stakeholders, so they can reevaluate the strategy for the product. If they push back, show them the data that led to your conclusions.
- Reevaluate your data sources to consider whether they are really in line with the existing strategy with respect to target users.
- Build this information, and the related design challenges, into the personas you create. Given that your targets currently don't like to watch television, and that you cannot change the delivery medium, how do you get these people to change their behavior and turn on the television to access your product? How do you build a specific product that will appeal to them, given their needs and goals?

## PERSONA GESTATION: STEPS 4, 5, AND 6

Once you have a set of skeletons, it is time to get feedback from your stakeholders. You will evaluate the importance of each skeleton to your business and product strategy and prioritize the skeletons accordingly. During gestation, you will identify a subset of skeletons to develop into personas.

### Step 4. Prioritize the skeletons

It is time to prioritize your skeletons. To do this, schedule a meeting with members of your persona core team who understand the data you have collected and stakeholders empowered to make decisions about the strategic focus of the company. If stakeholders are not aware of the data and general process that led to these skeletons, present that information before introducing the skeletons to them. It is important to carefully plan and manage your prioritization meeting. Before you get started, remind everyone of the goals of the meeting and the impact their decisions will have on the project.

- *These skeletons were derived from data* and should map fairly clearly to the user types (categories and subcategories) you already reviewed together.
- *Prioritization should focus on immediate goals or low-hanging fruit.* Remind the team that the goal is to reduce the possible set of targets to just those that are critical *to your current product cycle.* Remember that you can prioritize the skeletons differently for subsequent versions of this product or for derivative or sibling products.
- *Prioritizing does not mean abandoning the interests of the lower priority skeletons.* It simply means deciding that, in the case of feature or functionality debates, the interests of the persona derived from the most important category or subcategory of users should be considered before anyone else's. If the stakeholders insist that all of the skeletons are critical, ask them to consider which would be *most useful* to the development staff. For example, have them do a Q-sort in which they can place a particular number of items in each of three priorities (high, medium, and low) and then have them sort within each category for one more gradation. You can always provide a slightly different set of personas to those teams who might benefit most from them (e.g., give your marketing team the set of personas closest to purchase decisions).
- *Prioritizing should be relatively easy if the business and strategic goals for the product are clear.* If prioritizing is difficult, it may mean that the stakeholders have some more work to do on their own. The skeletons and the detailed category and subcategory distinctions may be able to help them in this work (see information on articulating goals in Chapter 3).



It is important to reach consensus on the importance of the various skeletons, but it is not often easy to do so. When you ask your stakeholders to rank the skeletons you identified, they will probably respond in one of the following ways:

- "These three [or some subset] are the ones we really need to target."
- "They are all great."
- "They are all great, but we need to add X, Y, and Z customers to this list" or "You are omitting many of our major customer groups."
- "None of these is good."
- "I can't tell you which ones are the right ones."
- "Wow, we need to do some (more) customer research" or "We really need to know X about our users."

Although getting the first answer is the best, all of these answers are actually okay. They all provide useful, actionable information. Of course, you could get a completely different response from each stakeholder. If that happens, know that it is useful information and take note of it (in Chapter 7, we provide suggestions for expressing the value of the persona effort); also, demonstrating that key stakeholders had very different ideas about the target users before the personas were completed can be helpful.

Some of your stakeholders' answers may point to problems in your organization—problems in business strategy or lack of real knowledge about your customers. If this is your first time doing personas, we can pretty much guarantee that there will be difficulty and indecision. You are asking difficult questions that your stakeholders may not have been asked before or probably have not been asked this early in the product cycle.

## STRUCTURE THE DISCUSSION

It is helpful to provide some structure to the prioritization exercise. The first step is simply to have them rank order the skeletons by perceived importance. There will likely be some disagreement as they sort the list. That is okay at this point. Once you have a rough order in place, we suggest assigning each skeleton one or more values that can more closely be tied to data:

- *Frequency of use*—How often would each skeleton use your product? Daily users would likely be more important regarding design decisions than those that only use your product once a month.
- *Size of market*—Roughly how many people does each skeleton represent? Larger markets are usually more important than smaller ones. Do you plan to aim your new product at a new market? In that case, you might consider the importance of a small market with growth potential.
- *Historic or potential revenue*—How much purchasing power does each skeleton encompass? If this is a new product, you may have to estimate this amount (e.g., through trade journals, market trends, market research, and understanding spending behaviors in related markets). In many cases, users might not directly make the purchase. Someone else buys such products for them. Still, they may influence those purchase decisions.
- *Strategic importance*—Decide who is your most strategically important audience. Is it those who make the most support calls, those who rely on your product for critical activities, those who use your competitor's product, or those who don't use yours or anyone's product yet? Are you trying to expand or grow your market? If that is your primary goal, do your skeletons include nonusers, technology pioneers, or trendsetters? Which target audiences will help your team innovate or stretch?
- *"The magic question"*—Sometimes it's just really hard for a team to say that one persona is more important than another. Try turning the question around: "If we don't make [persona name] ridiculously happy, we've failed." This is a great way to prioritize for many executive teams, because there are often a few personas who, when they are put into that sentence, are obviously critically important. For example, if you are creating a website for elementary-school children to introduce them to more of your company's games, then it's easy to say, "If we don't make Tanner (the 9-year-old who has one of our games but doesn't know about the others) ridiculously happy, we've failed." And this is likely to be *more* true than: "If we don't make Austin (the 12-year-old competitive gamer who has moved on to advanced gaming) ridiculously happy, we've failed."

You might derive other attributes that are more directly related to your line of business. Either way, you can use just one of these attributes or some combination of them to more accurately prioritize the skeletons. If time is critical for your stakeholders (which is usually the case), consider generating the values for these attributes yourself, and even doing the prioritization, prior to the meeting. To help your leadership team through the review process and toward a conclusion, remind the stakeholders that validation work can and will happen later in the process to ensure that the current decisions and resulting personas are on track.

## ASK STAKEHOLDERS TO ASSIGN POINTS

Before you dive into a debate about which personas are most important, collect each individual executive's and stakeholder's opinions on prioritization. Ask everyone to take out a sheet of paper and write down all the names of the skeletons or sketch personas. Then ask them to indicate the relative priorities of each persona, using the following rules:

- You have a total of 100 points.
- Assign points to each persona to reflect the priority of that persona.
- You *cannot* give the same number of points to any two personas *unless* it's zero. (We guarantee that everyone will forget this rule and you'll have to ask for some revisions; for example, ask someone who gives both Tanner and Austin 20 points to change one to 19 and one to 21.)

- Create a grid on a whiteboard using persona names as the row headers and each executive's or stakeholder's name as the column headers.
- After everyone is done (*everyone* must be finished!), ask everyone to write their scores on the board.

This exercise inevitably brings to light discrepancies in thinking. It's very helpful to point out that these discrepancies are totally solvable and that one of the most helpful benefits of creating and using personas is that they highlight exactly these kinds of "not on the same page" issues for product teams. If these discrepancies had *not* surfaced, they still would have existed in the minds of key team members. Surfacing these issues is the first step toward solving them.

Record all the scores in a spreadsheet, and work with the meeting participants to come to agreement on the scores for each persona. You will need these when you move on to the adulthood phase. Note that the participants may have to continue the debate beyond a single meeting to reach agreement on the priorities.

Note that this method will not be as easy if you have more than eight to ten skeletons or sketches.

### REMEMBER, IT'S *THEIR* DECISION

You are going to have definite opinions about which personas you think are most important and should be very high on the priority list. However, it's critical to remember that the prioritization process is an incredibly important step as you work to get buy-in, and therefore future support, from the executive team. It's the executives who should prioritize the personas, because the priorities should reflect business objectives. Remind the executives that you (and your team) can create excellent user experiences no matter which personas you are designing for (which you can!).



### ASK IF ANYONE IS "MISSING"

Finally, you will want to ask your stakeholders if there are any missing skeletons (i.e., categories or subcategories of users) that are truly important to your company. If the answer is yes, have the stakeholders create those skeletons based on their collective knowledge and assumptions. You should include those additional assumption skeletons in the prioritization process.

#### BRIGHT IDEA

***If You Are Stuck, Create Anti-Personas***

Consider preparing skeletons of clear *non-targets* for your stakeholder review meeting. These are audiences that no one would refute as being outside your product's audience. Cooper refers to these as "negative personas" in *The Inmates Are Running the Asylum: Why High Tech Products Drive Us Crazy and How to Restore The Sanity* (Sams Publishing, 1999). These are usually quite obvious once described, but it is helpful to make it clear that your product is not for everyone in the known universe. For example, if you are developing an ecommerce website, your target audience probably shouldn't include people who are non-PC users, people without Internet connectivity, or (more ridiculously) infants and toddlers.

This is particularly useful if your team members see themselves as the target audience. It is also useful if there is a well-known audience or well-liked audience that is not a good business target. For example, anti-personas might include:

- Extreme novices ("My mom can't use this.")
- The seasoned expert or guru ("Macros and shortcut keys are critical!")
- The domain enthusiast (an obvious audience that might actually be very small in size and thus not a good target for the business).

## BRIGHT IDEA

### *Got a Lot of Possible Users? Plot Them by Critical Dimensions*

***Len Conte, BMC Software***

Are you creating a product that will have many users? Not sure how to approach creating personas that will be useful? We suggest plotting large groups of users according to the critical dimensions of technical and domain expertise and looking for clusters of users (see Figure 4.11). For example, for an online media player you could collect a large group of assumption personas or sketch personas and cluster them according to their domain knowledge (how much expertise do they have with respect to media?) and technical expertise (how facile are they with computers and the Internet?).

Wherever you find a group of dots, that's where you need a persona. This can be a great tool for a reality check on assumptions. Perhaps one or more of the executives assumes that the target market is largely in the top right quadrant (perhaps highly technical music enthusiasts), but your data show that most potential users of your product cluster in other quadrants.

