

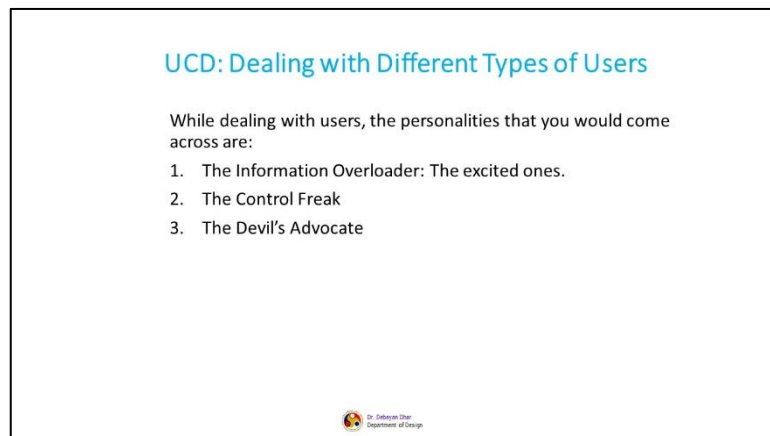
Usability Engineering
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Module - 03
Lecture - 09
User Centered Design Process

Welcome to lecture 9 of module 3. In this lecture, we will discuss about the different types of users and how to handle them. We will also discuss about the important points that we must remember during the planning of the user centered design process and finally, we will discuss about the user centered design thinking approach that we are going to adopt in this course in subsequent lectures.

So, let us begin.

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UCD: Dealing with Different Types of Users

While dealing with users, the personalities that you would come across are:

1. The Information Overloader: The excited ones.
2. The Control Freak
3. The Devil's Advocate

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Now, while dealing with users there are various personalities that you would encounter during this design process and you would come across with them. So, it is an art to know how to deal with each of them. Some of the major types of personalities that you would come across are the information overloader – these are called as the excited ones, the control freak right and the devil’s advocate. In the subsequent lectures we will discuss about them in detail.

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UCD: Dealing with Different Types of Users

1. The Information Overloader:

These users like to give you information. They'll explain entire history of the process with great detail. They don't understand that you can't keep up with the amount of information they're giving you. The challenge with these types of users is that you don't want to discourage them. Coach them in the proper ways to communicate with you. Explain to them the importance of staying focused on the current version. These types of users have a tendency to get ahead of themselves, so continually bring them back to the task at hand.

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Now, the information overloader are the users that like to give you a lot of information. And they will explain the entire history of the process with great detail. They do not understand that you cannot keep up with the amount of information they are giving you and the challenge with these types of users is that you do not want them to get discouraged.

You must coach them the proper ways to communicate with you. Explain to them the importance of staying focused on the current version. These types of users has a tendency to get ahead of themselves. So, continually bring them back to the task at hand.

Now, here I would like to draw your attention on the important issue which is the importance of staying focused on the current version. Now, these types of users the information overloader one of the major issue while working with them which you will realize is that many a time they lose their focus.

They have so much information which they are going to give you and because of the interplay of this information that is going on in their mental processes you will realize that they will start talking about different things that does not concern your objective. They will talk about aspects that are not essentially related with the project or with the goal of your project.

So, therefore, it is important that you anchor them. So, the word is here I am using is anchor you anchor them and make sure that the discussion that you are having stay focused. These types of users also have a tendency to get ahead of themselves; that means, they have a set of mindset where they have detailed out the information and they have priorities of providing those details.

Now, many a time what happens while interacting with these users they run through their ideas or information in such a way that things get really murky and because of the amount of information they run from pillar to post by in terms of giving you the information and therefore, what you realize is that it is many a time they will just hurriedly express things.

They will express they will jump from one concept to the other, they will just run you through the different aspects of the situation and give you information. Now, they hardly realize the importance of any segment or any issue that you are concerned with.

So, therefore, it is important that you continually bring them back to the task at hand; that means, that is what we have been discussing about the concept of anchoring. We will discuss all these things in detail when we learn about how to conduct user studies. Now, the issue with working with them is that they do not understand that you cannot keep the amount of information that they are giving you.

