



# Enhancing Customer Experience with Usability Testing



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# INTRODUCTION

Since the 90s, User experience has been the center of any B2C technology & with lot of emphasis on UX and UI, we sometimes fail to put the right amount of focus on "Usability". Usability is the key to any User experience and while the design and content play an important role, usability testing is one of the key factors to create a hassle free experience for the end user.

Usability testing is a user-centric design technique which is used to evaluate a product/app/website by testing it with real users. The tests take place with real users to measure how 'usable' or 'intuitive' a platform is and how easy it is for users to reach their goal.

To improve user experience and efficiency of the platforms on an ongoing basis, usability testing continuously tests to see whether users feel comfortable and competent on your app, –whether we are implementing prototype for a new feature, improving an existing interface, or even making subtle changes to wording, Usability testing ensures that the software works. Most software testing focuses on functionality and fixing all major Defects, But usability testing explicitly focuses on the End User experience. Ultimately, usability testing asks whether an application will be easy to use. If not, you can bet your users will quickly move on to another software option that's easier to navigate. The vast majority (88%) of users will abandon a site after just one bad experience.



Real users are required for this form of testing. These users are asked to complete tasks to help measure how an app or website is "usable" or "intuitive" in real world conditions. Usability testing is not about developers proving to themselves that the app functions exactly as they programmed it, Rather, usability testing collects feedback from real time users about their experience.

The key difference between usability testing and traditional testing is that usability testing takes place with actual users or customers of the product, Whilst traditional testing might be undertaken by a developer, designer or a Testing Professional.

Usability testing is therefore going out there and taking inputs from the end consumer on how to improve the application for their better use, removing any bias by collecting feedback directly from the end-user.

It is a customer centric process, done by the customer and for the customer.



## WHY IS IT PERFORMED?

As per the latest stats:

**46%**

of the people leave a website after getting an unclear picture of what your website does.

**44%**

of people leave a website as they find insufficient contact information on the website.

**37%**

of people decide to never come back to a website because of poor design or lousy navigation.

The web and mobile applications rule the business world in recent times. These apps being efficient, effective, easy, simple, appealing, engaging, etc. is very critical for them to be embraced by the customers. The Usability Test is all about determining if a application/platform is what the user would want to use and would prefer to come back to it or not.

## Who Performs This Testing?

It can be done as an internal process, when the designers, developers and anyone else can sit down and analyze their system and get the results. Based on these results, the design or code can be modified to be in accordance with the changes they all agree on.

A more advanced approach is to hire real-time users and give them tasks. A facilitator can devise these tasks and get the results from the users. The users can then provide information on whether:

The task was  
successful or not

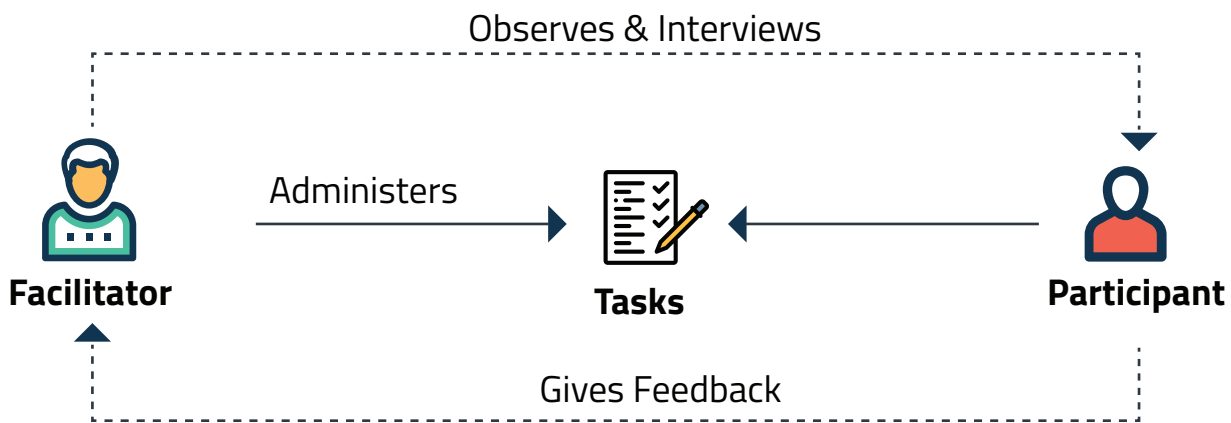
The task could  
be performed easily

Was the experience  
interesting, engaging or  
annoying – their feeling  
towards the software

## ELEMENTS OF USABILITY TESTING

There are many types of usability testing, but the core Pillars in the usability testing are the Facilitator, the Tasks, and the Participant.

