Making customer groups real – using Personas

1   Introduction

When you design a product or any kind of service it is important to know who belongs to your target group. Often clients or suppliers of products or services want to reach out to 'all' users, but unfortunately this often results in failure. A product or a service designed for a vague or too broad target group has less chance of success than one based on well-researched and well specified target groups.

Alan Cooper, a pioneering software inventor and the inventor of personas, argues

The best way to successfully accommodate a verity of users is to design for specific types of individuals with specific needs. When you broadly and arbitrary extend a product's functionality to include many constituencies, you increase the cognitive load and navigational overhead for all the users. Facilities that may please some users will likely interfere with the satisfaction of others.

The most natural way to integrate users into the development process is to let the users themselves be involved in development and also be the goal of design. According to Cooper, the real user sometimes tends to focus on less essential details. Even if the user has problems that need to be addressed, it does not mean that they are in the best position to identify solutions to their problems.

There are a range of different tools and methods for defining target groups such as interviews, observations, questionnaires etc.. This report describes the Persona method, and is based upon the work of Alan Cooper, the inventor of the Personas approach.

2   What is a Persona?

A persona is a *user model* that is represented as a specific set of characteristics for named individuals. These personas are not actual people, but are *archetypes*: a set of characteristics that have been constructed based on direct observations of the needs and wants of real people (Cooper 2007).

Although personas are depicted as specific individuals, because they function as archetypes, they represent a *class* or *type* of user of a specific product (often *interactive* product). A persona encapsulates a distinct set of behaviour patterns regarding the use of a particular product, which are identified through the analysis of interview data, and supported by supplemental quantitative data as appropriate.

The goal of persona creation is to identify target groups with *similar* objectives and expectations to a specific product or service. Examples of personas are included in the appendices.

3   How to use Personas

Personas are used for a range of different reasons. Personas can be used as a tool to identify and specify target groups, as requirement tools, as visualization tools, and as communication tools.

3.1   As a requirement tool

Personas can be seen as a *requirement tool*, since personas are used to identify user requirements and needs. By collecting data from users and defining target groups, the persona description can tell us a lot about user's needs and requirements.

Using personas as a *requirement* tool can ensure that:

- the design team prioritizes the functionality that is needed by users,
- the project avoids building features that are not wanted by users,
- the most frequently used functions are easy to find and comfortable to use (www.verva.se), and
- the time taken to discuss 'what the user really wants' is significantly reduced.

3.2   As a visualization tool

Personas can also be used as a *visualization tool* that can provide a means to visualize what different target groups are like. When collecting data during the creation of personas, the characteristics of target groups should become increasingly clear and explicit to the design team.

Using personas as a *visualization* tool can ensure that:

- the design team stays focused on users during the development process,
- the design team focuses on those characteristics that are most important for the product success, and
- the persona descriptions visualizes and "gives a face" to users for both stakeholders and people in the design team.

3.3   As a communication tool

Personas are a good *communication tool*. During the design process, a lot of design decisions need to be taken, and by using personas these decisions can more easily be communicated. Personas can also be a good tool for communication with stakeholders, guiding design decisions and evaluating design ideas (Chang et al, 2008).

Using personas as a *communication* tool can ensure that:

- prototypes can be evaluated and reviewed,
- both system and user goals are communicated,
- design issues to people outside the design team are communicated, and
- team members rather focus on user goals than on the their own needs.

Personas can be used in many different ways – such as an early expert-based evaluation, using the **cognitive walkthrough** method (Pruitt & Adlin, 2006). Either one or a group of experts steps through a system according to pre-defined context scenarios, where the evaluators imagine themselves to be the personas and scenarios are created from the personas' perspective. This allows the evaluator to see the system through the eyes of the user.

Persona-based walkthroughs can be conducted in three different ways. They can be used for a rapid evaluation of a system, which can take about one to two hours, or they can be used for a more formal review with more detailed modelled tasks. Persona walkthroughs can also be used as a part of larger design efforts. By employing persona walkthroughs, the typical design issues faced by key users can be detected early in the design process. Furthermore, the entire user experience and 'learnability' of a system can be examined. The outputs of a persona walkthrough should include usability issues, user experience flaws and concerns, and detailed suggestions for improvement of the system (Pruitt & Adlin, 2006).