Now, that is why this is happening? This is happening because they do not realize which information would be useful to you and which would not be useful to you they cannot distinguish between the usefulness of information and therefore, they generally try giving out as much information as possible.

And, it is because of this attitude that you as a designer you as a design team when you approach this kind of people for your user studies for conducting user studies you will get lot of information overload and you would get confused, perplexed, how to handle these situations how to ensure that all these information's are distilled and refined and put into perspective.

So, therefore, this kind of or this type of users needs to be handled with care because they will provide you with lot of information, but as I said the two important aspects where they just not can understand which information you require and which you do not. So, therefore, they would be providing you the enormous amount of information; the second thing they run fast while they provide you information.

So, these two issues influence working with them and therefore, you need to understand how do you anchor the discussion to a particular topic, to a particular issue politely in order to ensure that they do not get discouraged.

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UCD: Dealing with Different Types of Users

2. The Control Freak

They want to get involved in every decision on the project and exert their presence. These users want to be the ones calling the shots. Their need for control comes from a sense of insecurity. They just want to feel included and respected.

Make sure to prompt them for their opinion during meetings and politely move on when things get off track. These users end up being your best allies because they can be incredibly knowledgeable.

These users have the ability to examine their own (or others') usability behaviors and make assessments on what may be needed. They can actually help in developing and implementing your user-centered design strategy

 Dr. Catherine Chen
Department of Design

The second categories of personalities of users that we often come across are the control freak. Now, these types of users they want to get involved in every decision on the project and they exert their presence. These users want to be the ones calling the shots. Their need for control comes from a sense of insecurity. They just want to feel included and respected.

Now, it is important for you to understand that you need to ensure how to prompt them for their opinion during meetings and politely move on when things get off the track. These users end up being your best allies because they can be incredibly knowledgeable. These users have the ability to examine their own or others usability behaviors and make assessments on what may be needed. They can actually help you in developing and implementing your user centered design strategy.

Now, these are incredibly important type of personalities that you would come across. The issue with them is this. The issue with them is this that they are very dominant and they will exert their presence. This is what you would see that. They are going to do they will get involved in every decision on the project.

See, essentially, we are talking about a situation when your users will they probably are the focus group we will understand about these techniques in detail in later, but as of now it is important that this type of users are continually involved in the design project. So, they feel that they are part of the project and therefore, there is a sense of ownership which they also have for this kind of design projects.

Now, when they have this kind of feelings and experiences for the project is it is appropriate that they would try to get involved in every decision of the project; that is the

situation that we are discussing here and they will exert their presence – that is the major issue. So, this is a situation which hardly do you expect right this is not a situation which is very very easy going.

Now, these users want to be the one calling the shots; that means, these are the people who will tell you what to do what not to do. They will ensure that they provide their insights, they provide their comments so that they seem to be very very important for the project.

Now, the question is why do they behave like this? They behave like this because of the insecurity they have they feel that the team members or you should not consider them just because as users or just for the sake of considering. They should exert their presence in order to show their relevance, in order to show their importance, so that you do not take them for granted that is the insecurity they have and therefore, they behave in that particular way.

Now, how to deal with this kind of people? Understand this. They just want to feel included and respects, that is it. They want the respect and the inclusion, the the ability to feel inclusive into that project. That is what they want from you. To ensure that you make them feel included and respected you must ask for their opinions you know.

So, you should not just avoid them. If you avoid them, they will have a much stronger way of reflecting their opinions which you do not want. So, you must make sure that the sense of inclusion, the sense of being included, inclusivity into the project is being communicated to them and how do you do that when you prompt or ask for their opinions during meetings, during discussions, they feel that you are providing or giving them importance.

Now, whenever things do not go if you start asking for their opinions you might also see that they will start on discussing and then gradually they will become off the track. It is your responsibility to ensure that you anchor the discussion and make sure that you politely tell them or communicate them the objectives of the project and how you can anchor them to the main topic of discussion. That is also something that you need to ensure. And therefore, a lot of experience is required while dealing with this kind of people.