The facilitator administers tasks to the participant. As the participant performs these tasks, the facilitator observes the participant's behavior and listens to the feedback. The facilitator may also ask follow-up questions to elicit details from the participant.



### Facilitator:

A skilled facilitator is the one who knows how to stay out of user's way and not be biased. In the whole evaluation process, The facilitator guides the participant through the test process, give instructions, answers the participant's questions, and asks follow-up questions as well. The facilitator ensures that the test results are accessible with high-quality, reliable data, without having an unintended effect on the actions of the participant.

### Tasks:

The tasks in a usability test are realistic activities that the participant might perform in real life. They can be very specific or open-ended, depending on the research questions and the type of usability testing. The activities should match the goals and make sure that you plan the activities in a way that the real end users might be performing. One of the Caveat with this is you have to be very careful with the wording of the tasks, and you don't divulge too many details to the participants- like Where to look, Where to click, Where to tap or swipe and also do not bias the participant by describing the instructions such as visit the website- Login to the application-Look towards a particular option etc.

A detailed Step by step instructions to the participant should be avoided. The task should be as simple and straight-forward such as "Transfer 20\$ to your friend". This will be an user goal which will be more realistic.

### Participant:

The participant should be a realistic user of the product or service being studied. This might mean that the user is already using the product or service in real life. These users should be similar to the actual users that are going to be interacting with your product.

It is very critical that the users whom we recruit are a reflective of the broader population, so that you can trust the results of what you are seeing. The participating usability testers should closely resemble the product's target audience. For starters, if the app is designed to support golfers while they're on the course, you need to find participants with some golf expertise.

It is also recommended to exclude people who have lot of experience in Web design or UX because they might know the interface too well and might pay more attention to the interface than the normal user. We might also want to exclude people who have strong people bias against your brand and finally avoid leveraging people within the same organization since people from the same organization are not exactly a reflective of the actual users.

Participants are often asked to think out loud during usability testing. The facilitator might ask the participants to narrate their actions and thoughts as they perform tasks. The goal of this approach is to understand participants' behaviors, goals, thoughts, and motivations.

# A 5-STEP PROCESS FOR USABILITY TESTING:

## Step 1: Plan the session

Planning the details of the usability testing session is, in some ways, the most crucial part of the entire process. The choices you make at the beginning of the research process will decide how you go about it and the outcomes that you end up with.

Determine the Nature of your Study	Define the problems/area you want to focus on	Type of users you want to test	Questions you want to ask
Users or the participants	Timetable	Moderators	Location of the Test

## Step 2: Recruiting participants

This helps to choose the set of users who are close to the Real users. Care must be taken not to pick experts or complete newbies. The experts are going to simply run through the entire process and the novices need lots of background training to even get started- neither situation is optimum. The Participating usability testers should closely resemble the product's target audience. For example, if the app is meant to help golfers while they are on the course, you need to find participants with some knowledge of golf. The device focus should be mobile, since your users probably won't be using desktop computers on their golf carts!

Designing the tasks that the users are going to perform on the application and also the list of situations that the users are going to use the application is to be made prior to starting the test. This can include something like: 'Search for an X-box and buy it' or 'submit a customer care question' etc. on an eCommerce site. The tasks should closely represent the real transactions, the users would use on the website.

## Step 3: Facilitating the testing

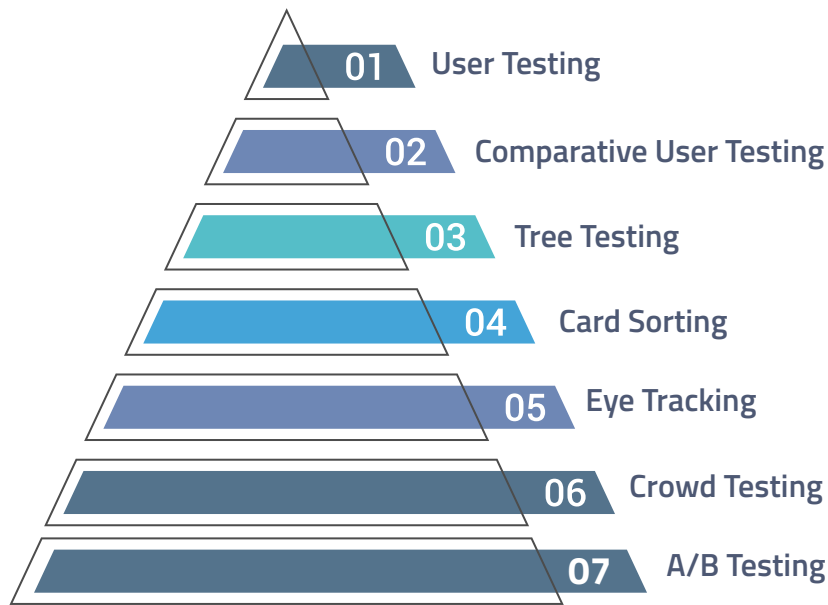
The usability team will have the users perform the tasks on the site and are going to gather information regarding the test progress and results. It really makes a huge difference when the design team participates while the users are working on the application. It gives them a better picture of how the app was used and where it did not deliver what the user wanted etc.