4 Strengths and weaknesses of persona approaches

The persona method has both strength and weaknesses. The strengths of the approach tend to be over-represented: however there are some criticisms about the approach to keep in mind.

4.1 Strengths

In addition to what has already been said about personas, the following benefits can be mentioned:

- Users' goals and needs become a common point of focus for the team.
- The team can concentrate on designing for a manageable set of personas knowing that they represent the needs of many users.
- By always asking, 'Would Jim use this?' the team can avoid the trap of building what users ask for, rather than what they will actually use.
- Design efforts can be prioritized based on the personas.
- Disagreements over design decisions can be sorted out by referring back to the personas.
- Designs can be constantly evaluated against the personas, getting better designs into usability testing.

4.2 Weaknesses

The persona approach has been criticized for not being sufficiently practice-related. Real personas should not be created randomly, but should be based on empirical and ethnological studies of real users. This reflects the fact that many do not really understand the persona approach.

Sometimes it can be hard for people in the design team to take the personas seriously - to think and talk about their personas as true representatives of real users. To overcome this, the usability expert or project leader has to be very pedagogical, enthusiastic and focused. A risk of the persona approach is that while significant initial effort may be put into creating personas, they may be forgotten, neglected or not used as the design process proceeds. To overcome this there must be one person in the design team who is responsible for the personas, and who can make sure the personas are used. The value of personas needs to be communicated clearly and consistently to design teams and stakeholders.

4.3 Reuse of personas

Unfortunately personas cannot be easily reused. To be effective, personas must be *context specific* - they should be focused on the behaviours and goals related to the *specific* domain of a *particular* product. For a set of personas to be effective design tool for *multiple* products, the persona must be based on research on the use context for all of these products. It is a fallacy to believe that just because two users exhibit similar behaviours in regard to one product, that those two users would behave similarly with respect to a different product (Cooper, 2007).

5   How to create Personas

So, how do we create and construct our personas? There are a many different descriptions of the process: sometimes the process is described briefly in few steps, and sometimes it is described more extensively through more detailed descriptions. The usability specialists Robert Reinmann, Kim Goodwin and Lane Halley have developed a well known and often cited process to create personas, building on the hundreds of interaction design projects they have been involved in. Alan Cooper (2007) describes this:

There are a number of effective methods for identifying behaviour patterns in research and turning these into useful user archetypes, but we've found the transparency and rigidity of this process to be an ideal way for designers new to personas to learn how to properly construct personas, and for experienced designers to stay focused on actual behaviour patterns, especially in consumer domains (Goodwin 2002, Cooper 2007 etc.).

The process set out below summarises their process and integrates good practice from a number of well known step-by-step guides. A worked example of the step-by-step process of creating personas is included in Appendix 1.

5.1   The persona hypothesis

You often start with a hypothesis. The persona hypothesis is a first attempt to definine the different kinds of users for a product - in this phase you *define who* the existing and potential users *might* be. The hypothesis should be based on likely behaviour patterns and the factors that differentiate these patterns.

The persona hypothesis should attempt to address the following questions:

- What different sorts of people might use this product?
- How might their needs and behaviours vary?
- What ranges of behaviour and types of environments need to be explored?

Each persona should be based on the user's goals and motivations, rather than on demographic data like age and gender.

5.2   User research (collecting data)

The next step is to collect 'real' data about service users. Personas must be based on *real-world* observations and the primary source of data used to synthesize personas should be in-context interviews borrowing from ethnographic techniques, contextual inquiry, or other similar dialogues with observation of actual and potential users (Cooper, 2007). It is *not* recommended that you base your personas only on guesses and hypothesis – you need to perform some user research to collect accurate data via interviews *and* observations. Qualitative interviews give you valuable data to understand user's behaviour and needs. And during observations you can identify actual behaviours and 'hidden' problems that the users have difficulty articulating or problems that they are not even aware of. If supplemental data is needed (to fill gaps after interviews and observations), the following data sources could be used:

- interviews with users outside of their use context,
- market research data such as focus groups and surveys, and
- data gathered from literature reviews and previous user studies.

Provisional personas
Sometimes there are occasions when there is not enough time, resources, or corporate buy-in to perform the necessary fieldwork. In these cases provisional personas (or "ad hoc" personas) can be useful tools to clearly communicate assumptions about who the important users are and what they need. Provisional personas are structured similarly to real personas, but rely on what data is available and the service designer's best guesses about user behaviours, motivations and goals. Special care need to be taken when using provisional personas: read more about this in Cooper (2007 p.86-88).