Now, why we are discussing this in detail? Because these are the users who are going to be your best allies because they are incredibly knowledgeable. They will give you such

insights which very few other different type of user personalities can provide you. And, they now, why we are saying all these things? Because they have the ability to examine their own behaviors and others also.

And, they can compare contrast between situations. They can make these assessments you know and ensure that the distilled data and provide you with a insightful details regarding the behaviors of the users.


And, therefore, ensure that if you have got such users in your focus group team or your team with whom you are going to work for your project, you ensure that you take care of them you make them part of the team make them the feeling of belongingness and the feeling of being respected while you take decision from them while ensuring that communication does not go off track.

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UCD: Dealing with Different Types of Users

3. The Devil's Advocate

They can hardly coming up with their own ideas, but they'll gladly tell you why yours won't work. It is very difficult to have them in a group and work. But you can marginalize them by giving other users (or team members) detailed roles to play, you're empowering them to participate in a specific way. Ex: the role of Anthropologist is responsible for observing human behaviors and reporting back to the group. The Experimenter tests new ideas and validates assumptions. The Cross-Pollinator explores other industries and cultures and then translates her findings into new insights. Each person will then have a responsibility to represent her view from the perspective of her role. This way the Devil's Advocate becomes marginalized by the stronger points of view.

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Now, the third type of user personalities we have are the devil's advocate you know. By the term devil you must realize the kind of personality behaviors we would be dealing with. Now, they can these type of users can hardly come up with their own ideas, but they will gladly tell you why yours or your idea would not work.

It is very difficult to have them in a group and in your work team, but the issue is how do you take care of these kind of people. To ensure that your meetings, your communication does not get derailed, you need to marginalize them by giving other users or team members detailed roles to play.

While giving the other team members detailed roles to play you actually are empowering them to participate in a specific way because these kinds of people, the people who reflect personality of the devil's advocate they will always talk about the anti aspects of everything, right. They will always provide you with the anti aspect of any discussion, any comments, any situation that is presented before them.

So, therefore, it is important that the other members of the team get empowered, so that they start playing their role effectively in order to ensure that these kind of people are marginalized ok in the group. You cannot let them out, you cannot let them off but you can ensure that they do not derail the entire objective of your user study, the focus of your user study by only providing you thoughts, opinions that are anti to the situation or context.

Now, an example can be the role of anthropologist for example, if you have team members and you have various people in your team. The role of anthropologist is responsible for observing human behaviors and reporting back to the group. So, you have somebody playing the role of an anthropologist or who is good in observing human behavior. They can observe human behaviors and report back to the group with their insights.

There can be experimenter who tests new ideas and validates assumptions because it is all about the decisions that you have taken whether this idea will work or not. So, the experimenter who is in your team, who is in a group he takes up that role and get back with that data and the cross pollinator who explores other industries and cultures and translates her findings into new insights.

So, each person each person will then have a responsibility to represent her view from the perspective of their role this way the devil's advocate becomes marginalized by the stronger points of view. Now, can you refer to the situation we are discussing here? See, we use the word participatory design and in the concept of participatory design approach, we ensured that stakeholders or end users or focus groups participates in the design activity in the design process.

Now, while this happens you would realize that while working in a team you would have different kind of people working with you and the same thing will also house your users. And, many a time what happens for getting close to the mental model of the users you get feedback from your users on the conceptual model of the product or even to understand the requirements specifically.

So, there are two things that can happen – one is when you start the project you are focused on identifying the requirements accurately; the another aspect that can happen is you have identified the requirements. Now, you need to come up with a concept you have some concepts and you want to test whether the conceptual model of the concepts gets matched with the mental model of the user.

And, therefore, the team that you have where your users are also party to it provides you with greater insights. Now, it is this situation that we are referring to. When you have this kind of team you will have personality like this the devil's advocate and these personalities can derail any discussion they will derail any good work that you are going to propose just because they would act as a devil here and they would just talk about anti aspects of everything that is presented to you.

