

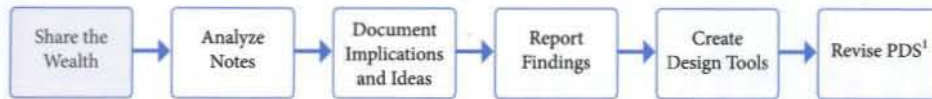
# Analyzing User Research

AFTER COMPLETING THE USER RESEARCH for your app, you will undoubtedly be armed with reams of notes, dozens of photographs, and hours upon hours of audio or video footage to sift through. The sheer quantity of these artifacts can be overwhelming, but it's a priceless resource that you may refer to for months—potentially years—to come.

The challenge is how to translate these artifacts and observations into insights that can easily be used by designers, developers, and other members of your team. This chapter provides you with step-by-step advice on how to effectively analyze your user research, with an emphasis on collaborative affinity diagramming.

You'll also learn how your findings can be used to create valuable design tools such as personas, scenarios, and user journeys. These tools will help you prioritize features and ensure that your app designs meet your users' needs. To illustrate, we'll look at case studies demonstrating how other app designers and developers used similar methods in their design process.

## Share the Wealth



One of the first things to do after a study is gather the artifacts and post them in a place where other team members can view them. Intranets and wikis are great, but so is an actual physical space within your company such as a conference room, an office, a cubicle, even the hallway if that's your only option. You can use invisible tape on the wall, whiteboard, or foam core.

Making the artifacts visible has several benefits:

- Surrounding everyone with this content will create a shared understanding within your organization.
- It simplifies analysis since the medium makes it easy to collaboratively analyze findings.
- The physical representation can be referred to in the later design stages, as it's continually updated and refreshed.

Initially, you'll want to organize these artifacts according to participant, as shown in **FIGURE 4.1**; later on you'll look for themes across participants. As discussed in the previous chapter, artifacts may include photos, notes, screen captures, video, audio, or all of the above.

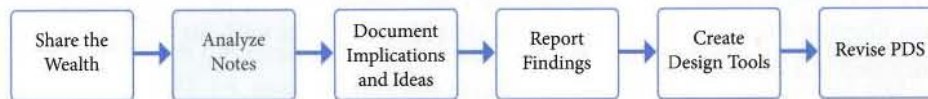


**FIGURE 4.1** Participant board for iPhone field interview analysis

1. Product Definition Statement



## Analyze Notes



Once you've gathered your notes, start extracting observations and grouping them into themes as you uncover them.<sup>2</sup> Sounds simple, right? If you are working independently and have observed nearly all of the sessions, the process can go rather quickly. However, if you are working with a group and not everyone has attended the sessions, the process may take a few days. People who didn't attend may be curious about some observations or debate whether a behavior even occurred. One rule that can help alleviate this problem is that team members must have attended at least two user interviews to participate in the analysis sessions. The depth and format of your interview notes (handwritten, transcripts, verbatim notes) will influence your approach.

### HANDWRITTEN NOTES

As mentioned in the previous chapter, handwritten notes are a good option if approximate user quotes are acceptable. Study participants may also be more comfortable since a notebook is less intrusive than a laptop or video camera. Unfortunately, when notes are handwritten, the person who wrote them is typically the only one who can fully decipher them. Even the note taker may have a hard time interpreting incomplete sentences and shorthand. If there isn't time to create a transcript, consider having the note taker read the notes aloud while others in the group write observations on sticky notes. Additionally, holding debrief sessions immediately after each interview is a great way for teams to collaboratively analyze and expand upon notes.

### TRANSCRIPTS

Transcripts can be created from the audio or video captured during your sessions. They are helpful if your team needs precise user quotes along with timestamps. Although transcripts are the most accurate option, they can take a long time to review since they include every single word that you, the participant, and the observers said during the interview.

Transcripts can be read to a team during an analysis session, but they require some filtering on the part of the reader. In this situation, it might help to divvy up the transcripts and have team members independently analyze each one.