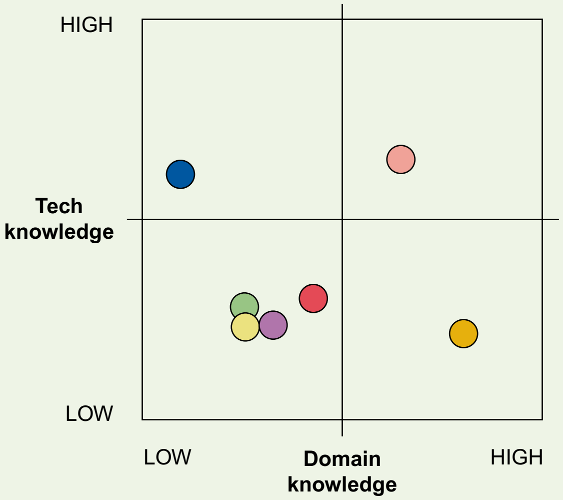



**FIGURE 4.11**
A plot of technical expertise and domain knowledge. Each colored dot represents a large group of current or target users. You'll need at least one persona wherever you see a cluster of dots.

## HANDY DETAIL

### *Articulate the Role of the Non-Primary (or Secondary) Personas*

Whether or not you decide to enrich the skeletons of your nonprimary categories and subcategories into full personas, you should make some solid decisions about how you might use them. These less important targets can serve, among other ways, as tie-breakers, brainstorming tools, or heuristics. Alternatively, there may be some critical scenarios with nonprimary personas; for example, one persona may be an IT manager who has to install the software.

You and your team can evaluate the design as it progresses from the points of view of the non-primary personas you build from these categories and subcategories. This will give you a perspective that is illuminating and still grounded in data. If you are clear on the role of the non-primary personas and communicate the fact that they will not be discarded despite not being selected, you will free your team and stakeholders to make the difficult decisions that will result in a streamlined set of primary personas.

## Step 5. Develop selected skeletons into personas

You now have a reduced set of basic skeletons that your stakeholders helped select. Your task at this point is to enrich these skeletons to become personas by adding data as well as concrete and individualized details to give them personality and context. You will also include some storytelling elements and photos to make the personas come to life.

As you build on your skeletons, all of the details of your personas will be encapsulated in a *foundation document*. Depending on the available time and the needs of your product you might create full personas for just the small set of primary personas you defined, or you can create full personas for a larger set of primary and secondary personas. We have found that it is time and resource effective to first fully develop the high-priority primary skeletons and then to enrich, but not exhaustively complete, the nonprimary skeletons into sketch personas.

### WHAT IS A PERSONA FOUNDATION DOCUMENT?

We use the term *foundation document* to describe whatever you use as a storehouse for all of your information, descriptions, and data related to a single persona. The foundation document contains the information that will motivate and justify design decisions and generate scenarios that will appear in feature specs, vision documents, storyboards, and so forth.

**HANDY DETAIL**

***The Foundation Document Is a Storehouse, Not a Communication Artifact***

It is worth noting here that *the foundation document is not the primary means of communicating information about the persona to general team members.* In fact, don't expect many people outside the core team to actually read this document. You will create other materials to do that (see Chapter 5 for details). Likewise, the foundation document may not contain all or even most of the scenarios your personas will act in. Instead, the foundation document will contain the core scenarios that provide context and motivation for your product overall (see Chapter 6 for more information on using personas in scenarios).



Foundation documents contain the complete definition of a given persona, but they do not have to be long or difficult to create. Depending on your goals and the needs of your team, your foundation document could range from a single page to a long document. Creating a foundation document for each persona will provide you and your team with a single resource you can harvest as necessary as you create your persona communication materials. At the very least, complete personas must include *core information essential to defining the persona*: the goals, roles, behaviors, segment, environment, and typical activities that make the persona solid, rich, and unique (and, more important, relevant to the design of your product).

### AD HOC PERSONAS VERSUS DATA-DRIVEN PERSONAS: TWO TYPES OF FOUNDATION DOCUMENTS

In this chapter, we have described two basic approaches to creating personas: ad hoc personas and data-driven personas. Each type of persona requires a different kind of foundation document.

#### Ad hoc persona foundation documents

Over time, we've created an ad hoc persona foundation document format that works very well, especially given the very practical needs of teams who don't have time or resources to create full, data-driven personas. Our ad hoc persona foundation documents include the following:

- Persona name, which is usually an alliterative, descriptive name such as "Ellen Everyday" or "Danny Drummer"

- Persona photo (see below for recommendations related to persona photos)
- Priority score (a summary index indicating the relative importance of this persona — likely generated in the previous step while evaluating your skeletons)
- Identifying quote, which is written to quickly communicate the key goals or needs of the persona with respect to the product
- Meet-the-persona write-up, which is a one- to three-paragraph narrative describing who the persona is
- Questions in [persona name's] own terms (which should capture the key questions and concerns that the persona has with respect to your product)
- Things the persona would be interested in but might not think to ask for ("Oh, by the way …" statements)—these allow you to recast the benefits or interesting new features of your product in terms that will resonate for the persona (see Appendix A)

### Data-driven persona foundation documents

If you have gone through the data analysis and assimilation process described above, you have lots of options when it comes to your foundation documents. If you have time, your completed foundation documents should contain:

- Abundant links to factoids
- Copious footnotes or comments on specific data
- Links to the original research reports that support and explain the personas' characteristics
- Indications of which supporting characteristics are from data and which characteristics are fictitious or based on assumptions

As your foundation document grows, it is helpful to add headings and a table of contents. Consider creating your foundation documents as an HTML page for each persona. This will allow you to add links and keep your materials organized while providing access to your various core team members and stakeholders during its development. We provide an example of a more detailed and complete foundation document in Appendix B (see the completed persona, Tanner Thompson).



The more details you include now the easier you will find the *birth and maturation* and *adulthood* lifecycle phases. Complete multipage foundation documents can contain a tremendous amount of information and require considerable effort to create. It is up to you and your team to decide how rich your foundation documents need to be and how you will collaborate on or divide the work required to create them.

If you are extremely time and resource constrained, you can start with brief one-page description or resume-style foundation documents. Then, as you find the time you can always come back and add to the information in these short foundation documents. Figure 4.12 shows one-page and resume-style outlines for these brief foundation documents.

## CHOOSE PERSONA CHARACTERISTICS TO INCLUDE IN THE FOUNDATION DOCUMENT

Your assimilated data as well as your product and team needs will dictate what content to include in your foundation documents. When you created your skeletons, you were purposely selective in what information you included. Now you need to be more exhaustive. This means that you need to include all headings and information appropriate and useful to understanding your audience and developing your product. Different types of information will be relevant for different people on your team and will have different uses toward product development.

Your skeletons will serve as the starting point for the foundation documents. Each skeleton has a bulleted list of characteristics. Your next step is to add important content headings

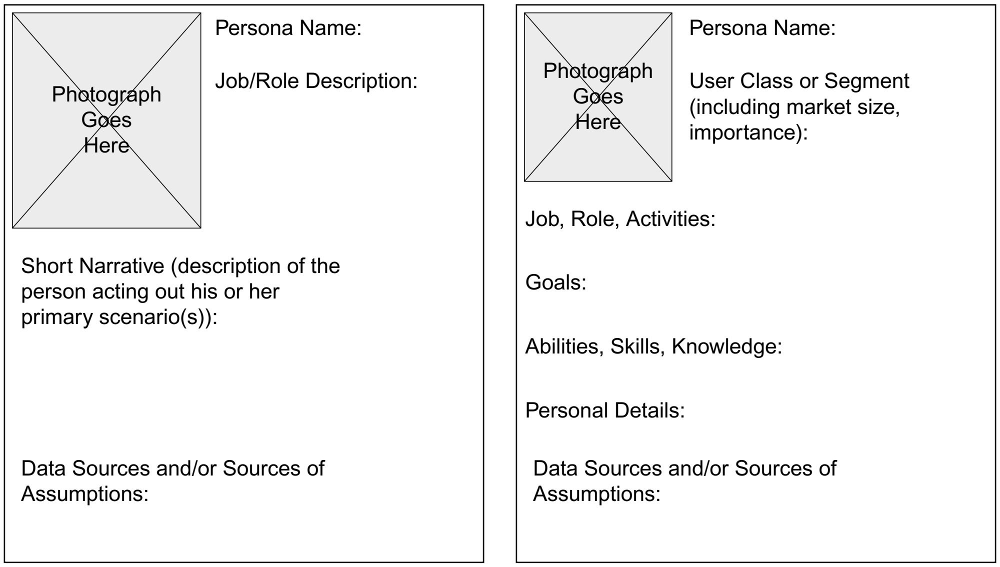



**FIGURE 4.12**

One-page (left) and resume-style (right) foundation document templates. These are the shortest possible data-driven persona foundation documents, and in most cases (unless you are extremely time and resource constrained) your foundation documents will include considerably more detail. Note that it is a good idea to develop your own template before you dive into creating your foundation documents. The templates help organize your work as you add and look for data to include in the document.

based on three things:



- The labels for the clusters that came out of the assimilation exercise
- Topics relevant to your product domain or business (e.g., if you are creating an Internet product you probably need a section on Internet activities, equipment, or Internet connection environments)
- Some common headings in persona documents that help create a persona that is well rounded, realistic, useful, and complete

Regarding the second and third of the previous items, consider the following list of persona characteristics that you can use as a content "menu" and template for your foundation documents. When you are deciding which characteristics to include in your foundation documents, think about the types of information that will be most helpful to your core team and to the development team. We recommend that you include at least rudimentary information in each of the following categories of persona characteristics:

- Identifying details
  - Name, title, or short description
  - Age, gender
  - Identifying tag line
  - Quote (highlighting something essential to that persona, preferably related to the product)
  - Photograph or brief physical description
- Roles and tasks
  - Specific company or industry
  - Job title or role
  - Typical activities
  - Important atypical activities
  - Challenge areas or breakdowns, pain points
  - Responsibilities
  - Interactions with other personas, systems, products

- Goals
  - Short-term, long-term
  - Motivations
  - Work-related goals
  - Product-related goals
  - General (life) goals, aspirations
  - Stated and unstated desires for the product
- Segment
  - Market size and influence
  - International considerations
  - Accessibility considerations
  - General and domain-relevant demographics
    - Income and purchasing power
    - Region or city, state, country
    - Education level
    - Marital status
    - Cultural information
- Skills and knowledge
  - General computer and Internet use
  - Frequently used products, product knowledge
  - Years of experience
  - Domain knowledge
  - Training
  - Special skills
  - Competitor awareness
- Context/environment
  - Equipment (Internet connection, browser brand and version, operating system)
  - "A day in the life" description
    - Work styles
    - Timeline of a typical day
  - Specific usage locations
  - General work, household, and leisure activities
  - Relationships to other personas
- Psychographics and personal details
  - Personality traits
  - Values and attitudes (political opinions, religion)
  - Fears and obstacles, pet peeves
  - Personal artifacts (car, gadgets)

This list was partially adapted from Mike Kuniavsky's list of attributes in *Observing the User Experience: A Practitioner's Guide to User Research* (Morgan Kaufmann, 2003), where he provides detailed descriptions of these and other possible persona attributes.