The problem they are not the problems they are the problems lie in the role that they are playing that is what we are trying to explain to you, right. So, in order now it is not going to be a easy approach dealing with them because you need people who can tell you the anti aspects of the situations.

Probably you have come up with the concept and you have people who will tell you why that concept would not work that let us you even look at the perspectives which you have hardly thought of now. Up till now that is ok, but then if you have situations where every aspect every decision are being weighted, weighed and then only the anti situations, anti as perspectives are being highlighted you have a serious issue at your hand.

How do you address those situations? The approach that we just discussed is how Mr Kelley of IDEO in his book talks about that. He says that, in order to ensure that these people do not derail the discussion in the meetings or in the group discussions you must ensure that the other team players or the other team members of your design team they play their role effectively.

That means, if you have five-member design team you have somebody who focuses on user study somebody who focuses on as I said cross pollination and they explore other industries and tells you what will what other products or your competitors have as features or not you have experimenters who can test these ideas and come back with the results.


So, each of these members plays their part and ensures that their insights are put in front while these discussions are happening. Now, while these important team members discusses their insights because of the depth of the work that these guys have done the other team members done the devil's advocate gets marginalized. They do not have the stronghold of derailing that discussion.

So, this is one of the techniques how you ensure that these kinds of people are taken care of.

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UCD: Dealing with Different Types of Users

- Users aren't always right. Oftentimes, they're terrible at describing or understanding what they need. It's Designer's job to continually ask questions and get to the root of what they're asking for.
- Bring users into your development process and educate them on using the right terminology. Give them the tools to better explain their needs.
- Users have their own way of approaching problems. Learn how to work with different personalities so you can get the most from your users.
- Avoid the Fundamental Attribution Error, which is "the inclination to explain people's behavior *by the way they are* rather than *the situation they are in.*"

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So, in summary in the last lecture we talked about different types of users; we talked about the primary, secondary and tertiary. In this lecture, we have talked about different personalities who might affect your studies, but in summary how do we deal with these different types of users what are the key takeaways for us after all these discussions.

All these discussions highlight that users are not always right, they behave in a different way and oftentimes they are terrible at describing or understanding what they need. So, it is the designers job to continually ask questions and get to the root of what they are asking for, right. We must ensure that this is happening. This is the design teams responsibility, right.

This is not the responsibility of the user to tell you what they require or what they need. As a person trained in ethnography, as a person trained in working with users and conducting user studies you must ensure that you get to the root of what are the accurate requirements of your user.

Bring your users into your development process. That is what we have been discussing all about with the different personalities. The participatory design approach and educate them on using the right terminology. You must ensure to learn their terminologies and you must anchor them always whenever they are using words phrases that does not conform to the objective of the study.

And, therefore, you must make them aware of the terminologies that are to be used. Give them the tools to better explain their needs. Many a time you have to prompt them about the way they can explain. Many a time you should tell them what not to be discussed, because it does not conform to the objectives of the study. These would help them to ensure that they provide you with details that has insightful data.

Users have their own way of approaching problems. The see this is very very critical. You must understand first how users approach the problems. You must learn how to work with different personalities and it is then only when you can ensure that you get the most out of these types of users.

Another important issue that you must understand is how to avoid the fundamental attribution error; that means, the inclination to explain people's behavior by the way they are rather than the situation they are in, that is a difference. Please understand here, these twos this sentence has two important issues which we are discussing explaining peoples behavior by the way they are ok rather than the situation they are in. What is the difference between these two statements.

When you start you would realize that when we start explaining users issues we start explaining the situation, we start explaining the situation not the way in which information is being information is being structured into. We just explain the task; we just explain the context of the work. What it means that we must ensure that all parameters that can be used to explain the situation in its fullest detail.

We must not just talk about the behavior we also talk about parameters that defines the behavior and this means that we must also understand the user's characteristics, we must also explain the user demographics, the user personalities, the environmental situation the environmental constraints, the influences and then the task that is being observed.


All these details provide a better comprehension or understanding about the situation rather than only explaining the task, that is what we call as the fundamental attribution error. You must describe the task with its fullest details that can explain the occurrence of a particular phenomena rather than only focusing on the task to his bare minimum details, right.