5.3   Identifying behavioural patterns

Now it is time to identify *behaviour patterns* from the collected data. First you list the distinct aspects of observed behaviour as a set of behaviour *variables*. Demographic variables (age, geographic location etc.) can be used with care, but it is important to understand that *behaviour variables* are far more useful in developing effective user archetypes. The most important distinction between behaviour patterns emerge by focusing on the following variables:

- Activities – What the user does - frequency and volume
- Attitudes – How the user thinks about the product/technology
- Aptitudes – What education and training the user has; their capability to learn
- Motivations – Why the user is engaged in the product domain
- Skills – User capabilities related to the product domain and technology

Then you need to map each interviewee (user) against each of the variables set out above. The variables are often represented in continuous range of behaviour (e.g. from computer "novice" to computer "experts") and a few will represent multiple discrete choices (e.g. uses digital camera vs. uses film camera). Mapping the users to a precise point in the range is *not* as critical as identifying the placement of the users in *relationship* to each other. The desired outcome is to accurately represent the way multiple subjects cluster with respect to each significant variable.

5.4   Creating personas

After identifying behaviour patterns and mapping users to scales, you need to look for *clusters* of users that occur across multiple ranges or variables. A set of users who clusters in 6-8 different variables will likely represent a significant behaviour pattern that will form the basis for a persona.

NB: For a pattern to be valid there must be a *logical connection* between the clustered behaviours, not just a spurious *correlation* (Cooper, 2007).

It is important to try to keep down the number of personas since it is easier to create a clear design based on the needs of a few personas.

5.5   Describing your personas

In the next step you need to *describe* your personas using your collected, analyzed and structured data. This description should "bring the personas alive", but it is important to "stick to observed behaviours as much as possible" (Cooper, 2007) and *not* make them *too* fictional. Personas should not be descriptions of a particular profession, but should rather be a description of people with the same *goals* and *needs* from a product or service.

The following data could be included in the persona's description:

Demographic characteristics
First you create bullet lists of characteristics and demographics of your personas, such as:

- name (both first and last name),
- age,
- occupation (e.g. job title),
- relative income (if appropriate), and
- geographic location.

User goals
Goals are the drivers behind user behaviours. They serve as a lens through which designers must consider the functions of a product. The goals must always directly relate to the product being designed, if they are to be an effective design tool.

The majority of useful goals for a persona are *end goals* - you should have three to five *end goals* associated with them. *Life goals* are most useful for customer-oriented products. Zero or one *life goal* and zero to two *experience goals* are appropriate for most personas. General experience goals such as "don't feel stupid" and "don't waste time" can be taken as implicit for almost any persona (Cooper, 2007)*.

* There are other goals that the designers need to take into account which are not real user goals (such as customer goals, technical goals, business and organizational goals). Read more about these in Cooper (2007, p. 95).

Examples of goals of interest are:

- **Experience goals** (how someone *wants to feel* while using a product)
  Examples
  "feel smart and in control", "have fun", "remain focused and alert".

- **End goals** (what a user *wants to do*, motivation for performing a task when using a product)
  Examples
  "be aware of problems before they become critical", "stay connected with friends", "find music I love", "get the best deal".

- **Life goals** (who a user *wants to be*, represent deep drives and motivations that help explain why the user is trying to accomplish the end goals)
  Examples
  "Live the good life", "succeed in my ambitions to…", be attractive, popular and respected…".

Pictures
You should choose pictures or photographs for your personas, to make them feel more real and to bring them to life. The best photos reflect your persona's demographic characteristics, hint at their environment, and capture the personas' general attitude (e.g. a clerk overwhelmed by paperwork).

Sometimes sketches can be used instead of photos to emphasize that personas are not "real" people. An advantage of sketches is that they are flexible and relatively cheap to produce. A drawback is that the team members sometimes don't take them seriously and only see them as cartoon characters – not description or real users.

Describing your personas
You also need to create a narrative description of your personas. It is important not to be too precise in the description, and to base the description on real user data. Cooper argues that a "third-person narrative is powerful at conveying the personas attitudes, needs and problems to other team members".