## Step 4: Analyze results

At the end of the test, we might end up with the time it took to perform tasks, whether the task was successful or not. The results must be presented to all the stakeholders and analyzed for the identification of potential problem areas.

# USABILITY TESTING TYPES:

Some of the most popular techniques are:



## User Testing:

This testing provides a way to understand how real users experience your product or website. It is one of the few methods that gives flexibility to what information you can gather, due to its multiple use cases.

Test how users would interact with your prototype

Reveal how customers find information about delivery

Compare competitors to see who has better navigation or search

User testing is an essential part of the UX design process. It typically consists of evaluating a product by researching it with your representative users. This testing provides a way to understand how real users experience your product or website.

It is one of the few methods that gives flexibility to what information you can gather, due to its multiple use cases. User testing will generally be task oriented. Tasks will be created in advance and the user will be asked to complete them whilst being questioned by a researcher who will analyze and question their behavior in real-time. This research method enables deep information to be gained about your users' patterns of behavior, preferences and opinions

## Comparative Usability Testing

Comparative tests are commonly used to compare a website/Application against peer or competitor sites; however, it can also be used to compare two designs to establish, which provides the best user experience. Testing multiple designs early in a project can provide much more useful information than testing just a single design solution. When participants can experience two or more designs during testing, they can provide better feedback. Also, when we have data from testing two or more designs, we can compare the data to determine whether one solution is more successful than another. The purpose of comparative usability testing is not to allow users to make every design "decision" It's about gathering information so we can evaluate and choose the best aspects of two or more designs. Below are standard variables we encounter that should be collected and managed in the analysis:

Prior Experience

Brand & Product Attitude

Domain Skills

Confounding Experiences

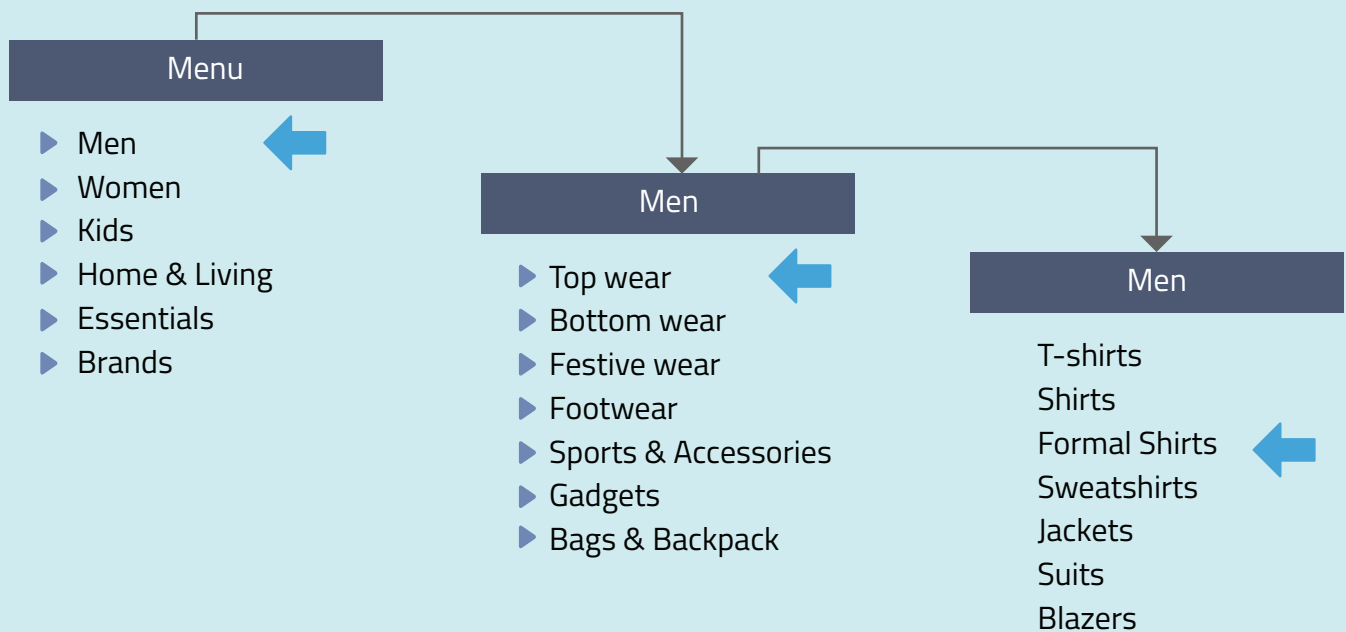
## Tree Testing:

Tree testing is a usability technique for evaluating the findability of topics on a website. A tree test evaluates a hierarchical category structure, or tree, by having users find the locations in the tree where specific tasks can be completed.