So, therefore, that is what we mean by explaining people's behavior by the way they are rather than the situation they are in if you explain the context that will enlighten the team to understand the task at the proper perspective rather than only explaining the task in detail.

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UCD: Planning

- Your team should have a mission statement that reflects your purpose and commitment to users and each other.
- Consider creating a project template that starts with planning, moves to implementation and testing, and ends with deployment and maintenance.
- You should include a project details section in your template. The project details should include the title of the project, a description of what it is, and an impact assessment, if appropriate.
- Your documented plan should include a list of user requirements. Essentially, this list represents your users' needs and should not include technological solutions.

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So, how do we plan for this after discussing? All these things it is now important that we must start planning about the user centered design process that we are going to adopt. Some important aspects that must be considered are your team should have a mission statement and this mission statement should reflect your purpose and commitment to users and each other.

You must consider creating a project template that starts with planning and moves to implementation and testing and finally, ends with deployment and maintenance. You must include a project detail section in your template. The project details should include the title of the project, a description of what it is and an impact assessment if appropriate any design decision that we took that we take or any decision that we take has to go through the process of assessing its impact.


If you are not aware as a design team about the impact that your ideas that the decisions can have on the project you will not be able to take informed decisions. Your documented

plan should include a list of user requirements. Essentially, this list represents your users' needs and should not include technological solutions.

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UCD: Planning

- Functional requirements are a list of your application's needs. This list is focused on the technology and how it will meet each user requirement.
- If your application is reliant on a dataset or complex user workflow be sure to include database and/or dataflow diagrams in your documentation.
- Prototypes can be a powerful tool in the user-centered design process. Be sure to document any screenshots or early mockups of your prototype.
- Reviewing old documentation can be a valuable exercise in learning from previous mistakes.



The most important aspect of keeping these points and remembering them while you plan the usually process is focusing on the functional requirements. These are the list of your applications needs.

So, we refer we are referring to the application needs here as the word functional requirements. These are the important features; important call to action features that would address the needs of your product of the user, in fact. This list is focused on the technology and how it will meet each user requirement.


If your application is reliant on a data set or complex user workflow be sure to include database or data flow diagrams in your documentation because this will ensure that you understand and define the entities towards fullest detail. Prototypes can be powerful tool in the user centered design process. Ensure that you document any screenshots or early mockups of your prototype.

Reviewing all documentation can be a valuable exercise in learning from previous mistakes, because this will ensure that you do not repeat these things again the next time a project is implemented.

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UCD: Planning – Creating a personal manifesto

- Consider having a manifesto or vision statement for your application. A manifesto is the overall purpose and vision for your application.
- By building a narrative, you take the declarative statement of your manifesto and weave a rich story of how your application can be used.
- Personas are fictional, character-driven elements that personify your ideal user. Use personas to enhance your narrative and help tell the story of your application.
- Scenarios, just like scenes in a movie, are specific situations your personas might find themselves in. Using scenarios, you can explore how the application will respond (or not respond) to the user's needs.



So, these are some of the important aspects that you can remember while the planning phase of user center design approach is being undertaken.

What we are going to discuss now is about how you create a personal manifesto during this planning process. You must consider having a manifesto or vision statement for your application. A manifesto is the overall purpose and vision for your application; application means for the product that you are going to design.

And, these documents are very very important because you are going to work in a team and you must be able to communicate well and in a structured way with your team member. And, so, so to ensure that you have a good planning phase you also need to have a good structure for your personal manifesto.

By building a narrative you take the declarative statement of your manifesto and weave a rich story of how your application can be used. These are the strategies. So, you have a visual mission statement and you ensure that you reach a story that is a storyline how do you achieve these important objectives while you progress for the development of your design of your product.

Personas are fictional. Remember this, we will discuss that in great detail in the subsequent lectures, but we must remember that these are character driven elements that personify your ideal user. So, here the aspect which I would like to draw your attention is the fictional nature of your personas.