## STORY FROM THE FIELD

### *Getting the Right Goals*

***Kim Goodwin, VP Design, Cooper***

It takes practice to create accurate, compelling personas that are useful as design tools. In all the years I've been teaching people how to do so, I've consistently seen them struggle with a handful of issues. The most obvious problems occur when people don't stick to their data (or, worse, don't have good data to begin with). One of the trickier problems people often don't expect is getting the right set of goals.

Each persona should have a few goals that shed light on his or her priorities. There's not a magic number of goals any more than there's a magic number of personas; it depends on what you see in the data. However, three or four is a typical number; I've never met a persona who didn't have more than one goal, and I've never seen a persona with half a dozen goals that were all goals and not tasks.

The most challenging part for most people is getting the goals at the right level. If they're too high level or ambitious, they won't seem relevant to the product at hand. If they're too low level, though, they won't challenge you to think beyond basic screen layout. There are two types of goals that will help you focus at the right level.

*Life goals*, which are generally long-term and not something your product can really influence, are only occasionally useful in design. For example, "Retire by age 45" would be of little use if you were designing a word processor, mobile phone, or PDA, but it may offer valuable insight when you're designing a financial planning tool. When you think you've found a goal for your persona, ask yourself whether the product can help them accomplish it. If not, your goals are too high level.

You may wonder whether there's any harm in including life goals anyway. While it may not be obvious at first, life goals that don't add value will only clutter up your persona description and de-emphasize the more important goals. If you're designing network management software, who cares if your system administrator persona really wants to write a rock opera? It's much more important for people to understand his goal of always knowing what's going on. People may just laugh about the rock opera thing and not take the rest of the persona seriously.

That said, in a few instances I've really needed to convey that the persona just doesn't care. This isn't something I've had to do often, but when a product team believes their product is the center of the persona's universe it can be useful to have a persona essentially say they'd rather be somewhere else. This helps set everyone's expectation that this persona is willing to exert zero effort to learn or use the tool.



Most of your persona goals should be *end goals* that focus on what the persona could get out of using your well-designed product or service. In the case of a financial planning tool, retiring at age 45 is an end goal as well as a life goal, because it's something the product could help accomplish.

The trick with end goals is to avoid getting too low level. To see whether your end goal is really a goal and not just a task, ask yourself whether it's in service of something else. For example, if you interviewed me for a digital photo organizer product, you'd see that I spend a lot of time organizing my photos and assigning keywords to them, even though it drives me crazy to spend that much time. If you took that at face value and assumed that "easily organize photos" was my goal, you'd be missing the point. Instead, ask yourself why I spend all that annoying time, and you'll see that I do it because it's the only way I can find specific photos later. Every time you think you have a good goal, ask yourself, "Why does our persona want that?" If you have an easy answer, it's probably not a goal; if your answer is "because she just *does*," then you've probably found a genuine goal.

You can also ask yourself *whether* the product can help people progress toward the goal, or whether it will accomplish it entirely. In most cases, good end goals are things the product won't entirely accomplish. For example, if a manager wants to be more proactive and spend less time dealing with emergencies, a better forecasting tool can help but won't eliminate emergencies entirely.

*Experience goals* are another type you may find useful for certain projects, though less frequently than end goals. They describe how the persona wants to feel when using a product; having fun and not feeling stupid are experience goals. Not every persona needs an experience goal. We usually assume that no one really wants to feel dumb; however, if you have a persona with an exceptional level of anxiety about technology, calling that out is a good idea.

Experience goals have limited usefulness for most interaction design problems, but they tend to be very helpful for branded visual design. If you're not just using the standard look of an operating system and you need to make choices about color, typography, and style, an experience goal can help guide those choices. For example, someone doing online banking wants to feel very safe about the transaction, so a lot of navy blue and a professional-looking typeface would be appropriate, but lime green, orange, and Comic Sans® would not.

Once you have the right goals, it can be helpful to articulate them in the way your personas would say them. For example, if you're describing an avid shopper's goals, which works better: buy the right thing, or find the perfect gift? The latter conveys a sense that shopping is a quest, and that there's a sense of accomplishment involved in it.

The persona's goals are, in some ways, the most fundamental part of the whole description, because they help us understand what motivates people and how they will react in a certain situation. If you watch Mr. Data, the android on Star Trek®, which gives us more insight into his behavior—what his duties on the *Enterprise* are or the fact that he not so secretly wishes he were human? Our understanding of goals is what helps us create future scenarios for successful products, since we have to understand our users' goals before we can design products that help accomplish them.



### STORY FROM THE FIELD

#### *Addressing Accessibility Issues*

***George Olsen, Principal, Interaction by Design***

Rather than having separate personas to represent users with disabilities, I find it more useful to incorporate accessibility issues into personas as long as it doesn't distract from the persona's main purpose. This can be as simple as having personas who occasionally forget their glasses (resulting in low-vision issues) or who have color blindness. It is true that doing this will overrepresent users who actually have these issues, but personas are a design tool, so I bend reality when needed to highlight an important design issue.



## START A FOUNDATION DOCUMENT (TRANSFER FACTOIDS INTO YOUR SKELETONS)

Your skeleton documents are a template you can use to create a foundation document for each persona. Each skeleton should now have a similar set of headings. For each of those headings, transfer the appropriate factoids into the related sections (as shown in Figure 4.13). It is likely that some sections will have a lot of factoids in them and others will be nearly empty.

## GET SPECIFIC ABOUT EACH CORE CHARACTERISTIC

Once you have copied your factoids into your skeleton documents, evolving the skeleton into a more precise persona can be relatively easy. You will create a concrete fact, phrase, sentence, or paragraph to replace each factoid or set of factoids in the skeleton.

### STORY FROM THE FIELD

#### *Determining Just the Right Amount of Information*

***Damian Rees, Usability Engineer, BBC New Media***

We include as much detail as we feel is necessary to be able to put that persona into any situation and know how he or she would react to it. Minimum requirements are name, photo, age, description, occupation, Internet usage, environment, trigger, ultimate goal, and current usage. We attempt to keep all information relevant where possible. All personas are collated into a one-page document, listing core components as a summary sheet. Anything we feel isn't going to help us understand the persona is stripped out but still kept for reference in a different document.

ranges of values (e.g., age = 25 to 35, parent, works full time) instead of specific values. You purposely stayed at this abstract level when considering the few attributes of your skeletons in order to stay as close as possible to the actual data during the evaluation process. Now it is time to turn most of the characteristics in your skeleton personas into very specific and more concrete values. For example:

- Works full time *becomes* a specific job, such as bank teller, department store manager, or high-school teacher.
- Parent *becomes* mother or father.
- 70% female *becomes* Laura, Dianne, Irene, and so on.
- Lives in a major metropolitan city *becomes* Chicago, Los Angeles, or Houston.

More specifically, from your skeleton (see Figure 4.14, left) transform your headings and factoids into specific, concrete details in your foundation document (Figure 4.14, right).

As you replace factoids with specific details to enrich your persona, copy the factoid or set of factoids into a comment or a footnote in your foundation document. A lofty but worthy goal is to have every statement in your foundation document supported by user data. You likely will not achieve this, but the attempt helps you to think critically about your details and highlights places where you might want to do further research. (In fact, when such research questions come up it is a good idea to make a note of them directly in the foundation document.) By the time you finish creating a description for each persona, you will have also created a very rich document that is full of direct references to data (as illustrated in Figure 4.15).

**Persona Skeleton:**
**Boy, age 10–13**

**Computer use at school**
- Has access to a shared computer in his classroom or a computer lab shared by the whole school
  - Factoid
  - Factoid
  - Factoid
- Has at least one computer-related assignment a week
  - Factoid
  - Factoid
  - Factoid
- Finds computer use at school boring
  - Factoid
  - ...

**FIGURE 4.13**

Transfer factoids verbatim into your skeleton document. This document will evolve to become your persona foundation document, which will be the repository for all information on each persona.



**Parent** (skeleton)

Demographics:
- People who make enough money to have two computers in their home tend to live in major metropolitan areas (source 3, p 1)
- etc.

Work:
- 85% of parents surveyed work full time in white-collar professions (source 5, p 2)
- etc.

Goals, fears, aspirations of parents:
- Mothers are more concerned with their child's behavior online than fathers (source 2, p 10)
- etc.

**Irene Pasquez, the involved parent (1)**
(foundation document)

Overview:
Irene lives in a suburb of Houston (2) with Emanuel, her husband, and her one child: Preston, who just turned 5.

Even though Irene works full time as a manager in a local branch of Bank of America (3), she is heavily involved with Preston's daily activities and has the opportunity to see him during the working day because ... etc.

---------------------------

Data references
1. Mothers are more concerned with their child's behavior online than fathers (source 2, p 10)
2. People who make enough money to have two computers in their home tend to live in major metropolitan areas (source 3, p 1)
3. 85% of parents surveyed work full time in white-collar professions (source 5, p 2)

**FIGURE 4.14**

An example skeleton (left) being transformed into a foundation document (right).