A typical persona description should be a synthesis of the most important details observed during research: it should not contain every detail that you have observed. The best narrative quickly introduces the persona's job or lifestyle, and briefly sketches a day in their life (e.g. a typical workday), including peeves, concerns and interests that have directly bearing on the product or service. The narrative need not be longer than one page - a good way to start your narrative is by choosing a picture for your persona. From this point on, you should refer to the persona by his or her name (Cooper 2007).

5.6   Prioritizing your personas

The final step in persona construction is to prioritize your set of personas. Trying to create a design solution that simultaneously serves the needs of even three or four personas can be quite an overwhelming task. Therefore you need to prioritize your personas to determine which should be the primary design target. Cooper says that the goal is to find a single persona from the set whose needs and goals can be completely and happily satisfied by a single interface without disenfranchising any of the other personas.

Cooper sets out a typology of six types of personas: **primary**, **secondary**, **supplemental**, **customer**, **served**, and **negative** personas.

Primary personas

The primary persona is the primary target for the design of an interface or service. There can only be one primary persona per interface of a product.*

Choosing the primary persona is a process of elimination: each persona must be tested by comparing the needs and goals of that persona against goals of the other personas. If there is no clear primary persona this could mean one of two things: either the product needs multiple interfaces, or the product is trying to accomplish too much. If a product has multiple primary personas, the scope of the product is too broad.

Secondary personas

A secondary persona is one that is mostly satisfied by the primary persona's interface, but which has specific additional needs. The design team don't always need to produce secondary personas, but if they do there should not be more than three or four secondary personas – otherwise this may be a sign that the scope of the work may be too large or unfocused.

Negative personas

A negative persona is used to illustrate types of users that the product is not being built to serve – i.e. negative personas *aren't* users of the product. The use of this kind of personas is purely rhetorical.

The primary persona will be used to support and act as a reference point for the information architecture and graphical design work. If you prioritize your personas, they will be a good aid in the prioritization of functions and other solutions and options.

Key points about personas

- Do not use too many personas – use as few as possible
- Do not make the descriptions too long descriptions
- It's important that they are credible
- Emphasize that they are hypothetical
- Plan for the persona lifecycle - use them!
- Define a short sentence that describes the persona and use this as a slogan

6   Scenarios

Scenarios are a good complement to personas. Scenarios are short stories that describe how users (in an ideal world) will successfully use a product or service. Scenarios bring together the user's goals with the product's functions and features. If a persona describes a user's motivations and goals, a scenario describes concrete user actions. Scenarios should be able to test if the persona can perform its goal and how satisfied the user will be. The advantage of scenarios is that they are a simple and concrete way to describe the persona's use of a service. Without scenarios, personas easily become purely decorative.

To summarise, scenarios:

- Describe the most important and frequent usage of services in a given context.
- Describe what actions the user performs.
- Describe when and how often/seldom actions are performed.
- Explain why actions are performed and what are the user's goals.
- Use as few as 1-2 scenarios per persona, and develop scenarios for the primary persona first.

Example scenario - Annie (a 41 year-old shop assistant)
Annie is having a lunch break and takes the opportunity to surf on her work computer. She wants to find a gift for her mother's birthday and finds an appropriate website by searching with the keywords "buy jewellery."

She enters the website and looks around for a while. Then she uses the website's internal search engine and writes the keywords "gold jewellery". The website then displays a page full of jewellery and she finds a nice necklace. She clicks on the necklace picture to enlarge it. The image and associated text is printed. She forgot the picture in the printer but gets it from her boss who says "I did not know you liked gold jewellery ".
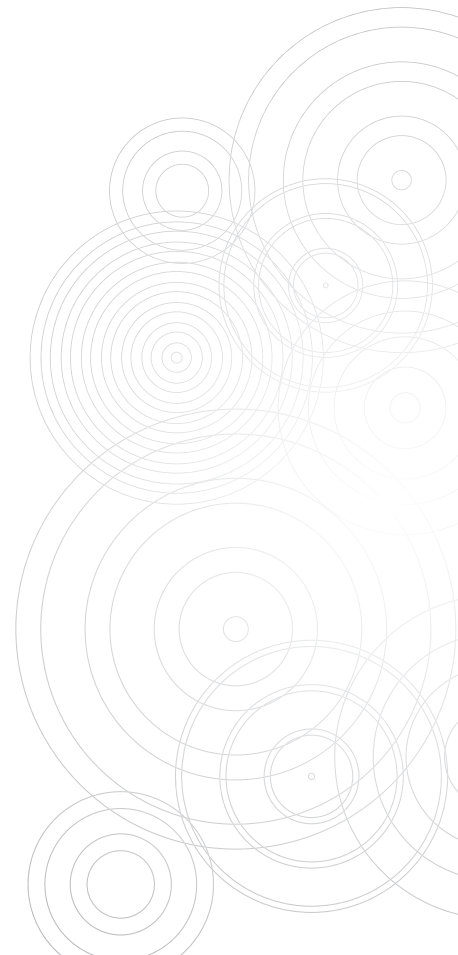
Appendix 1