#### NOTE

Creating transcripts is a time-consuming process. Companies sometimes outsource this step to a transcription service, which costs approximately \$60 for each hour of footage. Another option is to use software to help transcribe content such as InqScribe or Transcriva.

<sup>2</sup> The process is commonly referred to as *affinity diagramming* and was developed in the 1960s by Japanese anthropologist Jiro Kawakita.

## VERBATIM NOTES

Typed verbatim notes (also known as “approximate” transcripts) typically require less filtering since they contain valuable details and quotes without the extra noise included in a transcript.

The following paragraphs are an excerpt of notes taken during an iPhone field interview with a college student. The notes totaled five pages for a 1.5-hour interview. The participant was asked to describe how he uses the iPhone at school.

I would have chemistry in the morning for 5 hours, Trig in afternoon, English at night. My chemistry teacher would lecture for 2 hours. I would have my periodic table open. I was in class one day and forgot my periodic table. I Googled it and found an iPhone periodic table app. I showed everyone in class and then they got it. It's free and they have a light version. A lot of people in class have an iPhone; half the class. Everybody is on the iPhone, especially on the train.

I'd also use my scientific calculator. If you turn the iPhone landscape, it expands. I removed the other one [he purchased a different one for class]. Don't like a ton of apps on my phone at once. Replaced my TI-89. The other app allowed more numbers than the built-in calculator app; could do longer equations with iPhone app. I looked in the App Store under scientific calculator. Looked for graphing one. I got this one. [shows me] There was a pop quiz one day so I asked: Can I use the phone? Professor said yes but some would say no.

To see how to analyze a user interview, examine the highlights indicating the notable observations:

I would have chemistry in the morning for 5 hours, Trig in afternoon, English at night. My chemistry teacher would lecture for 2 hours. I would have my periodic table open. I was in class one day and forgot my periodic table. I Googled it and found an iPhone periodic table app. I showed everyone in class and then they got it. It's free and they have a light version. A lot of people in class have an iPhone; half the class. Everybody is on the iPhone, especially on the train.

I'd also use my scientific calculator. If you turn the iPhone landscape, it expands. I removed the other one [he purchased a different one for class]. Don't like a ton of apps on my phone at once. Replaced my TI-89. The other app allowed more numbers than the built-in calculator app; could do longer equations with iPhone app. I looked in the App Store under scientific calculator. Looked for graphing one. I got this one. [shows me]



There was a pop quiz one day so I asked: Can I use the phone? Professor said yes but some would say no.

Next, write each observation on a sticky note along with the participant's number—P1, P2, P3, and so on. If you notice any similarities, create a label and write them on different-colored sticky notes. For example, **FIGURE 4.2** shows a blue sticky with the text “How people find apps.” This is used to label the different ways people find iPhone apps (such as Google, searching the App Store, through friends). As you continue the analysis, you will eventually include other stickies within a high-level grouping. If an observation belongs in more than one group, create another sticky and try to cross-reference the two with a unique letter or number.

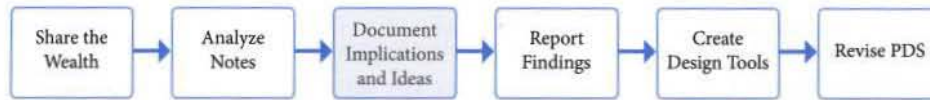


**FIGURE 4.2** Affinity diagram for iPhone field interview analysis

Here are some additional tips for this type of analysis:

- Try to limit your team to four to six people.
- Minimize conversations and debates while writing up observations.
- Ensure that observations are written in concise phrases or sentences.
- If one sticky group is much larger than the others, consider splitting it or creating subheaders.
- Connect related sticky groups with lines.
- Collaboratively prioritize findings when all observations have been placed within a group.
- Provide a key if you color-code your stickies (e.g., heading versus findings versus idea).