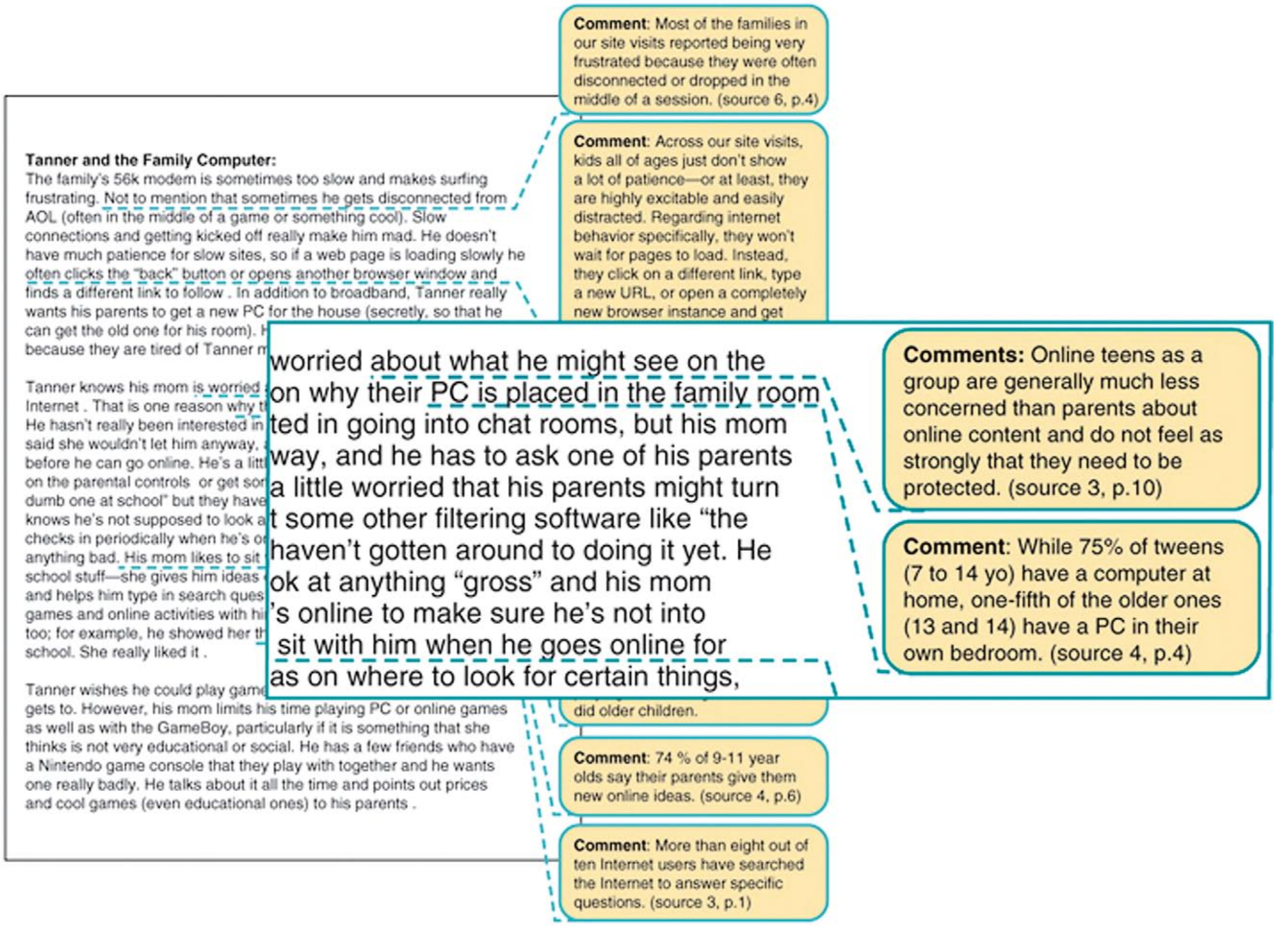



**FIGURE 4.15**
An example of statements in a foundation document supported by factoids using the "Insert > Comment" feature in Microsoft® Word.



## HANDY DETAIL

*There Are Many Ways to Include References in Your Foundation Documents*

Many word processing programs and HTML editors allow you to add annotations, references, or even pop-up comments to your text. In Microsoft® Word, for example, you can use the Comment feature to do this linking and annotation. To do so, highlight a word or phrase, select Insert > Comment, and type or paste your factoid into the comment field. This makes your links not just explicit but also very salient to the reader (see Figure 4.15). If you are creating HTML foundation documents, you can create hyperlinks directly to electronic versions of data or pop-up windows containing direct quotes or summarized data from your original sources.

If you use Word to add comments in support of specific details, consider checking the Options > Security "Remove personal information" so the reader of the document will not see who inserted the comment:

- Select Tools > Options ….
- In the Options dialog box, select the User Information tab.
- Check the box to remove personal information from file properties on save.

This is a particularly good idea when multiple people are creating the foundation document. When you find yourself referencing a factoid from a data source, don't forget to include the bibliographic information for that source in the "References" area at the end of the document.

### MOVING TOWARD PRECISION MEANS MOVING AWAY FROM ACCURACY

In many cases, the accuracy of your data lies in their ranges (not just central tendencies but descriptors of variance, percentages, and skew). By selecting precise descriptors you are going to lose some of that accuracy. If a category includes males and females, for example, you cannot create a single individual who represents the entire category. Rather than trying to represent every nuance of the entire category, try to pick values that are reasonable, believable, and meaningful.

As you choose specific details to include in your personas, you are zooming in on a particular person; that is, you are transitioning from rough descriptions of categories and subcategories of users to precise values and detailed depictions of a particular persona. As you build these detailed depictions, you will be making educated guesses and adding fictional elements, some of which will be directly related to the data you have collected and some of which will not. (It is a good idea to document these assumptions and to consider them possible research questions that may need answering during the validation of your personas.)

Think of your data and your categories and subcategories of users as describing *neighborhoods* of related users of your product. As you create your personas, you are describing a specific "resident" of each neighborhood. As in real life, each resident *inhabits* his or her neighborhood, but no one resident can *represent* all qualities of all people in the neighborhood.

No one who reads a persona description can understand all the intricacies of the data behind that persona; however, as design targets, personas can *stand in* for all data in your communications. Think of a town meeting. Each neighborhood might send a single representative who *stands in* for everyone else in the neighborhood, even though that one person cannot accurately communicate the particular demographics, attitudes, needs, and desires of every one of his or her neighbors. Instead, the representative communicates the *essence* of all of his or her neighbors' needs. Your personas will represent your data in the same way that a single neighbor can represent an entire neighborhood.



### WHEN IN DOUBT, CHOOSE DETAILS THAT ARE PRECISE AND MEMORABLE

As you select specific characteristics for your personas, try to choose values that are clearly within the range and essence of the data and findings from which they came. You may choose to select values in the middle of the ranges described in your data, but you don't have to. Try to choose values that are reasonable, believable, and meaningful. As a rule, try to choose values that have face validity while not adding any extra baggage. Your goal is to create personas who feel real and relevant, while being memorable and even interesting.

### INCORPORATE NARRATIVE AND STORYTELLING ELEMENTS

Enriching your terse skeletons into personas that are realistic and engaging requires some storytelling. To do this well, remember that you are trying to tell the story of the data in your foundation documents with narrative. What do your personas sound like and act like? What can they do or not do? Turn your factoids and specific details into a running story—that is, a sequence of actions and events with interaction and even a plot. Demonstrate their interactions with people, objects, and systems. Narratives in persona documents are typically written in third person, active voice. The following is an example of a descriptive overview for the persona Tanner written as a narrative:

> Tanner is 9 years old and is a fourth-grade student at Montgomery Elementary School, a public school. He lives with his mother and father (Laura and Shane

Thompson) in a suburb of Chicago, Illinois. Tanner has been using computers at school since kindergarten and has had a family computer at home for 2 years. He has been using the Internet in his school's computer lab for some time but only recently got Internet access at his house (6 months ago through his family's AOL account). Even though Tanner loves to be physically active (riding his skateboard and bike, playing in the yard and nearby creek, participating in organized sports, and so on), Tanner thinks computers are really, really fun and prefers the PC to the TV. He uses the PC mostly to play games and to surf the web for "stuff" but occasionally does research for school projects. His favorite computer game of the moment is *The Sims™ 2*. His uncle gave it to him for his birthday (his mom and dad usually just buy him educational games). He also really likes *RollerCoaster® Tycoon 3*. Since his dad likes computer sports games like *NBA Live 2005*, Tanner sometimes plays those with him. Tanner has a Game Boy™ Color and saves up his allowance to buy new games for it, but his parents say he can only play Game Boy for half an hour each day (they tell him "it will rot his brain").

Writing these stories can be difficult at first. This part of persona creation does take creativity and inspiration. If you have skilled writers on your persona core team, you should likely enlist them to do this part. Start writing your stories by simply expanding the bulleted factoids with context, adding situations, other characters, objects, actions, and events. If you feel blocked or awkward in writing narrative, look through the raw notes and observations from your field research and other qualitative data; that is, use anecdotes and incidents from those real people to enrich your personas. (For more ideas and a deep discussion of personas and storytelling, see Chapter 9, "Storytelling and Narrative," by Whitney Quesenbery, in *The Personal Lifecycle: Keeping People in Mind Throughout Product Design*.)



## DERIVE SPECIFIC DETAILS AND STORIES FROM REAL OBSERVATIONS

You will notice that we are now moving from the realm of hard, accurate data, observations, and facts toward more subjective, best-guess information and particulars (i.e., toward fiction). In other words, you are starting to include details that are not solidly derived from data. This step is generally uncomfortable, but it can be fun, too. Like you had to do when you were determining what types of information (including the categories and headings) would go into your foundation document, you now have to make decisions about specific details that are based on the data, the needs of your team and product, and your knowledge of the world. Your personas need backgrounds and context to be real. Consider using specific, observed information from your site visits or other research as the exact values or characteristics of your profiles. Doing so can ease the burden of being creative, stop disagreements among your persona creation team, and add an aspect of credibility or authenticity to your resulting personas.