Example of persona – Municipality of Karlstad, Sweden

This is an *example* to illustrate how to create a persona. Since no real data is used, some steps and tasks in the persona creation have been omitted. Note that this is not a full persona, but an example of how a persona can be created.

Step 1 – Hypothesis

The municipality of Karlstad has a lot of different target groups, and in this example is focusing on parents in *families with children*. The group of families with children can easily be divided into several sub groups. In this example the following groups are used: 'parents with **toddlers**', ' parents with **schoolchildren**' and 'parents with **teenagers**'.

Who	Behaviours	Frequency	Goals
Parents with **toddlers**	Looking for facts about **school attendance**	Seldom - Last year this was done several times. Now they just want to **update** themselves to see if anything has changed	Want to find accurate information about starting **preschool**
	Looking for information about **available schools**	Several times the last weeks	Wants a list of available schools. Also wants to know how previous parents **liked** the schools
	Looking for information about **school fees**	Seldom. One time last semester and now update to see if fees have changed	An explicit and simple list with school **fees**

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Who	Behaviours	Frequency	Goals
Parents with **schoolchildren**	Looking for information about temporary **summer activities** for the children.	Several times the past few days. Otherwise once or twice a year	Wants to find list and **detailed** information about fun summer activities for families with schoolchildren. And also be able to book some activities of interest
	Looking for information about **regular** sport **activities** (once a week activity)	Seldom	Wants a **list** of sport clubs in the area **sorted** by type of sport. What to read detailed information about the sports. Also wants to **make a reservation** or book the kids to some club if interesting sport activities are available
	Looking for **date** and **time** when school starts after the summer holiday	Seldom	Want to (via a quick search on the kid's school) find the date **when school starts**

Who	Behaviours	Frequency	Goals
Parents with **teenagers**	Searches on the website to find information about alcohol and drugs	First time (since just discovered the daughter smoking). Probably more often in the future	Wants to know **how to behave** when kids have started to smoke, and learn other **signals** important to discover the use of drugs
	Wants to volunteer as a parent walking the streets at weekend nights	First time (since just discovered the daughter smoking). Probably more often in the future	Want to know when and where to be a volunteer. Also wants a phone number to give the organizer a call

Step 2 – User research
Data collection (i.e. collecting real data on users) will be needed to develop accurate personas.

Step 3 – Identify user patterns
In this step the group 'Parents with teenagers' (marked above) has been used as an example.

Behavior variables:

- **Activities** (what the user does; frequency and volume)

  The parent is in a panic situation. Their oldest daughter has been caught smoking. They thought she was an innocent and well-behaved school girl. The parent is now desperate for information about how to help their daughter stop smoking etc..

- **Attitudes** (How the user thinks about the product/technology)

  The parent uses internet and computers every day at work, but has not used the municipality's website much. The parent thinks that looking for information via a website is good in this case since they are embarrassed by what has happened. Usually they think websites often have too much information, which makes it hard to find the information that they are looking for.

- **Aptitudes** (What education and training the user has; capability to learn)

  Since they use computers and internet every day at work, their skills are fairly high.

- **Motivations** (Why the user is engaged in the product domain)

  The parent is in great need of information and thinks the municipal website should contain accurate and important information regarding teenagers and on the problems and issues teenagers face.

- **Skills** – User capabilities related to the product domain and technology
  Good or medium skills.

Step 4 Create Personas
No clusters are made in this example.

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Step 5 – Describe the personas

This is an example of a short description of a persona from the 'parent with teenagers' target group.