Tree testing is one of the “Prominent User Experience Testing” technique for evaluating the findability of a products/topics on the website. A large website is typically organized into a hierarchy- A tree of topics and subtopics. Tree testing provides a way to measure how well users can find a topic on the website, unlike traditional usability testing. During tree testing, users are shown a tree-like sitemap of an app or website’s navigation without the distraction of visual elements and are asked where they would navigate to in order to find something. A question could be: “Where would you go to find a Formal Shirt for Men” — which could yield different results depending on whether the navigation category is labelled as Shirts, or else something very obscure.

### Tree Testing Process

#### Task 1: Look for Formal Shirts for Men



Tree testing allows you to show a menu structure to users in its most basic form without worrying about the layout and design. Users are asked to complete a series of tasks using the site structure. Typically, tree testing sessions are quite short and only last about 15-20 minutes. On average you would have about 15-20 tasks per session as users tend to lose concentration if the tasks go on for too long. By using this method to evaluate your site structure, you have a way to measure how easy it is for users to find items.

### Popular Online Tools used for Tree Testing:

Tree jack	Userlytics tree-testing	UserZoom tree-testing
UXArmy tree testing	Crazy Egg	



## Card Sorting

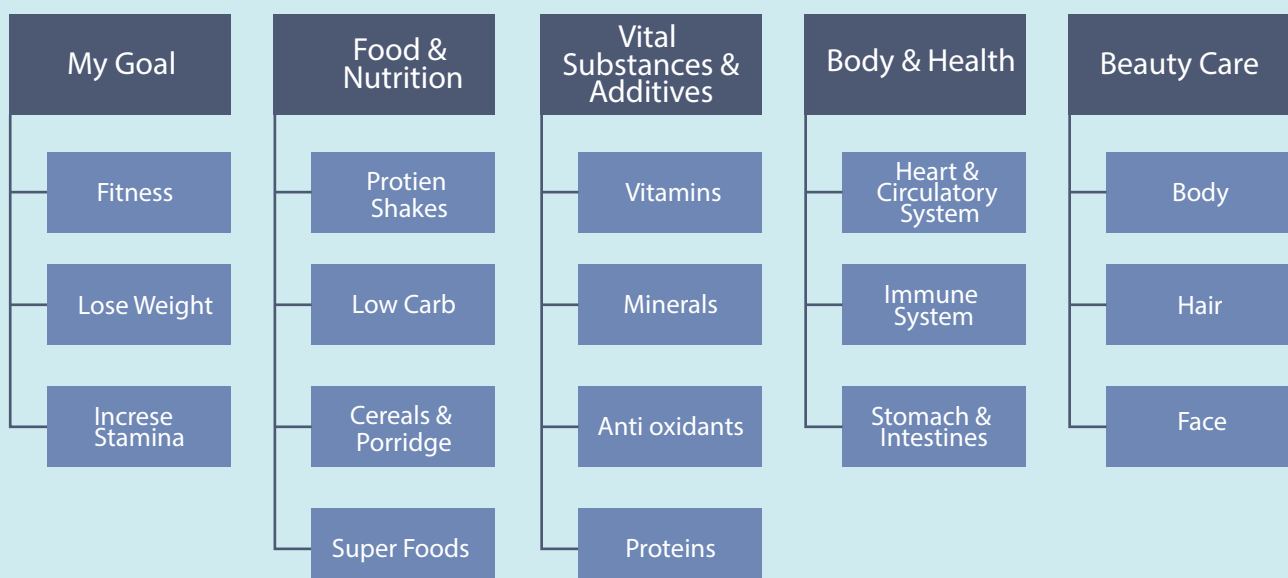
It is one of the popular testing techniques where it helps users in navigating through the products and find what they are looking for. Let us say we are designing an e-commerce website which is used to sell hardware and we would want to make sure that the end-users can easily find what they are looking for. The website might have plenty of groups like Appliances, Bathroom Fittings, Kitchenware, Plumbing, Gardening etc. In order to understand what categories and hierarchy make logical sense for categorizing the homepage, it is recommended that we need to recruit at least 5 users that represent the target customers by running through the exercise with enough participants.