## YOU CAN USE STEREOTYPES, BUT USE THEM WITH CARE

You may be tempted to use stereotypes and common knowledge or cultural lore in your personas. If you do, do so carefully. For example, consider this transition from abstract profile to specific details to stereotype/cultural phenomenon:

Yvonne Chandler lives in suburban Chicago with her husband, William, and their two kids, Colbi (age 7) and Austin (age 13). Yvonne works part time now that the kids are in school, but she always arranges her work schedule to accommodate a fairly complex system of carpools and after-school activities (she has become a "soccer mom"). She feels tremendously busy but wants to make sure that her kids have a lot of opportunities and learning experiences. She also feels pressure to "keep up with the Joneses" in many aspects of her life, from the activities she involves her kids in to the entertaining she does at home. Before she had kids, Yvonne was known as the neighborhood "Martha Stewart" because of the dinner parties she would host. She would like to entertain more, but right now she is just too busy with her kids.

If you are creating a persona of a user who happens to be a suburban mother, you may find yourself tempted to add details based on your own perceptions of a "typical soccer mom" or a "Martha Stewart type." In both cases, utilizing a stereotype or strong cultural icon can be dangerous. The "soccer mom" stereotype is very evocative, but perhaps in ways that work counter to the persona effort. Perhaps there is someone in your organization who has a similar set of responsibilities and recognizes herself in the persona but is put off by the reference to "soccer mom" because she does not want to think of *herself* that way. Or, there might be others in the organization who are scornful of "soccer moms" and the stereotypical suburban lifestyle. This distaste can get in the way when you ask your colleagues to use the personas in their everyday work. Similarly, Martha Stewart generally evokes a fairly strong image, at least for a North American audience—one that is either positive or fairly strongly negative.

Persona use brings sociopolitical issues to the surface. Each persona has a gender, age, race, ethnicity, family, or cohabitation arrangement; socioeconomic background; and work or home environment (even if you don't include all of these directly in the persona description, the photos you use will imply decisions on these details). This provides an effective avenue for recognizing and perhaps changing your team's assumptions about users. In his chapter, "Why Personas Work: The Psychological Evidence," in *The Persona Lifecycle: Keeping People in Mind Throughout Product Design*, Jonathan Grudin argues that stereotypes are very powerful influences that must be handled with caution because they can create a one-dimensional character—one that is not likely to be as rich and complex as most people naturally are. Furthermore, Lene Nielsen argues, in *Constructing the User* (Lawrence Erlbaum, 2003), that stereotypes are naturally formed by our teammates and can be difficult to work with in a design process. To overcome a stereotype, he suggested, "it is necessary to get access to the users' feelings and knowledge as more than one dimension of the character is needed to raise sympathy."



### BEWARE ANY DETAILS THAT CAN EVOKE STRONG EMOTIONAL RESPONSES

Note that there are other types of information that can evoke strong responses. For example, if we say that Philip is a concerned dad who is recently divorced and battling for custody of his children, does this information get in the way of the more salient info about how he relates to his child as an online consumer? The information may be memorable and even be reflective of the data, but does it help your persona be effective as a design target?

So, be careful when evoking stereotypes or any information that could elicit a strong personal response. When in doubt, choose to include details that help others see your persona as a real person, with particular goals, needs, and interests that are understandable. Allow realism to win out over political correctness. Avoid casting strongly against expectations if it will undermine credibility. Break the mold if it helps get people on board with your effort. In *The Inmates Are Running the Asylum*, Cooper addressed this issue by stating, "All things being equal, I will use people of different races, genders, nationalities, and colors."

## STORY FROM THE FIELD

### *The Villain in Us*

***Christina Wodtke, author of Information Architecture: Blueprints for the Web***

When a group gets together to create personas, a funny phenomenon almost always occurs. They make a bad guy. It will start innocently enough, with a set of characteristics: a male in his thirties making six figures on the east coast. Then, as your team develops him into a persona—let's call him "Fred"—he only wears gray, has a gray BMW, and is a young securities trader who works 90 +–hour weeks. Then he's suddenly a jerk who doesn't have a girlfriend because he's too selfish, and he underpays his secretary and doesn't recycle. What happened?

Perhaps it is because we know people like this. Perhaps it is our human need to create villains. They are fascinating creatures, from the wicked queen in *Snow White* to James Spader's amoral lawyer on *The Practice*. But the problem is that personas are not protagonists and antagonists; they are design targets. You have to feel for them, or you won't be trying your best to make an interface that makes consumers happy: "Yeah, that jerk, he makes twice what I do. He can figure out the navigation himself."

The solution, interestingly enough, also comes from narrative: redemption. Except that in narrative you usually wait until the end of the story to redeem your villain (if indeed you plan to do that rather than, say, drop him off a cliff). With personas, you have to redeem your villain with a bit of editing and a bit of back story before you begin your scenarios. In this example, we simply need to remove the fact that Fred underpays his secretary (it's probably the company's fault anyhow). Now we need to get into the facelift.

"He only wears gray." This could be seen in a number of ways. Let's make him colorblind. Now he's afraid to wear color for fear of being unable to match his clothes. Fred knows that if he goes into work wearing green and orange he will be mocked by his coworkers, and his boss won't take him seriously. With this change, we have both made him more humane *and* given him a useful trait for our design work. When a designer makes an interface choice, he will remember that it needs to be high contrast with redundant channels of information for Fred, who is afraid of looking stupid at work. The designer cares, because we have all been afraid of looking stupid at work.

Now we can continue. Fred is a first-generation Chinese–American, and he is saving to purchase a house for his parents. He works long hours for that. He has a gray BMW, but it's a 202 and he works on it on weekends for fun. He is a 202 enthusiast and finds it easier to talk to other car geeks than to girls, but nothing would make him happier than a girlfriend, and his parents have started to bug him about it. Obviously, if this were a car site or a dating site, one aspect or another of the back story could be played up, but we now not only feel for him but understand what motivates him.

The villain is cool, seductive, and powerful—but he's not useful. Some may argue, "Some of our users are like that," but can you really do your best work designing to make a jerk happy? Redeem your personas, and redeem your design.



## DON'T OVERDO IT

Be sure to keep your stories to an appropriate length. You are not writing a novel. You will want to create interest and provide some background and context for your teammates, but keep your stories in check and don't include detail that is superfluous and highly irrelevant.

Some of the details you create will naturally be relevant to the design and development of your product, and others will seem completely irrelevant. That your persona "lives in Chicago" or "has been married for 10 years" may not inform any design decision. However, seemingly irrelevant details do have their place. Their purpose is to help make the personas into people—to make them believable and memorable. Think of this "irrelevant" content as you would salt and pepper or other spices used in cooking. You are adding flavor to your meal, but too much will ruin the taste. With regard to the level of relevant and irrelevant detail, consider the following three examples written in narrative style:

- *Too little detail*

  Tanner arrives home from school at 3:15 and calls his mom to let her know that he's there. He plays a computer game and watches TV until his mom arrives home.

- *Just the right amount of detail*

  Tanner rides the bus home after school and arrives home at 3:15. Laura, his mom, is still at work, and per her requested routine Tanner gives her a phone call to let her know that he made it safely home. Tanner throws his backpack on the floor in the entryway and immediately heads to the family room. He turns on both the TV and the family PC. Within minutes, he is watching his favorite after-school shows and IMing two of his friends and playing an Internet game on his (currently) favorite site. He knows that he only has 45 minutes of "free" time before his mom arrives home.

- *Too much detail*

  Tanner rides the bus home after school and arrives home at 3:15. He likes his bus driver because he reminds him of the bus driver on the cartoon show *The Simpsons*. Laura, his mom, is still at work. Having a part-time job, she works until 4:00 p.m. three days a week. She worries about Tanner being home alone after school—particularly regarding his trip home. She worries less once he is home, and so per her requested routine Tanner gives her a phone call to let her know that he made it safely home. Tanner throws his backpack on the floor in the entryway, spilling some of its contents on the floor, and immediately heads to the family room. He turns on both the TV (a nice but old 34-inch Sony® Trinitron®) and the family PC. Within minutes, he is watching his favorite after-school shows and IMing two of his friends and playing a flash-based Internet game on his (currently) favorite site. He makes the most of this play time, because he knows that he only has 45 minutes of "free" time before his mom arrives home. Laura arrives home a little late due to traffic and gets a little irritated by the mess Tanner created in the entryway. She snaps at Tanner to get started on his homework.



### HANDY DETAIL

#### *Determine Where Personas Stop and Scenarios Begin*

A foundation document as we define it is a rich and detailed description of an individual, which may include stories about how he or she approaches work, gets things done, and interacts with colleagues and products (possibly yours). The stories you include in the personas should be there to help people deeply understand who that persona is, but this doesn't mean that your foundation document will contain all possible stories for that persona.

In Chapter 6 we discuss how additional stories, specific scenarios, design maps, and use cases can be created and used outside the foundation to help your team explore and define solutions to be built into your product. Scenarios, Design Maps, and use cases are typically much more specific and focused than the stories in foundation documents. They are stories designed to specifically describe a particular person interacting with a particular part of a product in a particular situation. Your personas will become the "particular people" (or "actors") in these additional stories.

Personas are generative in nature. That is, they can drive the creation of an almost endless set of possible scenarios. When defined appropriately, your personas serve as the motivational factor and grounding requirements for future scenarios—detailed scenarios in specific domains.

## KNOW WHEN TO STOP

Once you start enriching your skeleton personas into full foundation documents, you might find it difficult to stop. You and your team will discover new data sources and will want to incorporate new information into the sketches. That is fine, but it should not get in the way of sharing and "birthing" the personas into your organization. At some point, you and your core team will have to decide that you have enough information in each persona and are ready to move on to the next phase. Remember that it is likely that no one outside your core team will ever read the entire foundation document. The document need only be complete enough to support your *birth and maturation* and *adulthood* activities to the extent that you are "ready." This does not mean that you cannot keep adding information. In Chapter 5, we recommend that you assign an owner to each persona. The owner can be responsible for keeping the persona up-to-date and integrating new data and information as appropriate.

## ILLUSTRATE YOUR PERSONAS

Each persona needs a face, a photo, or set of photos to make it real. We believe photos or illustrations are critical. They help your team believe in the personas and understand that each persona describes a single person. The choice of what specific photos to use is difficult. These illustrations of your personas are extremely influential and can significantly affect how your personas are perceived.