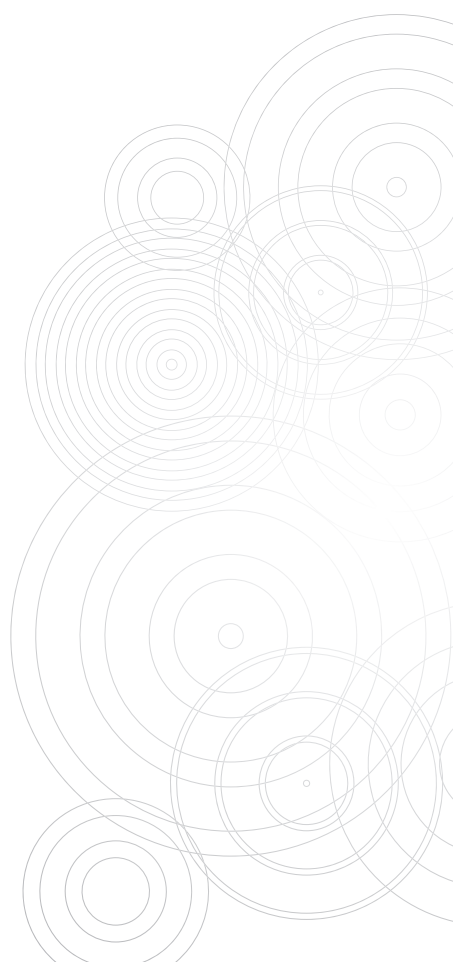| Persona		
Name	Anne Svensson	
Age	52 years	
Occupation	Clerk at a bank	
Relative income	26,000 Swedish crowns/month (~2600 EUR)	
Goals		
Experience goals	Anne wants to feel that the information she reads on the municipality website is accurate and reliable. She wants the website to "give her a helping hand" in this difficult situation.	
End goals	Anne wants to find as much information as possible about teenage problems, especially smoking and drugs. Anne wants to learn about smoking and about how to help people (especially her teenager) to stop smoking. Anne also wants to be anonymous since she is ashamed of her daughter's smoking. Using the web, she can search for information without anyone knowing.	
Life goals	Anne wants to be a good wife and a good mother to her children. She has always feared that something bad should happen to her children - and now it has.	
Description	Anne lives with her husband Thomas (a football and poker loving taxi driver) in a villa just outside Karlstad (Sweden). She has worked as a clerk at the bank for almost 19 years. She loves her job and her colleagues. When Anne doesn't work she loves to cook. Her favourite food is Italian. She also likes knitting and often knits when sitting in the sofa in front of the TV. She has two children (Lena 15 and Patrik 12). Patrik is a football player and spends most of his spare time with his football friends. Lena is (or at least was) a nice and reliable teenager with a lot of friends. She is away from home a lot since her best friend live on the other side of the town.	

Step 6 – Prioritize Personas

Since only one persona was created, there is no need to prioritize personas.

Appendix 2 – Example of a persona

Persona	
Name	Patrick McDonnell
Age	39 years
Occupation	Staff Reporter, Agricultural Producer Magazine
Qualification	Bachelors in Literature & Journalism
Computing environment	Comfortable using a computer, advanced Internet user, with a T1 connection at work and cable at home. Uses email extensively; uses the web about 2 hours a day for his work.
Description	**"I want good stuff and NOW!"** Patrick spends most of his time researching and writing articles that are relevant to the audience of the magazine he works for. Recent happenings in the agricultural business landscape, both in his specific areas of expertise but also in general issues, are important to him. After receiving an article assignment, he tracks down sources and leads wherever he can find them. He gathers primary information through interviews of experts and people relevant to his article but also uses the Internet extensively to verify information, to provide background and hard facts, and to generally add "meat" to his stories. Some of the online resources he uses are USDA websites, AgWeb, FarmDoc, ProfNet, university websites and search engines - wherever research takes him. He visits the ERS website on a need-to-know basis, to keep abreast of recent developments, to find historical data, and to verify facts. An avid sports fan, he frequents sports websites to keep track of his favorite team's scores.
Key Attributes	– Deadlines, deadlines, deadlines – Opinionated but fact-oriented – Persistent – Interest scattered over a broad range of agricultural issues and topics
Tasks	– Writes and edits articles on agricultural news relevant for the magazine's audience – Conducts interviews with sources – Researches background information for stories
Informational Goals	– Broad subject focus – Looks for information for agricultural business stories; more relevancy and currency not necessarily depth – Wants access to hard facts and historical data for background to articles – Seeks recent and upcoming news relevant to audience – Seeks information on a need-to-know basis – Needs contact info to interview subject experts – Values credibility of information