## Document Implications and Ideas



Eventually you'll have several walls and/or foam-core boards filled with clustered observations from your fieldwork. Some stickies will have only one participant number, but observations witnessed in more than one interview may have multiple participant numbers. In addition to the observations and group titles, you may want to start incorporating implications and design ideas, as shown in **FIGURE 4.3**.



**FIGURE 4.3** Affinity diagram with implications and ideas

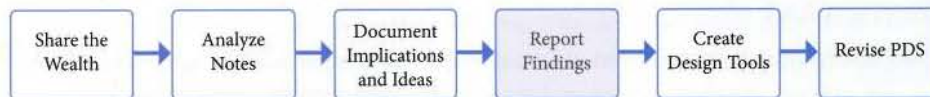
Implications suggest best practices or design principles your team wants to follow, whereas ideas are specific features or concepts you may want to incorporate in the actual design. These should also be written on stickies, using a different color from the observations and titles. You may want to post a color key if other team members are involved in the process. At the end of the day, take photos of the groupings in case any stickies get accidentally moved or fall off the wall. Double-sided tape can help keep the stickies in place.

If you want to create electronic versions of your affinity diagrams, consider using the Stickies Dashboard widget on the Mac or lino (<http://en.linoit.com>), a web-based tool for organizing sticky notes. Keep in mind that these computer-based approaches typically require one person to “drive,” which may make the process less collaborative. With a paper-based approach everyone can simultaneously



add stickies to the affinity diagrams. Additionally, if you use a computer, your workspace will be limited by the size of your computer screen or projector image. In contrast, paper stickies can be plastered on several walls, which may make it easier to step back and see the big picture.

## Report Findings



After spending time in the field and working for hours in a conference room filled with observations, implications, and design ideas, your study participants may seem like old friends. Someone on your team will mention a name and something interesting the person said and everyone will know exactly whom and what that person is talking about. Trust me, it may seem weird, but this is a wonderful stroke of serendipity.

While it may be tempting to leave the content up on the wall and move on to design, you should write up a Quick Findings report at minimum. You may be able to recite your favorite participants' quotes today, but chances are you won't even remember their names in a couple of months. Moreover, you will probably have a hard time deciphering all of your shorthand sticky notes. If you find yourself asking, "Anyone know why I wrote 'FB quiz doesn't work'?" you'll quickly understand the importance of having that Quick Findings report on hand.

In addition to clarifying all of the sticky notations, the Quick Findings report will give you an opportunity to stew on the material and brainstorm additional implications and ideas. This report also makes your findings more portable, because you can take them anywhere once you've moved from the sticky notes to electronic documents.

There are countless ways to organize your findings and make them more shareable (e.g., in a report, presentation, wiki, summary poster), as you will discover in the sections that follow.

### METHODOLOGY AND GOALS

Did you shadow participants, conduct field interviews, run diary studies? A combination? Individuals who were not able to attend the sessions will want to know how you approached the research as well as the research goals.

## TEAM MEMBERS

Although this information may be known throughout your organization at the time of the research, after a few months you may forget exactly who facilitated and observed the research. Identifying these individuals will make it easier to figure out whom to ask for research advice in the future and whom to include in relevant brainstorming activities.

## PARTICIPANT PROFILES

Participant profiles vary based on the user research methods and goals. For example, an iPhone app study looking at overall app usage might include the following information:

- First name and photo
- Demographics (age, gender, occupation, location)
- iPhone model and date/time of purchase
- Computer setup (model, where located)
- “A day in the life” (how the participant uses the iPhone over the course of a day)
- Overall app usage
- App-specific usage
- App wish list

**TABLE 4.1** shows a sample participant profile from one of our app studies (courtesy of Michelle Reamy).

## FINDINGS

The format of your findings depends on your user research goals. One common approach is to summarize each finding and then include representative participant quotes and screen captures, as shown in the sidebar “Example of User Research Findings.” If you captured video, consider embedding salient video clips (about 30 seconds or less) as they can be extremely beneficial for readers who were unable to attend the sessions.