A photo is more than just a face. The model's clothing, expression, activity, and general appearance—along with the setting and background—will communicate or dictate some of the characteristics of your persona. You can either take advantage of this fact or continually fight it. The sections that follow offer some suggestions to help you with this.

**FIGURE 4.16**
Stock photos can look too professional.

## DON'T USE SLICK STOCK PHOTOS

Stock photos can look too professional and slick, as the people in them tend to look like professional models (see Figure 4.16). With stock photos, you do not have control of the model's context, activity, or expression. There are also usually only one or two photos for a given model. As you'll see in the next chapter, which discusses the birth and maturation phase, it is useful to have a variety of shots of the same model. In addition, we have experienced situations in which a stock photo that was used for one team's persona was coincidentally used for a different persona for a different team in the same company. We have also seen stock photos for personas show up in magazines and on billboards ("Hey, isn't that our Dianna?").

Instead of using stock photos, locate people who look the part and hold your own photo shoot. Photos of friends of friends will look approachable and real (see Figure 4.17). Using local, known people for your models means that you will likely be able to get additional photos at a later point if the need arises. If you choose to take your own photographs (which we highly recommend), you should start looking for models the moment you decide on the primary personas. The time-consuming part of this step is finding just the right faces. Each photo session takes about an hour.

**FIGURE 4.17**
Photos of local people can look more real; see note above.

If you can't locate your own models or do your own photo shoot for some reason, there are other options. We recommend such websites as:

- Free photo sources
  - stock.xchng® (www.sxc.hu)
  - flickr® (flickr.com), where you can find photos that are usable under the creative commons license
  - Microsoft clip art photos (office.microsoft.com/clipart)
- Inexpensive stock photos
  - dreamstime® (www.dreamstime.com)
  - iStockphoto® (istockphoto.com)
  - Shutterstock® (www.shutterstock.com)
- High-quality photos and photo series with the same models (note that the inexpensive sites also often have series of photos with the same models)
  - Getty Images® (www.gettyone.com)
  - Corbis Images® (www.corbis.com)
  - Veer (www.veer.com)

### HANDLE DETAIL

*Hold Your Own Photo Shoot*

To do a photo shoot, start with stock photos that have the basic look you want. Then ask your teammates and friends if they know anyone who resembles the models in the stock photos. Once you locate a few candidates, have them send a photo of themselves and have your core team evaluate which local model would work best. Then schedule 30 minutes to an hour with each model to do a quick photo shoot (preferably with a digital camera).

You will want your team to see different aspects of your personas. During your photo shoot, make sure you have the model pose in a variety of places—with different expressions and doing different things (talking on the phone, drinking a beverage, working at their desk, getting out of a car, and so on). Choose settings and activities that are core to each persona. Bring your own appropriate props to help make the right statement. Have the model bring a few changes of clothing. You can likely take 100 or more shots in an hour-long photo shoot. If possible, use a digital camera so you can immediately review your work. You will need about five to ten good shots when you are done.

Consider paying your models with gift certificates or perhaps free products or services from your company. Finally, be sure to use an image release form with these models.



Note that it is critical that you review the details of the agreement on how these photos can be used. Ignoring the terms can get you into trouble. For example, collections of clip art (with photos) might say that you cannot use more than 100 copies for a particular activity or that the use must be for educational purposes (such as passing out slides at a conference). These are normal conditions of the "fair use" clause under copyright law. It might be worth making a copy of the license for your records from whatever sources you use.

### ILLUSTRATIONS CAN BE AN INTERESTING ALTERNATIVE TO PHOTOS

Consider having an artist generate sketches to represent your personas. Although sketches feel less real and may detract from credibility, they do have their place. For example, sketches can keep your personas from being interpreted too literally. Further, you have a lot of control over what the sketches look like, what the personas are doing in the sketches, and so on.

### AUDITION THE PHOTOS

Hold auditions for proposed photos (or illustrations or models). Let a variety of teammates have a say as to what photos or specific models are used for your personas. Doing so will obtain buy-in and should result in more broadly acceptable images. Generally, the selected models should be attractive; not supermodels, but people that have a look that is likeable, approachable, trustworthy, nice, and engaging. In addition, the facial expressions in the photos should be pleasant. These images will likely be around for a long time—perhaps several development cycles. Choose images that are easy to look at and that inspire your team to build great products.

### NAME YOUR PERSONAS

The names you give to your personas are important, perhaps on par with the importance of the illustration. In many cases, the persona's name is the one detail that everyone will know and remember. Choose names carefully. There are several simple rules of thumb for selecting persona names:

- Don't use the name of anyone on your team or in your organization.
- Avoid using the names of famous people (such as Cher or Britney).
- Avoid using names that have any negative connotation.
- Do use names that are unique and distinctive.
- Consider building a mnemonic device into the persona names to help people remember them. For example, if you create personas for segments that are already named *enthusiasts*, *ostriches*, and *neophytes*, why not select names that share the first letter of each segment? The enthusiast could be named Eddie, the ostrich Omar, and the neophyte Nanette.

If you need help in coming up with interesting and memorable names, you might refer to one of the baby-name websites (there are many to choose from). If your personas are different ages, you can also look up popular names for the years each was born.

Consider getting your larger organization involved in the naming process. This serves the purpose of both getting good, agreeable names and getting your organization engaged early with your personas (see the "Buzz Generators" section in Chapter 5). If you decide to do this, we recommend that you select a set of names for each persona and allow everyone to vote during the *birth* activities.



### CREATE NAME AND TAG LINE COMBINATIONS

Generally, we recommend creating a name and tag line together, usually something alliterative. For example, you might have "Toby the Typical Teenager," "Abe the Active Administrator," or "Connie the Conscientious Consumer." Tag lines make personas easier to remember and to differentiate. Along the same line, you might consider using a simple quote or job title to bring meaning to the name. You want to highlight a key differentiator or characteristic for each persona. Be careful not to choose something potentially offensive (e.g., "Filing Goddess" or "Obsessive Organizer"). As a check, consider if it would it bug you to have these lines added to the end of your name.

## Step 6. Validate your personas

You have just spent a lot of time crafting personas to stand in for the users you researched and the embedded knowledge of your stakeholders. Your personas should now be looking and sounding great—full of solid information and complete with illustrative photos and meaningful names. Your stakeholders have reviewed them and you now seem to have the right set of target customers in your focus. But how can you be sure your personas embody the data you worked so hard to collect?

### TREAT VALIDATION AS AN OPPORTUNITY FOR DATA GATHERING

You may have created your personas based almost completely on existing data sources. If this is the case, you are probably missing some of the qualitative information that can inform the narrative surrounding your persona. If you utilized only qualitative information, you might need to understand aspects of your personas related to market size, spending, or other quantitative or domain-specific information. You can organize your validation efforts to serve two purposes: (1) validate the persona details you have developed from your data sources and (2) collect the additional information that will help complete the personas.

As you finished your assimilation exercises and moved on to create skeletons and full personas, you probably noticed some categories of information missing. For example, you may have collected tremendous amounts of data related to a teenager's schoolwork and entertainment interests but may find yourself with virtually no information about typical family activities and concerns. When you create the narrative for your teen persona, you can:

- Fill in this information based on assumptions.
- Return to your clusters, or even your original data sources, to see if there was relevant information you simply didn't use.
- Take the opportunity to look for more details as you conduct your validation activities.

Before you recruit people to survey or observe to refine your personas, create a list of the types of information you still need and use this additional data to inform targeted content areas or to create the narratives and storyline. It is perfectly reasonable to create the data-driven persona details and wait to build additional narrative until you have completed most of your validation activities.

## VALIDATING AD HOC PERSONAS

If you are using ad hoc personas, it is important to validate them to make sure that the personas you created really do fall into the neighborhood of your actual target users. The validation process can be quick and dirty, or you can treat it as an opportunity to gather data about your current and target users.



We recommend starting with ad hoc personas no matter which type of persona you intend to finish with. This step helps in several ways, including getting everyone on the same page *and* identifying what key questions you have to answer in order for everyone to feel comfortable that the personas are appropriate for the project.

### Quick validation of ad hoc personas

At the very least, show the ad hoc personas to other members of your organization who were not part of the persona creation process. See the "Have Subject-Matter Experts Review Your Personas" section, below.

### Using data to validate ad hoc personas

Some companies have tons of data, and starting with ad hoc personas can help you and your core team get organized before you dig into a huge mountain of factoids. In this case, the ad hoc validation process can include finding data points that support the details you have included in your ad hoc personas.

In cases where the company or team does *not* have a lot of data to work with, the validation process might include collecting new data. The benefit of creating the ad hoc personas before embarking on a data collection project is that you'll know the questions you really need to answer through the data you collect. This can often provide some much-needed structure to any research effort and ensure that you don't end up with just another pile of data you don't know how to apply.

We suggest you also review the validation methods provided in the next section. If you have the time and resources, these methods are equally valuable for ad hoc persona validation.

## VALIDATING DATA-DRIVEN PERSONAS

Your personas were likely created from a variety of data sources (primary and secondary sources; some older, some newer, some quantitative, some qualitative) all stitched together by educated guesses, assumptions, and business strategy. You have pieced together data points that may or may not actually fit together—some of which may not be directly comparable or inherently compatible.

Your goal during validation is to ensure that you did not stray too far away from your data when you made their characteristics specific and concrete and added elements of storytelling. Although it is true that personas cannot and do not need to be completely accurate, you do want to ensure that they reflect the essential information about your target users that you found in your data. If you built assumption personas, you want to ensure that the personas you created really do capture the assumptions in your organization. We discuss five approaches to validating your resulting personas (presented in order of increasing cost and rigor):

1. Review your personas against the original data sources.
2. Have experts (those closest to your users) review your personas.
3. Have representative users of each persona review "their" persona.
4. Conduct reality-check site visits.
5. Conduct large-sample surveys or interviews.

These five approaches are not mutually exclusive nor are they the only means of validating your personas.