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Appendix 3 – Example of a persona

Persona	
Name	Paula Grey
Age	42 years
Occupation	Professional Staff Member, Senate Agriculture Committee
Qualification	Law degree
Computing environment	Very comfortable using a computer, intermediate Internet user, with high-speed connection at work and DSL at home for daughter. Uses email extensively; accesses web about 2 hours a day for work
Description	**"Is this information right?"** Paula gathers information that will help her prepare economic analysis for the Senate Agriculture Committee and its staff. She is interested in the economic impacts and cost estimates of legislation. She obtains a great deal of her information from the Internet, now that increasingly most of the data, articles, and reports she regularly uses are available online. Some of the sites she uses are: AgWeb.com for timely news, NASS for raw data, and ERS for in-depth reports. She also obtains information from FAPRI, THOMAS, the Congressional Research Service, Mann Library, and the Farm Service Agency. For her, accuracy and credibility of the information she uses is key, but keeping abreast of the latest issues on a timely basis is also very important. She values ERS for its unbiased research and regularly refers to ERS' Agricultural Outlook, especially the Statistical Indicators section. She also uses the staff directory to find subject experts. Paula maintains a deep passion for jazz and plays the piano. She plays regularly with a friend's band.
Key Attributes	– Concerned about providing valued information for policy and legislation decisionmaking process – Focused and fact and detail-oriented – Broad knowledge of agricultural legislation and issues
Tasks	– Researches information pertinent to current legislation – Prepares economic analysis for committee members and staff – Attends and performs briefings – Keeps abreast of current issues that may impact or have been impacted by policy and legislation
Informational Goals	– Broad subject focus – Looks for background information related to policy and legislative issues – Seeks expert analysis and direct access to subject matter experts for quick answers – Seeksinformationonaneed-to-knowbasis – Keeps very up to date on current issues – Needs accurate and credible information (absolutely critical)

Appendix 4 – Example of a persona

Persona	
Name	Louise Rollins
Occupation	Contract Administrator/Office Manager
Primary goal	Assist program managers and managers within the Office of Information Resources Management (OIRM) in writing statements of work and in creating and administering OIRM contracts
Secondary goals	– Ensure that contracts are fulfilled by overseeing their administration and by understanding the roles and responsibilities of contractors and the HHS staff involved. – Help contractors and new OIRM employees obtain identification badges, security clearances, office space, and basic information and materials needed to perform work.
Description	Louise is forty-four years old and has worked at HHS since 1986. She was hired as an administrative assistant, but her in-depth knowledge of HHS contracts eventually earned her a key position as the contracts administrator for her office. In addition to working with HHS agencies such as NIH to administer contracts, Louise is the primary go-to person for OIRM contractors working on site. Using her extensive knowledge of the organization and her long list of contacts, she gets things done quickly and effectively, enabling work on contracts to continue seamlessly. Louise also assists people within her office with administrative tasks: last year she wrote a handbook outlining the policies, procedures, and forms required for business processes within OIRM. Recognizing that employees needed such a resource, Louise took the initiative on producing this handbook, a time-consuming task. Since her focus is administrative, Louise knows HHS and federal-wide policies, procedures, and regulations inside out. Often people involved in contracts ask her where to find information about policies that affect – or even dictate – how contract work must be done. Louise directs people to specific policies, procedures, and regulations on the intranet, the HHS public Website (HHS.gov), and other federal sites. She also helps them understand and apply these "rules" to their particular project and situation. People enjoy working with Louise because of her good-natured personality, efficiency, and seasoned expertise. They trust her judgment, knowing they can rely on her to help them get things done within the complex framework of government policies and regulations. Frequently people stop by Louise's desk to talk, commenting on the numerous pictures of her children, grandchildren, and friends.
Computing environment	Fast machine, 17-inch monitor, Windows 2000, IE 6.0, T-1 Internet connection
Computing & web proficiency	Louise uses the computer for about two-thirds of her workday. Generally she's online, primarily using the HHS intranet, HHS.gov, and other federal sites. She can find almost any resource pertaining to contracts within a few seconds, having bookmarked the pages she visits frequently. Because Louise is a power user of the intranet, she often gets frustrated that HHS's Websites are not comprehensive and up to date, making it difficult for her to find current points of contact across HHS. Despite this, Louise likes the intranet because it allows her to locate information without having to call or e-mail people.