During card sorting, testers are asked to sort navigation items into appropriate categories; categories of which are created by the tester. Card sorting helps you to design an information architecture, workflow, menu structure or website navigation paths.

We can create a card sort in a few simple steps - we need to define the cards, Label the cards with information from the site and then get some people to sort the cards into groups that make sense to them. Once the results are in, we can identify any patterns found using similarity scores or other statistical techniques to understand and analyse the data.

Card sorting is a relatively inexpensive method used to understand how a user would organize and structure content that makes sense to them. Card sorting can be conducted in several ways such as actual cards, pieces of paper, Post-It notes or online tools such as Optimal Sort, which allow you to conduct the research remotely.

### Card Sorting Process



## Open card sorting

In open card sorting, each of the participants gets the same cards, and they must make up their own unique categories. For e.g. In a card sort about Food related categories, the users can make a category called Fruits and put everything related to Fruits into that group. This method is commonly used for new / existing information architectures or organizing products on a site or when starting to create a new Web application from scratch.

## Closed card sorting

Users are provided with both the content cards as well as the category cards beforehand and asked to place the cards in these given categories. This method is normally used when adding new content to an existing site or gaining a second round of insights after an open card sort.

### Popular tools for Card Sorting:

Optimal Sort	User Zoom	UXtweak
UX Suite	UX SORT	Usability Card Sorting

## Eye Tracking & Heat Maps

Eye tracking is the process of measuring what area on a website or app someone is looking at, or more specifically how the eyes move in relation to the head. Hoppers no longer tolerate poor online experience. Today, every online experience must be positive. Potential customers turn away and abort visits and abandon baskets when they feel that the site is not user-friendly, and the overall experience is bad. The website might have a great UI, But What matters is what user thinks. It is important to find issues and potential frustrations before their customers do, because bad user experience will cost the Retailers customers reputation and money. Eye tracking technology enables to show real-world results and how users interact with sites. Improving Website Usability also offers potential financial benefits and as per study, Avg conversion ratio for Retail website is around 10% which results in huge increase in their sales.

The evolving dynamics that foster this growth make it crucial to keep up with the changing pulse of the market for companies in this room. Amid the COVID-19 crisis, the global market for Eye Tracking estimated at US\$10.7 Million in the year 2020, is projected to reach a revised size of US\$2.1 Billion by 2027, growing at a CAGR of 22.3% over the analysis period 2020-2027.



## Purpose of Eye tracking:

When your site visitors are connected to eye tracking software, We will be able to express:

Where they are looking	How long they are looking	How their focus moves from item to item on your web page
What parts of the interface they miss?	How they are navigating the length of the page	How size and placement of items on your existing site or on proposed designs affects attention

## How it Works

This is an infrared eye tracker which is embedded in the Monitor and it records each users interaction with the site: How the user see the application, Where does their eye focus on the page, where does their eyes rest on a page and how long do they navigate in the website for performing a transaction etc. Few finer details like the words, colors, images attract human eye for many reasons. What some users see as eye catching could probably draw others away from the website.