## CHECK BACK IN WITH YOUR DATA

Now that you have enhanced your personas with details and narrative, schedule a short meeting with your persona core team. Ask everyone to skim back over the data sources from which the key factoids were derived. If you have transcripts or profiles from qualitative research, we suggest that you focus your review on these. As you skim the original data, ask each core team member to identify any ways in which the completed personas seem to contradict the data sources and decide together whether these contradictions are acceptable. Make appropriate revisions to your personas to ensure they are as representative of the data as possible.



### STORY FROM THE FIELD

*Personas at zylom.com*

***Erik Goossens and J. Vanzandbeek, Zylom.com***

At Zylom.com, we make interactive word and puzzle games. Our target audience is mostly women, age 30 and over, who typically like to play games at home when they "have a little break during the day." We saw a presentation on personas at Shop.org and decided we wanted to try using them. Our goal was to redesign our corporate website from an information source for our advertising business to a try-and-buy storefront for our games. We wanted to get started right away, so we came back to the office and created assumption personas. To do this, we created a core team of five people which included colleagues from management, market research, games development, and process experts. The core team brainstormed to capture our existing assumptions about our users on a whiteboard; these assumptions were based on our experience in this business and some market research data from a survey done to profile our audience for our advertisers (completed last year). We initially created three assumption personas to represent older women, younger women, and men: Maria, age 51; Sophie, age 31; and Michael, age 29.

Our resulting personas felt right to us, but we wanted make sure we were on target. To validate our assumptions, we bought a survey tool and created questionnaires for various groups of users. We put together a representative sample of users to survey, based on our analysis of "typical" usage patterns we found in our data. After we collected and cross-tabbed the data from the surveys, we cross-referenced our findings with other data sources, such as transactional data from our site, user characteristics collected during registration, time spent on the site, etc.

We concluded that all of our data made sense and was presenting us with a very clear picture of our actual users and how they were similar to (and different from) our assumptions. For example, through our data, we realized that women approach and use online games differently depending on their ages, so we revised our definitions of Maria and Sophie to comply with these findings. We also found that men comprised only 15% of our market. After this realization, we decided to focus or redesign efforts on Maria (our most profitable target) and Sophie, using Michael as a secondary target when appropriate.

Once we had our personas firmly in place, we:

- Defined Maria's and Sophie's goals for the site
- Created mockups of the site
- Brought in "Marias" and "Sophies" so we could watch (and videotape) them using the functional mockups
- Iterated the mockups
- Built and deployed the site

From start to finish, this entire process took 3 weeks, and the new site was up and running less than 4 months after the presentation on personas that we had attended.



### BRIGHT IDEA

***Collect New Data***

If you did not have time to collect qualitative and quantitative data before you started creating the personas or find that you need additional information to create good narratives for your personas, you can stop your persona creation efforts now and embark on your validation exercise before continuing (discussed in the following text). As you do the footwork necessary to validate your developing personas, you can collect the missing qualitative information that will allow you to add narratives to your personas based on observations rather than assumptions.

## HAVE SUBJECT MATTER EXPERTS REVIEW YOUR PERSONAS

Consider taking your personas to people who know your target audience. Look for domain experts who have direct contact with your users (or proposed users) and who were not involved in the creation of your personas. These may be sales personnel, product support engineers, trainers or educators, or people who have directly conducted research with your audience (focus group moderators, usability engineers, ethnographers, and so on). If you built your personas to help redesign an existing product, you might have access to people in your company who are very close to your existing user base and can help you validate your personas. If you have a customer service or sales team, these are the perfect people to validate your personas with. Basically, you want them to answer the following questions:

- Are these the people you interact with (or, in the cases where the personas represent target versus current users or customers, the people you *want* to interact with)?
- Is anyone missing?
- Are these really all separate people? Have we captured "differences that make a difference"?

HANDY DETAIL

*Avoid Confusion: Design Personas are Not the Same as Marketing Personas*

When you talk to members of the marketing organization, remember to explain that you are validating *product* personas and not *marketing* personas. Here is a great way to explain the difference:

- Marketing personas would capture important psychographics and demographics that help us *target* people and *get them to* our product. In this case, a user who is male and 22 is very different from a female who is 65, and you would advertise in very different ways to them.
- Product personas are intended to capture differences in goals, prior experiences, assumptions, and behaviors that impact the way people will *use* the product. In this case, people managing their finances on their own for the very first time (e.g., a 22-year-old guy who is newly graduated from college and a newly divorced 65-year-old woman) are more similar than they are different.

In simple terms:

> Marketing is about getting eyeballs to our product. Personas are about moving those eyeballs around within the product.

Ask these experts to read the foundation documents and point out things that don't match their experience with these users. Again, make revisions as appropriate to the personas so they best fit the original data and your experts' observations.

## SHOW YOUR PERSONAS TO REAL USERS

Another simple but slightly more demanding way to validate your personas is to show them to the actual people they are designed to represent. For example, if you created a bank teller persona, show your persona to several bank tellers. Tell the real bank tellers that your goal was to create a profile of a typical bank teller and you would like to know if your persona looks right, as such (see the following "Story from the Field"). You want to know what aspects of the persona resonate with real people that fall into that category of users.

In our experience, you only need to do this with a handful of people per persona. You will likely find that comments start to significantly overlap after the first three or four reviews. You might consider doing minor revisions after each review so the next real person sees only the most accurate persona. As you do these reviews and revisions, make sure you are not violating your original data. If there are major conflicts, choose the characteristic you trust the most and note the need to do further research if the discrepancy falls within an area important to your product domain.

## CONDUCT "REALITY CHECK" SITE VISITS

A more involved way of approaching persona validation (if you have the time and budget) is to visit people who are very similar to your personas and attempt to ascertain if your personas match your observations. The goal here is to visit users who match the personas on high-level characteristics to see how well they match on low-level characteristics. This goal is the same as with the previous validation technique, but here you are relying on your ability to see how real users actually are and how they behave, not just what they think about themselves and their reflection on their actions. We call these *reality-check site visits*. To do this, you will take the steps described in the following sections.

### Create persona profile screeners

Work backward from your rich persona to a set of characteristics that are essential to that persona. The sketches you started from are likely to be useful here. From this set of characteristics, you will develop questions that can be used to evaluate whether or not any

### STORY FROM THE FIELD

*Sharing the Persona with the Personae*

***Debby Catton, Technical Writing Consultant, and Jennifer Dunne, Technical Writer, Sun Life Financial***

Gaining approval to create personas wasn't an easy task. We were either too busy or people just didn't see the value. Finally, after two years of persistence, our assistant vice president (AVP) gave us permission to proceed. Because we had a number of different personas to create and were new to the process of creating a persona, we decided to first create the persona on our smallest but perhaps most significant user type—our financial center trainers.

We were somewhat shy during our first interviews with the trainers, but soon every interview was a completely successful and passionate experience! As the time drew near to present our persona to our AVP group, a twinge of doubt crept in. What if they didn't see the value in our work? What if they told us we couldn't proceed with the other personas?

We decided that if we presented the completed persona to the trainers we interviewed and got their opinion on how this work would benefit them, our leaders couldn't dispute the effectiveness of this tool. And we were right. The trainers loved the concept and provided the following statements:

- "Wow! You have done an excellent job at capturing our persona in my opinion. I like the perspective you took and how you personalized it. Good write-up. Hoping that the powers that be are able to get a better grasp of the role and how it works out here in the financial center."
- "It is a good generalization of the role as I am sure that each of us trainers has a broad and varied role. No two are exactly the same."
- "I like Sandra! Sounds like you have captured us—mood, job, etc. Great job. Now I hope that others who influence and affect our position and the tasks we undertake have a real good read and get to know Sandra intimately."

Having the blessing and acceptance of our personas made a huge impact at our presentation to our leaders, as we received unconditional approval to proceed with the rest. We know what a great communication and decision-making tool a persona can be. As the creators of personas, we have found that the process is an invaluable exercise in truly understanding our audience.



candidate participant is a good representative of one of your personas. For more information on doing screeners (including an example), see the "Use Personas as a Recruiting Profile for Usability Testing and Market Research" section in Chapter 6.

## Recruit representative people and visit them

Using your new persona screeners, locate several people who are good representatives of each persona. Three to five people per persona should be adequate. Visit those people and conduct a brief observational study and interview in an attempt to determine how well the low-level and peripheral characteristics of your personas match these people. Alternatively, hold focus group sessions with groups of representatives of each persona. Use the outline of the foundation document as a rough script for your discussion sessions. In either of these cases, and in addition to your direct observations, you can also show them personas and get their feedback as you would using the previous validation technique. With these observations and feedback, revise and refine your personas, being careful not to violate the original research findings that made up your personas. You will likely find that you are simply tweaking bits and pieces of the design-irrelevant details or fictional components of your personas in order to fit your validation findings.

### CONDUCT LARGE-SAMPLE SURVEYS OR INTERVIEWS

If you have even more time and resources, you can consider doing a more sophisticated validation effort. Using surveys, you can determine how pervasive your personas are in addition to the existence and coexistence of their attributes. To conduct this research, you will need to identify individual characteristics per persona and translate them into a form that real users can respond to as part of a questionnaire or survey. For example, you might generate a series of statements that respondents can rate (examples A and B following) or check as appropriate (example C).

### Example A

Rate the following after-school activity statements regarding your own behaviors:

a. I usually watch television after school. (strongly agree, agree, disagree, strongly disagree)
b. I usually play computer video games after school. (strongly agree, agree, disagree, strongly disagree)
c. I usually play outside at home after school. (strongly agree, agree, disagree, strongly disagree)
d. I usually talk on the phone with friends after school. (strongly agree, agree, disagree, strongly disagree)

### Example B

Indicate the frequency with which you engage in the following activities after school:

a. Watching television (frequently, sometimes, never)
b. Playing computer video games (frequently, sometimes, never)
c. Playing outside at home (frequently, sometimes, never)
d. Talking on the phone with friends (frequently, sometimes, never)

### Example C

Indicate which of the following activities you engage in regularly after school (check all that apply):

a. Watch television.
b. Play computer video games.
c. Play outside.
d. Talk on the phone with friends.