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Appendix 5 – Example of a persona

Persona	
Name	Jane Hudson
Occupation	New Employee
Primary goal	Get established as an HHS employee by enrolling in federal employee benefits programs, obtaining materials and space needed to perform work, understanding her role at HHS, and getting to know the organization and work environment.
Secondary goals	– Understand how the Secretary's priorities shape the work being done by her office to promote and enable the use of technology to administer health care promptly and effectively. – Because Jane is new to government, she wants to learn how to maneuver successfully within the federal landscape.
Description	Jane is thirty years old, having worked at a major health insurance provider since college. A week ago, she began her new position in HHS's Office of the National Coordinator for Health Information Technology (ONCHIT). Jane is excited about working at HHS: she believes her work will be very rewarding because it will allow her to participate directly in the creation of major federal health care IT initiatives and programs. Since arriving at HHS, Jane feels a bit disoriented by the scale of the Agency and the federal government. About two weeks before her first day, she received an e-mail requesting her to fill out some forms that she could access online. At her orientation, she received a large printout outlining benefits, and HR personnel checked her forms and helped with items she'd found confusing. They also communicated some basic information about HHS and took her to the security office to get a temporary ID badge. Unfortunately, Jane became frustrated as she tried to settle into her new position. She had questions about payroll and health benefits, so she asked the administrative assistant in her office who to call. The admin gave her several contacts, but when Jane spoke with them, they couldn't answer her questions. Sensing Jane's frustration, a coworker suggested that she try the intranet. Hopeful, she looked for a directory of functional business contacts on the site, but she got lost and was unable to locate a directory or to find the information she needed. As a new employee, Jane also had basic questions related to the building and to working at HHS: – Where is the gym and when is it open? – What are HHS's core business hours? – What is the number for the IT Help Desk? – What is the schedule for picking up transit benefits? – What is the copier code?
Computing environment	Fast machine, 17-inch monitor, Windows 2000, IE 6.0, T-1 Internet connection
omputing & web proficiency	Jane considers herself computer savvy. She spends most of her time at work online and stays informed about the latest IT trends, particularly those related to the health care industry. A big fan of bookmarks, Jane uses a Web-based bookmark manager to organize her ever-expanding list of government and IT sites. She would find it very useful if the intranet offered content and/or features like this to make it easier to manage resources she uses frequently.

Appendix 6 – Example of a persona

Persona

Name	Matthew Johnson
Age	51 years
Occupation	Program Staff Director, USDA
Qualification	Ph.D in Agricultural Economics
Computing environment	Comfortable using a computer, intermediate Internet user, with a T1 connection at work and dial-up at home. Uses email extensively; uses the web about 1.5 hours a day for his work
Description	**"Can you get me that staff analysis by Tuesday?"** Matthew spends most of his time at work requesting and reviewing research reports, preparing memos and briefings for agency heads, and supervising staff efforts in food safety and inspection. He had a brief stint at ERS a number of years ago and still maintains personal and professional contacts with a number of staff members who keep him abreast of recent research in his field of interest. He uses email extensively at work and uses the web on average about an hour a day to do quick fact checking and research and to find out about new developments. In addition to internally generated information, he uses foodsafety.gov, FSIS, CDC, FDA, APHIS, other Federal websites, university sites, and industry websites. He also visits the ERS site about once a week, but only for a few minutes each time. He finds he is increasingly relying more on the web to provide him with quick and easy access to timely information. However, he still prefers to print out pages because he finds it hard to keep track of pages he has viewed and to read long documents on his monitor. From his dialup connection at home, he uses the Internet to check up on recent news events, review his portfolio, plan travel, and order the occasional case of wine. Married, 3 children, 1 grandchild
Key Attributes	– Focused, goal-oriented – Strong leadership role – Concerned about maintaining quality across all output of program under direction
Tasks	– Reviews internally generated research and analysis – Researches and writes memos and speeches for Senior USDA managers – Prepares reports and briefings – Responds to inquiries for strategic planning from the Undersecretary's office – Supervises program staff who collect and analyze field data
Informational Goals	– Narrow subject focus – Seeks decision level information – Prefers summaries but also quick access to specific information for fact checking – Accesses subject matter experts – Seeks recent developments and publications in areas of interest – Values timeliness, credibility, accuracy of information

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