If design implications or ideas were identified, these should also be included with the findings. Findings with the most significant implications are generally included in a Top Findings or Executive Summary section of your report. They may be used to generate design goals or design principles for your app.



**TABLE 4.1** Sample Participant Profile

### Meet Matt

When he's not playing director at a prestigious contemporary gallery in Chelsea, Matt spends his time working on his own art. The iPhone was a gift from his boss for the extra help he put in at Art Basel.

### A day in the life of Matt and his iPhone

Every morning Matt grabs his phone and checks email, weather, and the surf report. He usually bikes to work, tucking the iPhone in a special pouch to protect it from condensation and sweat. At work he'll use his iPhone to check Facebook and Twitter. On this particular day, he took a photo of a great piece of art that he found really inspiring: a chrome cake on a porcelain platter. Later on he plans to look up cocktail recipes using an app so he can pick up the ingredients on his way home.

### Overall app usage

Matt calls everything on the phone an "app"—he even refers to Safari as "the web app." The first app he downloaded was a converter. He's always making calculations and converting measurements for sculptures and other artwork, so he explicitly looked for an app that could make these tasks easier. His apps are organized so the ones he uses the most are on the first page.

### Specific app usage

Matt hasn't found the need to pay for many apps. Some of his favorite apps include these:

- **Tweetie.** Matt and his musician friend downloaded the app to share and track their mix ideas.
- **Public Radio.** He likes the way you can set the app to stream or search for specific stations in a location.
- **iSkateboard.** He uses this app for finding good skate parks around the city. They come and go very quickly so the app has been very handy.

Although the quality isn't great, Matt finds the camera essential: "The quality isn't really the point—it's just to remember an idea or some piece of inspiration for later." Now that he has the iPhone, he has completely changed his blogging habits: "My old blog was mostly text with a few photos. Now it's almost purely photos and that's more my style." All of his photos are on the iPhone Camera Roll. He wants the photos with him at all times in case he's looking for ideas.

### App wish list

Matt would like more apps that support or augment the apps he owns: "The most awesome thing would be to actually send a music file when I post a Tweet. Honestly, I think there's more this thing can do that I don't know about. I struggle to keep up with technology. But I do love this phone."



(Photograph courtesy of Michelle Kramy)

**Name:** Matt

**Age:** 34

**Occupation:** Gallery director

**Home:** Lives in an apartment in New York City with his wife

**iPhone:** 3G

**Computer:** MacBook Pro

## Example of User Research Findings

When documenting specific user research findings, start with a brief summary such as the one that follows, “Setting Up an iPhone App Can Be Challenging.” Next, add salient quotes from your notes along with the participant number, such as P1, P2, P3. Below the quotes you can include implications and design ideas from your analysis sessions. If you have relevant imagery or video, it can also be embedded in the document, as shown in **FIGURE 4.4**.

### Setting Up an iPhone App Can Be Challenging

Related quotes:

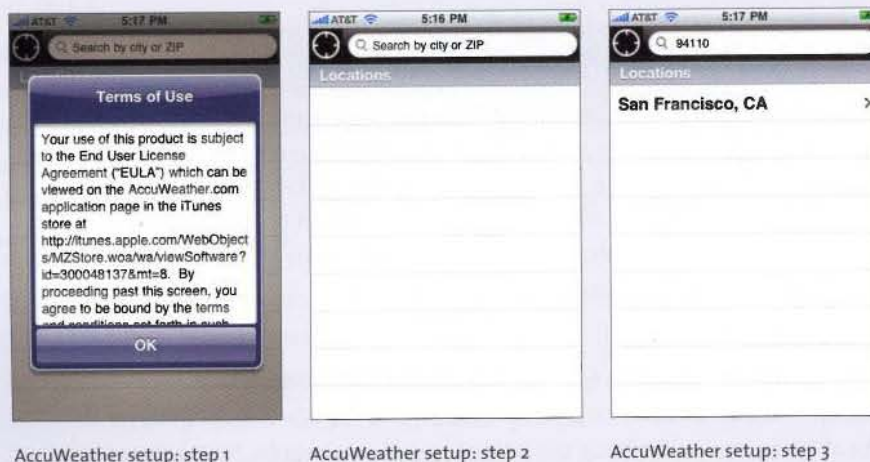
- “Tried AccuWeather but took a long time to change the default. When it takes a long time, I’m gone.” (P1)
- “I had the Wallet, I liked the idea, but it was too difficult to get started.” (P2)
- “They [Genius app] gave you directions to go into your Settings, go to international keyboards, then add it as a Chinese keyboard.” (P3)