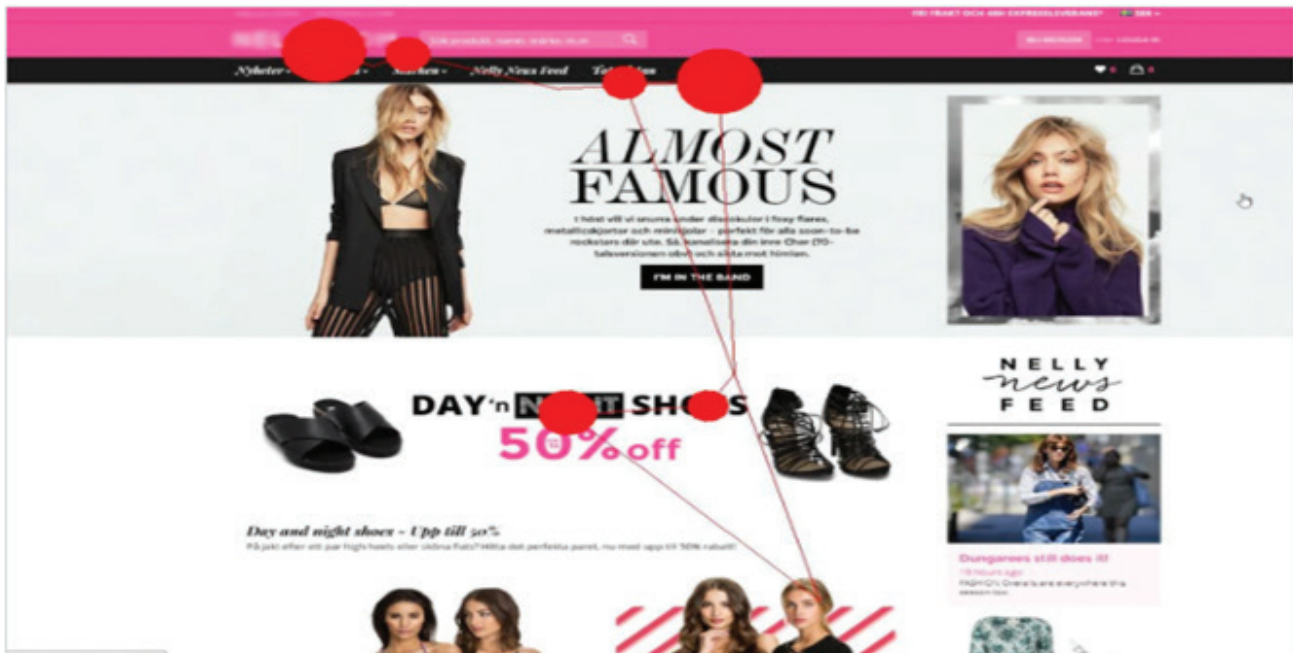
As a participant looks at a webpage, the eye tracking device focuses on the pupil of the participants eye and determines the direction and concentration of their gaze. The software generates data about these actions in the form of heat maps and saccade pathways. The Gaze plots show movement sequence and duration of gaze. The plots also track the order and how each user looks at the screen layout and highlights the areas users are look at the longest in the heat map reports. Once the experiments are completed, interviews are conducted for each user to record their feelings about the site and how they rate their experience.

Combining the user interviews with eye tracking inputs helps us with real time feedbacks on user experience and highlights the issues and problems with the Design teams. It also captures video and voice data when they interact with the website. This provides visual and audio insights and evidence of user's expressions and frustrations such as comments or facial expressions. Companies conduct these eye tracking technologies and the results enabled the firms to make changes to their website based on the user experience.





Example: Imagine a usability test in which John, the test participant, attempts to buy a bicycle. On the homepage John quickly finds the “bicycles” link, but on the next page he hesitates. “I wasn’t sure where to click,” he says afterwards, “there were a lot of options.” Later, while reviewing their notes, the test facilitators take everything John said into consideration. They note where his mouse hovered. They check how far down the page he scrolled. One of them comments, “I wish we could see what he saw.”

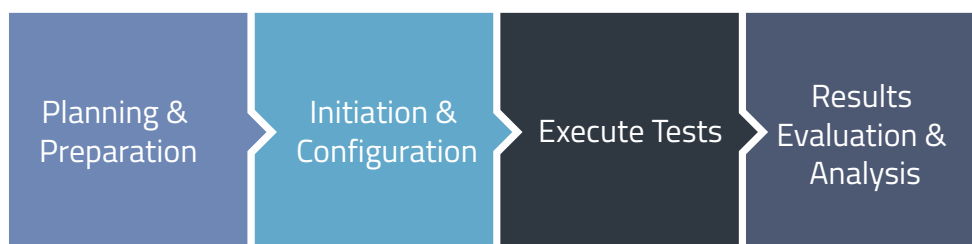


In eye tracking research, fixations are often visualized by circles. The longer the fixation, the bigger the circle

The above picture depicts a sample snapshot of the Eye tracking Heat map report. The Red dots indicates the user's gaze plots sequence and the duration of the gaze.

## Usability testing with crowd testers

Using Professional crowd testers for usability testing lowers your risks even further. Selecting crowd testers who are similar to your intended audience, we can thereby rely on their expertise, honesty, and confidentiality. They have the background in quality assurance to test big or small chunks of software. They can test as often as you need pre-release without you having to worry about negative exposure