Personas are always fictional and these are character driven elements. It talks about the characteristics of the user segment that are dominant or the kind of patterns that you have observed among them and they personify your ideal user. So, your personas, you can use your personas to enhance your narrative and help tell the story of your application.

Remember that stories communicate your ideas better than even you explaining the situation. Power of stories are 10 times the ways in comparison to actual description. Therefore, use storytelling as an art to communicate the way your product works and one and for this storytelling experience you would require personas.

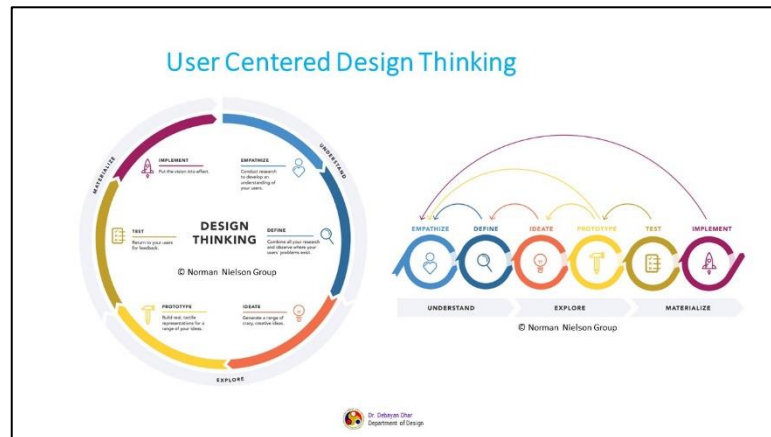
Scenarios, just like scenes in a movie are specific situations your personas might find themselves in. Using scenarios, you can explore how the application will respond or not respond to the user needs. Remember in our earlier discussion. We talked about the scenarios and use cases.

Scenarios are specific situations in a specific context that explain the situational parameters of the task being performed. You have a persona, you have the scenario, now you just need to present it in a way that communicates the situation to its fullest detail to your team members or even to the end user.

So, persona when you put persona into the story line into the events that take place while explaining the situation that is what we call as a scenario because scenario depicts the task that is being performed by your users and the goal that your personas embark on by completing sub tasks.

So, these are some of the important aspects that as a designer you must ensure that you consider before you start working on the design process. We will now see the design thinking approach that we are going to embark on in the subsequent lectures.

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We are going to refer the design thinking approach by the Norman Nielsen Group. What you see here in this slide are two very beautifully explained design thinking process. To the left of the screen you have the circular design thinking approach which has three important phases: the understand phase, the explore phase and the materialized phase.

And, each of the phase is associated with the activities like empathize, and define is associated with understand phase, ideate and prototype associating with the explore phase, while test and implement associated with the materialized phase. These are the design thinking approach or the more distilled way of looking at the user centered design process that we are going to refer and learn in the next module.

We are going to discuss about each steps and how to take up tools and techniques that would allow us to reach the objective of each stage. Though this seems to be a circular approach, but understand it is highly iterative in nature. To the right side of the slide if you can see the image you would realize that at every time every time from each step you have these phases where you can reach to the earlier stages.

So, from the defined stage you can come down to the empathize stage, from the ideate stage you can come down to see if the definition or the or the way you have defined your requirements have been correctly done or not, similarly from the prototype stage. If you find that something is not working you can again come back to the first stage and then again take the entire stage here.

Similarly, the same works with the test and the implement stage as well and therefore, it is called the iterative design thinking approach. We are going to learn about this in detail

in our subsequent lectures. So, why we are learning all these approaches? Our objective is to create a usable product a product that is usable that ensures that users can complete the tasks effectively, efficiently and with higher degree of satisfaction.

These are some of the aspects that we our objective is and therefore, in order to reach to these objectives of designing a usable system that is accurate, efficient and provides higher degree of satisfaction we have to learn how to design such a system. And, the design thinking approach suggested by Norman and Nielsen would allow us to understand that in great detail.

In the subsequent lectures, we will discuss about each phase in detail. We will discuss about tools and techniques that would help us in ensuring that we reach the objectives and come up with a usable product.