Implication:

- Users may abandon apps if the setup process is not welcoming and easy.

Design ideas:

- Consider offering a welcome screen for first-time users.
- Consider presenting a wizard if a multistep setup process is required.



**FIGURE 4.4** AccuWeather setup requires three steps.



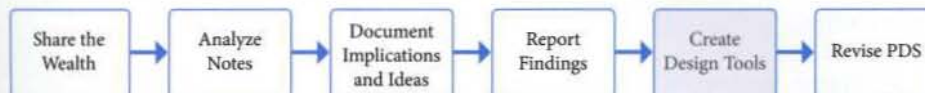
## PRESENTING THE FINDINGS

If you work in a large company, chances are you will create a report, post it internally, and present the highlights of your findings in a meeting. Smaller organizations may think presentations such as these are unnecessary, especially if everyone attended most of the sessions, but these meetings can be much more than a simple recap.

In addition to sharing findings, post-research meetings are important for determining the next steps your design and development team needs to take. They also offer your team the opportunity to brainstorm about solutions to app problems and discuss new directions for the app. For example, you could hold a 90-minute meeting, dedicating the first half to presenting the findings and the second half to brainstorming. Brainstorm ideas should be transcribed so they can be incorporated into the app requirements. You may want to use large sticky pads (25 × 30 inches) since they are portable. Additional brainstorming tips are discussed in Chapter 6, “Exploring App Concepts.”

Given the amount of work you’ve done with the affinity diagrams and the Quick Findings report, the presentation shouldn’t require too much effort. In fact, the affinity diagrams and Quick Findings could be your presentation; separate Key-note slides may not be necessary.

## Create Design Tools



To make your research findings more readily accessible, you may want to distill the content in a variety of ways. For example, you may have gathered field data from more than ten people for your iPhone app study. It would be impractical to thumb through each profile every time you wanted to make a design decision, and it would impossible (and likely unwise) to satisfy the needs of every participant.

Over the years, user experience researchers and designers have developed a number of tools that make it easier to incorporate user research into the design process. Here I’ll describe two of the most common tools, personas and scenarios, as well as a more diagrammatic approach, specifically user journeys.

## PERSONAS

Personas are profiles of *archetypal* users, as opposed to profiles of actual users; they represent the needs of many users.<sup>3</sup> Personas allow you to keep design teams on the same page with regard to target users, and they help prevent team members from being self-referential. For example, instead of saying, “Well, if it was me, I would use the iPhone this way,” team members would refer to a specific persona: “Well, Jennifer would do it this way.”

Personas are usually developed from multiple research sources, including user research, customer support, and application analytics.

Most products have more than one persona, and the appropriate number will depend on your app and your user research findings. In most cases, personas are categorized as primary, secondary, and sometimes negative (or “anti”) personas:

- Primary personas are the ones whose needs you must address for the product to succeed.
- Secondary personas are important but lower priority.
- Negative personas are the ones you’re clearly not addressing for business or other reasons.