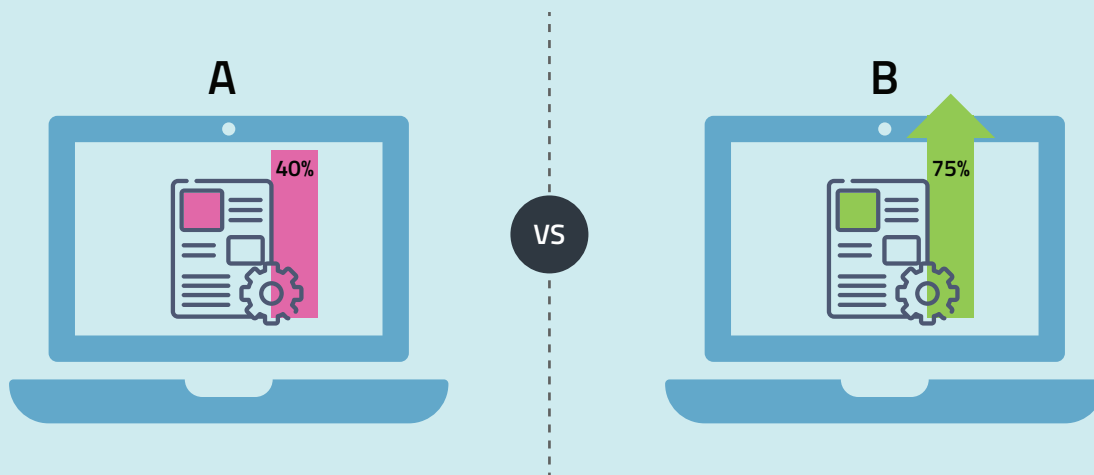
Crowd testers don't merely follow scripts the way an automated test would; they use their human discretion and accumulated knowledge to discover functional and user experience flaws in products and platforms. Testers use their devices as real users do, with privacy settings, ad blockers, and locales configured to provide realistic scenarios unattainable in a lab setting. With dozens or hundreds of testers, crowd testing provides real user testing in highly varied real-world conditions at unprecedented scale and efficiency.

For instance, we might engage crowd testers to test end-to-end how easy it is to register and log in as a new user. We might want them to test how to add items to a shopping cart and complete a purchase. They aren't loyal to your product, like friends or employees would be. They have no reason to give us false hopes about how your software might do in the market

## A / B Testing

A/B testing (also known as split testing or bucket testing) is a method of comparing two versions of a webpage or app against each other to determine which one performs better.

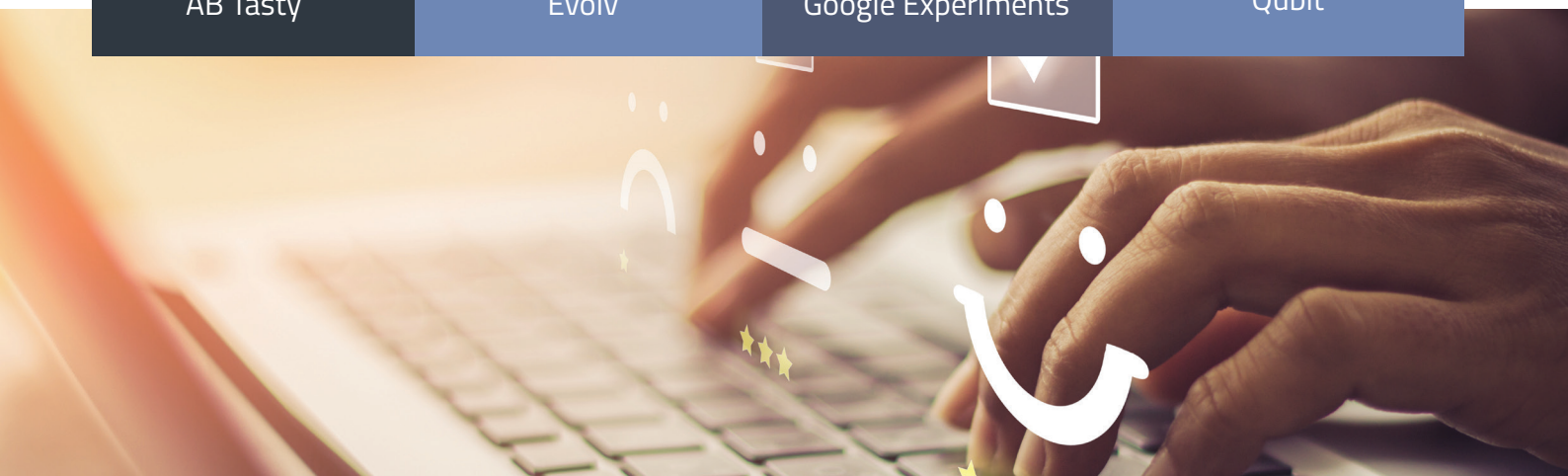
AB testing is a statistical way of comparing 2 or more versions of a web application such to determine which version performs better for a given conversion goal. The business run these tests to arrive at a data driven approach to finalize on the version. A common dilemma that companies faces is that they think they understand the customer well, But customers behave differently than we think.



In an A/B test, We take a webpage or app screen and modify it to create a second version of the same page. This change can be as simple as a single headline or button or be a complete redesign of the page. Half of the traffic is shown the original version of the page (known as the control) and the other half are shown the modified version of the page (the variation). By running the experiment for A/B testing, we get to know the customers behavior and interest. It is better to conduct tests rather than relying on intuition.