Analysis of such data can take many forms and can be quite complicated. This can be similar to segmentation or cluster analysis, which you might have started your persona effort from, only now you have target profiles to evaluate the responses against. Your goal is to understand how the characteristics of a broad sample of users relate to the known (or proposed) characteristics of your personas. The details of doing such an analysis are beyond the scope of this book. We recommend that you do not undertake such a validation effort without the involvement of a trained statistician or researcher. Keep in mind, however, that this approach can be greatly simplified by focusing on only a few of the key attributes of your personas. The analysis for this simplified approach can be as basic as comparing a few descriptive statistics (e.g., averages or a series of frequency counts) or doing a correlation analysis. For an example of this, see the "Story from the Field" by Colin Hynes regarding putting real values on your personas.

The invitation started with a subject line explaining, "Get $10 off your next purchase by filling out a quick survey." We sent the link out to 15,000 customers from our database. On the survey page, each respondent was presented with the seven defining quotes and an "Other" option for those who did not feel they bucketed neatly into any of the persona statements. After scrubbing the data, we ended up with 1048 valid responses.

Upon our initial high-level analysis of the data we were somewhat disappointed that respondents were fairly evenly distributed across the seven personas. There were some slightly heavier buckets, but all personas garnered between 10 and 20% of the overall

## STORY FROM THE FIELD

### *Putting Real Values on Your Personas*

***Colin Hynes, Director of Usability, Staples.com***

After a lot of effort went into creating meaningful and valid personas for our development team, and when our final personas were presented to the senior executives, our VP of Marketing commented, "I wish we knew how much each of these personas was worth in bottom-line dollars." This kicked off our "persona valuation project."

The main thrust of the persona valuation project was a joint effort between the Usability and Marketing teams. After several meetings between the two groups, we decided that data would be gathered through a survey with one simple question tied to the defining quote of each persona. This, of course, put much pressure on the defining quotes to fully encapsulate the essence of the persona. Our hope was that a user would read one of the quotes and immediately see himself in the statement.

Then we decided on the criteria for distributing the survey, which was simplified: people who had purchased from Staples (any channel) in the last six months, had visited Staples.com in the last six months, and had an e-mail address. We also decided to offer an incentive ($10 off) to participants, even though the survey was only going to be two questions. One requirement was that we had to be able to link responses to other info in the database for calculation of value regarding each respondent (see Figure 4.18).

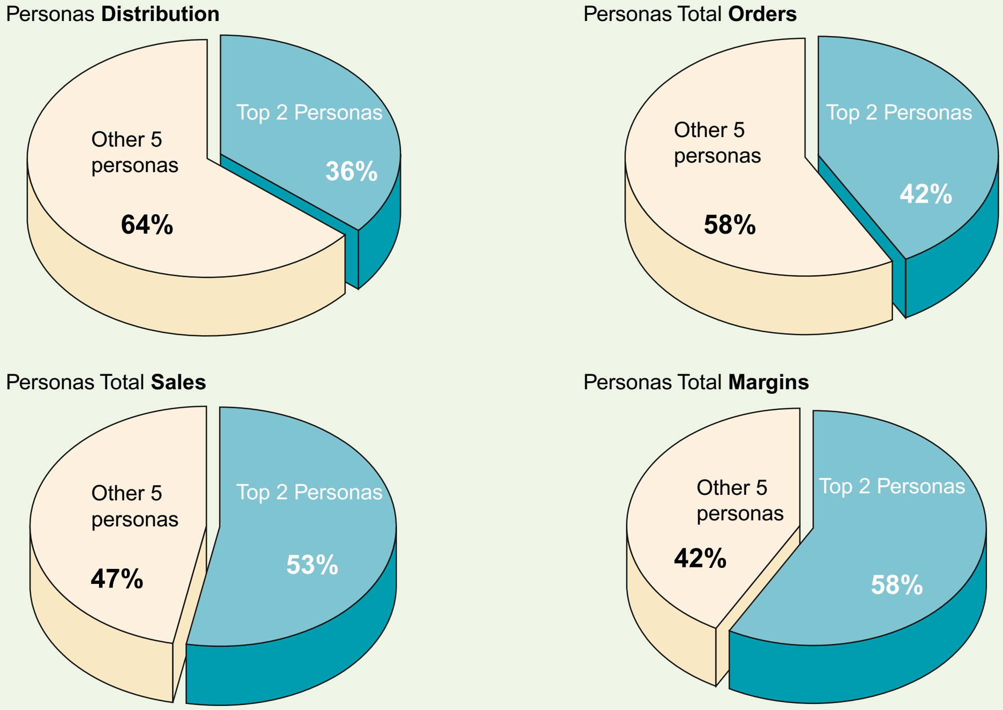



**FIGURE 4.18**
Staples was able to attribute spending per persona by matching survey respondents to purchases in their transaction database. As they looked at the data across different purchase metrics, a clear picture of the most valuable personas emerged.



distribution. The usability hypotheses that two particular personas would dominate the distribution was not supported. We feared that without one or two clear-cut leaders we would be left trying to serve all personas. Our ultimate concern was that this would manifest itself in a website design that tried to be everything to everyone, instead of having focus.

One highly encouraging data point was that only 8 of the more than 1000 respondents bucketed themselves as "Other." This made us feel confident we had nailed the original persona descriptions.

Although the distribution did not give us the clarity we were hoping for, when we matched the responses against 12-month sales figures the picture became crystal clear. We calculated the percentage of orders, sales, and margin generated for each persona. The figures were an aggregate of all purchases made through any channel. Strikingly, the data showed that two personas that made up a combined 36% of the distribution also made up 42% of the orders, 53% of sales, and 58% of the margin (see Figure 4.19). Further, if we were to map the personas out in a Venn diagram to illustrate overlap in goals, these two personas would have the greatest overlap. *Note:* We tried to have as little overlap as possible overall in the personas. If we deemed that there was a significant overlap between personas we combined the personas in the creation process.

It is difficult to overestimate the impact this data had on the future design direction of Staples.com. To ensure accuracy, we reanalyzed the data and obtained the same results. At that point, we knew we had lightning in a bottle. With the inclusive nature of the study and the airtight research design, the results were difficult to dispute.

### COMPLETED PERSONAS DO NOT MARK THE END OF USER RESEARCH

At the point you finish the creation of your personas, you may be tempted to think that you do not need to further understand (do research) or involve real users in the development of your product. From our perspective, this couldn't be further from the truth. We believe personas are a great starting point for understanding and incorporating user information in the development cycle.

As you will find in Chapter 6, personas can (among other things) be used to create excellent recruiting profiles for further testing and insight. User testing, focus groups, beta testing, and other methods of involving real users in the process should continue as long as possible throughout the entire development cycle. Personas can serve not only as recruiting targets for these activities but also as a communication device and a repository for new findings. You may find that you need to update your completed personas every six months to a year as your target audience changes, though you must be thoughtful about how you approach this (for more discussion of this, see Chapter 7). In other words, even though other activities are now in focus, the validation of your personas should continue throughout the persona lifecycle.



## HOW TO KNOW YOU ARE READY FOR BIRTH AND MATURATION

You should now have a set of rich, meaningful personas that have been validated against real users. Still, you may be tempted to keep refining your personas until they seem perfect. You may feel hesitant about putting them "out there" for people to see and use. How do you know when you are ready to begin introducing them to your broader team? There are signs that will indicate you are ready. You will notice that the amount of tweaking and reexamination slows down or stops. You may still have some open questions, but you shouldn't have any blank sections in your foundation document that are truly critical to your product domain. The personas will just *feel* right to you and your core team. In addition, your stakeholders should have signed off on your work. They now agree that no critical audience is missing and that the personas are robust, credible, and in line with your business objectives.

If your creation process took several weeks to several months, it may be that your product planning and design are now under way—or, worse, coding has begun. If so, it is likely that your broader team is becoming eager to obtain information about your target audience. They may be asking for you to deliver your personas ASAP. All of these things tell you that you are ready to deliver—that the *birth and maturation* phase should start. This is the phase in which you not only introduce your personas to the team but also begin a persona communication campaign. At this time you introduce the persona method and other UCD techniques, many of which will directly employ your personas (possibly changing the team's design and development process forever).

## SUMMARY

The *conception and gestation* phase of the persona lifecycle involves a great deal of activity, teamwork, and decision making. You have become an alchemist, combining data, assumptions, and your understanding of what will and will not work in your company to create a rich set of design targets. You have translated raw data into information and that information into prioritized categories and subcategories of users. You have created a set of personas that combines fact and fiction to reflect your business priorities and convey the essential information about your target users you found in the data. As much as possible, you have with explicit links to the original data supported every important characteristic and statement found in your foundation documents. Last, you have done validation work before finalizing your personas.

As we have stated several times previously, we believe that, whenever possible, personas should be based on data. Even the *perception* that the personas are not based on data can damage their credibility and utility. However, we've also shown you how to create ad hoc personas, which can be incredibly helpful despite their lack of hard data. No matter how you create your personas, it is practically unavoidable that some elements of personas are generated from educated guesses or are simply made up. Your job in the *conception and gestation* phase is to make informed decisions about how much fiction and storytelling are needed to make your personas feel real and be truly engaging. Creating personas involves straightforward fact gathering, but there is also an art to it. Be inventive, but also be practical and stay as close to your data as possible.



Once your personas are complete, substantive, and stable, you have only just begun. You are now ready to begin the education process. Communicating your personas will take time and effort. You will have to be strategic, persistent, and patient. Once your personas are out there, they will need to actively participate in the design and development process (the *adulthood* phase of personas). Your personas are ready to be born. Labor can be painful.

### HANDY DETAIL

#### *Get Ready for the Birth and Maturation Phase by Cleaning Up*

Once you have your personas fully created—pared down, prioritized, with perfect images in place, and details of profiles substantiated and revised with a quick user study—you probably need to do some cleanup work. Make sure you have solid, cleaned-up foundation documents before moving to the next phase (*birth and maturation*). Make sure you have copies of the reference research materials, including local copies of data you found on the Internet (i.e., material that might move or otherwise disappear). Take notes about your specific process, including who did what, when, and how. You will want to have notes on the problems you encountered and the reasoning behind critical decisions made. You might even want to keep records of how long certain activities took. This could be useful for return on investment (ROI) measures in the final lifecycle stage.