Knowing your personas’ needs can help with design decisions and prioritization. For example, a feature that satisfies the needs of only your secondary persona may receive a lower priority when it comes to actually implementing that feature. Personas can take a variety of formats, but they typically contain the following information:

- Name, profession, age, location
- Attitudes
- Activities
- Influencers
- Workflows
- Pain points and frustrations
- Goals

iPhone app personas may also include detailed information on the context of use, the computer and syncing setup, and the usage of web and desktop versions of iPhone applications. Organizations that already have personas for related products

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3. See John Pruitt and Tamara Adlin, *The Persona Lifecycle: Keeping People in Mind Throughout Product Design* (Morgan Kaufmann, 2006), and Alan Cooper, *The Inmates Are Running the Asylum* (Sams, 2004).



may want to extend them with iPhone information or create new personas specifically for the iPhone app.

For example, Sonos created personas when they first designed their wireless music system. Given that the iPhone app mirrored the controller functionality, it was not necessary to create new personas. Instead, Sonos extended one of their existing personas to include iPhone-specific information. **TABLE 4.2** is an example of a persona for a college student.

**TABLE 4.2** College Student Persona

*"I often get caught up in my iPhone."*

Every morning Marta reaches across her bed to grab her iPhone to check her email, calendar, and friends' status updates on Facebook. If she forgot to charge her iPhone overnight, she'll plug it in and let it charge while she gets ready for school.

Marta typically brings both her laptop and iPhone to campus. The laptop is stowed away in her backpack and the iPhone is tucked in her pocket. Over the course of the day, she uses the phone to listen to music, check her friends' status updates, and look up information via Safari.

Marta mostly uses the iPhone for fun, but she's been experimenting with some apps for school. She found spreadsheet and word-processing apps that work well for basic edits, but she switches to her laptop to get significant work done. Reference apps, such as the flash cards for her Chinese class, have been more valuable to her.

**Functional goals:**

- Check email and AIM.
- Update status on Facebook and Foursquare.
- Listen to music.

**Emotional goals:**

- Stay in contact with friends and family.
- Entertain herself and friends.
- Enjoy simple and pleasing aesthetics.

**Influencers:**

- Friends recommend apps to her.
- Her parents pay for her monthly plan.

**Frustrations:**

- Many apps feel disconnected (e.g., she edits photos with Photoshop on her laptop before posting them to Facebook).

**Wish list:**

- She wishes she could customize the look and feel of some iPhone apps.



(Photograph courtesy of Nerea Marta)

**Name:** Marta, College Sophomore

**Age:** 19

**Occupation:** Sophomore at NYU majoring in psychology

**Home:** Shares an apartment with two other NYU students

**iPhone:** 3G

**Computer:** MacBook

In addition to incorporating your personas into scenarios and user journeys, which are discussed in the next section, here are a few other ways to keep personas alive:

- Create posters and display them in your company hallway or office.
- Laminate and distribute them to team members.
- Post them on your company intranet or wiki; provide different formats for different use cases.
- Incorporate them anytime design concepts are shared.

## SCENARIOS

Scenarios describe how personas may use your app to achieve their goals. In the very early stages, scenarios tend to be written at a high level without many user interface elements. Excluding these elements allows your team to brainstorm a wide variety of design directions, rather than confining yourselves to a particular solution.

As your design unfolds, the scenarios can help uncover gaps in your solutions and potential usability issues. They are also useful when demoing your working app or authoring user interface specifications. Scenario content will vary depending on the app, but it typically includes the following information:

- **Motivation**  
What prompted the persona to embark on the scenario?
- **Context**  
Where is the persona while the scenario is taking place?  
Does the context change over the course of the scenario?  
Who else is involved?  
What other devices are involved?
- **Distractions**  
What kinds of distractions or interruptions typically occur in the scenario?  
How does the persona deal with such distractions?
- **Goal**  
What is the persona's goal in the scenario?  
Is it information, an artifact, an emotion?