### Popular AB Testing Tools

Optimizely	VWO	Convert Experiences	SiteSpect
AB Tasty	Evolv	Google Experiments	Qubit

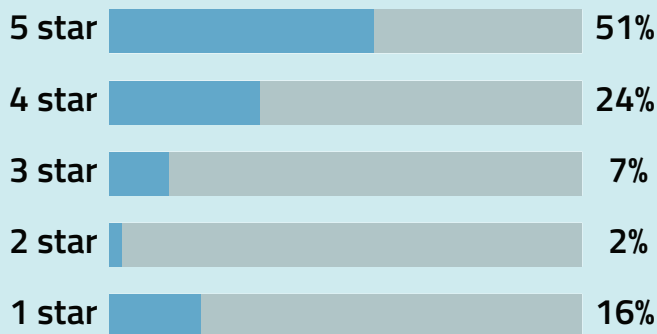


# SAMPLE CASE STUDIES THAT ACHIEVED GREAT RESULTS THROUGH USABILITY TESTING:

## Amazon increased its Revenue by more than 20% by asking one simple question:

Consumer reviews are a proven sales driver in e-commerce, with research showing that reviews are one of the key driving force for increased product sales. Amazon receives hundreds of reviews and it was faced with a challenge of how to curate them into a useful order for its customers. It struck upon an idea by adding the question: "Was this review helpful to you?" This allows users to endorse the best reviews, with the top three being featured on the product page.

### Customer reviews



How are ratings calculated?

2 people found this helpful

Helpful

| Comment

| Report abuse

Other feature, such as allowing users to easily view the best negative or positive reviews, as well as some handy charts that summarize review ratings and make the large number of reviews manageable for users as well as Amazon. Displaying the most helpful reviews has increased sales in the media products category by 20%.

## VOIP telephone service increases quote requests by 80%

In this test as B2B, VOIP telephone services company set about increasing its number of quote requests by performing an A/B test of different page designs. The company redesigned the page to simplify the form and reduce friction in the sign-up process. The number of fields that users had to fill in was reduced from six to three, and it removed any requests for personal information. The result was an 80% increase in conversion rate



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**Traditional Phones vs. VoIP**

	Traditional Phones	VoIP
<b>Setup</b>	Setup fees and installation required	Zero setup fees, no installation, and instant activation
<b>Manage</b>	Service technician required for updates and repairs	Easily self-manage from anywhere via online portal
<b>Quality</b>	Normal voice quality	HD voice quality
<b>Mobile</b>	No mobile capabilities	Integrates seamlessly with mobile
<b>Numbers</b>	Only one phone number	As many phone numbers as you want

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Original Sigup Page

New Sigup Page

# KEY KPI'S TO MEASURE APPLICATION USABILITY:

**Abandonment Rate:** How many people have come to your online retail store, put a bunch of products in their Shopping Cart, and then Abandoned the cart without checking out.

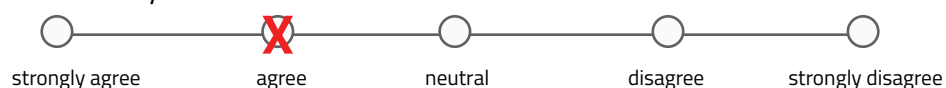
**Conversions:** If the changes in the application directly impacts how many people are converting it to a task completion. Conversion rate = Number of Sales / Number of Visits

**Net Promoter Score:** Net Promoter Score (NPS) is a survey you can include at the end of your UX tests. NPS helps you measure loyalty based on one direct question: How likely is it that you would recommend this company/product/service/-experience to a friend or colleague?

**Customer Satisfaction (Score (CSAT):** This measures the customer satisfaction through questionnaires or pointed Surveys and the results are measured as a percentage

**System Usability (Scale (SUS):** For every website usability test which is carried out, the users complete a short questionnaire and a score is derived from it. This metric will be measured on a Likert Scale which will help us to draw qualitative opinions of the overall user experience of the application.

Eg: The website has a user friendly interface.



## CONCLUSION

Usability testing can be used in a variety of ways during the project lifecycle. Despite not being able to mimic real life usage, usability testing is still the best method of ensuring the application supports users in achieving their goals quickly and easily. When businesses meet the needs and expectations of their users, they are more likely to develop a successful service. Few of the Business benefits are:

Provides better experience and increases conversion	Saves times for the company and the end-user	Gain a competitive advantage	Provides an unbiased examination of the product.
Identifies problem areas within the product which may not have been obvious otherwise.	Offers insight into how satisfied users are with the product.	Reduce Abandonment Rates	Improves Reputation with the End Customers.

## AUTHOR INFO

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