To illustrate, imagine that you're developing an iPhone app to help NYU students find their way around campus. It would probably make sense to include more than one persona, such as New Student, Existing Student, and Prospective Student



personas. Although students are the primary personas, instructors and administrators may also use the app, and you may find it helpful to develop secondary personas for them as well. The scenarios could start off at a relatively high level, then be refined as the design develops. **TABLE 4.3** shows a “need” scenario, using the College Sophomore persona. A need scenario implies that a solution has not been generated and can be used in the context of a brainstorming session.

**TABLE 4.3** Need Scenario with College Sophomore Persona

#### Getting to a new classroom

It's the first day of Marta's sophomore year at NYU. She just finished eating lunch at a café on Waverly Place and is scanning her afternoon schedule in iCal, which she synced to her iPhone from her laptop the night before.

Marta notices that her 2:00 p.m. class is held in the Puck Building. Although Marta is a sophomore, she's never taken any classes at Puck. She goes to the NYU web site using Safari on her iPhone, but the site isn't formatted for the device. After several minutes of pinching and zooming, Marta finally finds the building. It's not linked to Google Maps, so she mentally notes the cross streets before exiting Safari.

#### Brainstorm topic:

How can an iPhone app make Marta's life easier?



(Photograph courtesy of Nereia Maria)

**Name:** Marta, College Sophomore

While this scenario may seem overly simple, that's what you're shooting for in the early stages. The simplicity will provide just enough of a foundation for your team to brainstorm, which is covered more in Chapter 6, “Exploring App Concepts.” If everything were spelled out from the beginning, there wouldn't be any room for innovation along the way.

At the same time, having a basic scenario framework will help keep your team grounded. For example, the college student scenario highlights a potential shortcoming of the app: the inability to access the campus map directly from iCal. In addition, it unveils potential interruptions, such as bumping into a friend, and reminds the team that it's important to maintain the app's state.

### Common Questions

Authoring scenarios may seem like a daunting task, but a small investment can go a long way. This section answers common questions regarding scenarios and their relation to similar tools such as use cases and user stories.

- **How many scenarios should I write?**

The number of scenarios you write depends on the number of personas and the complexity of the app. Utility apps may need only one or two scenarios,

whereas Productivity apps may benefit from a series of short scenarios that cover different goals.

Although scenarios are highly valuable, keep in mind that they are a tool for design. The scenarios should be simple and focused. Instead of trying to document every possible scenario at the beginning of your project, start out by focusing on what's most important. As you get into the design phase, you can expand with edge case scenarios as needed.

- **Are scenarios just for design?**

Other teams within your organization may also leverage your scenarios. If the scenarios are relatively comprehensive, they may provide a starting point for help documentation and for training your support team. Similarly, QA teams may find the scenarios useful when developing their test plans. Keep in mind that the goals of help and QA are quite different from those of design; a one-size-fits-all approach may not be desirable. Ideally, the teams will share their knowledge and adapt as needed.

- **What's the difference between use cases and scenarios?**

Use cases are much more concise than scenarios and may include aspects of the back end, often called the "system." They help uncover flow and usability issues in the later stages of design, but they are generally too system-oriented for early-stage brainstorming. The NYU iPhone app, for example, could be described with the following use cases:

- User chooses building list.
- System provides list.
- User chooses *P*.
- System shows buildings that start with *P*.

- **What about user "stories"?**

User stories are commonly used in the Agile software development process.<sup>4</sup> They tend to be more feature-oriented than scenarios since they must be broken down for the "backlog" (items planned for the next development cycle). Moreover, although the term *story* is used, user stories read more like requirements given the language and specificity. For example, here are three potential user stories for the NYU iPhone app:

- A user can browse campus buildings by name.
- A user can view detailed information for each building.
- A user can get directions to each building.

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4. Mike Cohn, *User Stories Applied for Agile Software Development* (Addison-Wesley, 2004).



## USER JOURNEYS

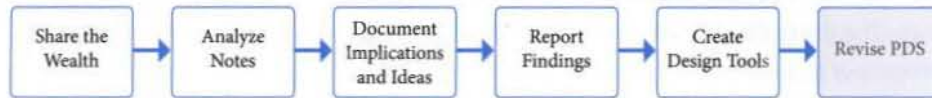
User journeys (shown in [TABLE 4.4](#)) offer an effective way to share research findings. The design team can use them as a quick reference throughout the design process or as a communication tool when explaining design decisions to other members of your company. The journeys typically encompass the entire user experience—from app discovery to app usage along an abstract timeline—with each part kept at a very high level. User journeys may seem overly linear at first glance, but they are not meant to be taken literally. It may help to view them as design requirements based on persona needs, rather than actual user flows. As you'll see in [TABLE 4.4](#), user journeys assume some concrete understanding of the user experience. If your app's definition is still vague, even high-level groupings may be too detailed.

[TABLE 4.4](#) illustrates the user journey created for an app that complements an existing web site for art events. The labels along the top represent the high-level goals that can be achieved with the app, and the labels along the side represent the different personas that may use the app. Having this reference helped the team prioritize features and make specific design decisions.

**TABLE 4.4** User Journey for Art Events Web Site

	<b>DISCOVER</b> Where they learn about the app	<b>FIND</b> How they find events	<b>LEARN</b> What they need to decide to attend	<b>ATTEND</b> What they need to get to the event	<b>REVIEW</b> What they want to include in a review
<b>All personas</b>	App Store		Artist name, reviews, images, description	Venue name and address	
<b>Martin</b> <i>Local art enthusiast</i>	Our web site Artist friends Galleries	Prefers to search or browse for genre or artist of interest	Number of days before the event closes	May not need maps if attended the venue in the past	Prefers to do lengthy reviews, thus more likely to do via the web site
<b>Katherine</b> <i>Local art dabbler</i>	Our web site Galleries	Relies on popular lists or proximity to work/home	Days before the event closes and gallery hours	Often needs maps and directions	Occasionally does brief text reviews
<b>Zoe</b> <i>Tourist art enthusiast</i>	Art magazines	Often seeks out a genre or artist of interest; hotel may be located in an area with galleries	Gallery hours	Needs maps and directions	Prefers to do lengthy reviews; may write in the hotel on a laptop
<b>Charles</b> <i>Tourist art dabbler</i>	Guidebook Google Time Out New York	Relies on popular lists and proximity to hotel	Gallery hours	Needs maps and directions	Rarely does reviews; if anything may do thumbs up/down

## Revise the Product Definition Statement



At the beginning of Part Two, we discussed how up-front user research can help refine your Product Definition Statement (the declaration of your application's main purpose and its intended audience).<sup>5</sup> To illustrate how this may be done, imagine that you're planning to develop an app for finding local art events. Before conducting up-front user research, your statement may look like this:

*A tool for helping people find art events.*

Now consider some of the problems with this statement:

- Who are the "people"? Art enthusiasts? Art students? Tourists?
- "A tool" is vague, and "find art events" seems relatively narrow and uninspiring.

After conducting your user research, perhaps you'll discover that the urban art enthusiast is your primary persona. Moreover, let's say you learned that this persona enjoys reviewing art events and sharing event information with friends on Twitter or Facebook. Your revised statement might look like this:

*An app to help urban art enthusiasts find, share, and review art events.*

While this may seem like a trivial exercise, you should take the time to formulate this valuable statement. Although we'll emphasize its importance in the design phase, your cross-functional team (sales, marketing, advertising) will eventually refer to this statement as they speak with investors, customers, and partners. Don't wait until after you've coded your app to come up with the Product Definition Statement.

## Summary

This chapter showed you how to analyze the text, photos, and other artifacts you gathered during early-stage user research. One of the first things we recommended is to post the artifacts where other team members can readily access them, such as in the hallway, a conference room, or a dedicated cubicle. Having

5. iPhone Dev Center, *iPhone Human Interface Guidelines*, <http://developer.apple.com/iphone/library/documentation/userexperience/conceptual/mobilehig/Introduction/Introduction.html>.