A NON-BORING GUIDE TO

How UX Research is Supposed to Work

eleken®

Contents

First of all, we have to say that UX research is not boring at all. We at Eleken have been using the research-driven approach for years, and there was no moment where we felt the research was useless.

UX research is something that often tends to be overlooked in the budgets of both startups and mature products. Our designers though are strong advocates of research as a base for all the user experience work. We even have a doc called “How to explain to clients that some time should be allocated to research.”

Here we have gathered all the essential info about UX research that a product owner should know. Let’s start from the very beginning.

What is user experience research?

Have you ever seen the cartoon Hedgehog in the fog? It's a Soviet 10-minute cartoon, unfamiliar to foreigners, that always leaves me in tears.

A hedgehog makes his regular evening journey to his friend, bear cub. Finding his way through the forest, he sees an unfamiliar fog bank. Getting off the path, the hedgehog curiously inspects the fog and gets completely turned around. A falling leaf terrifies him, bats scare him, and a weird owl tags along with him. Mysterious strangers and a pinch of luck help him find the right way.

It reminds me of starting a design project. Every time we develop something new, we stand at the frontier of knowledge, in front of the fog. To design, to write, to code the best solution ever existed for the problem we've just faced, we have to embrace danger, plunge ahead into the unknown, exposing ourselves to criticism and failure every single day.

You can be brave, and jump right into the fog with fingers crossed. Or you can remain on shore waiting till the smoke clears. What else you can do is to let a firefly light your way — just enough for a better view of your surroundings. UX research is your firefly.

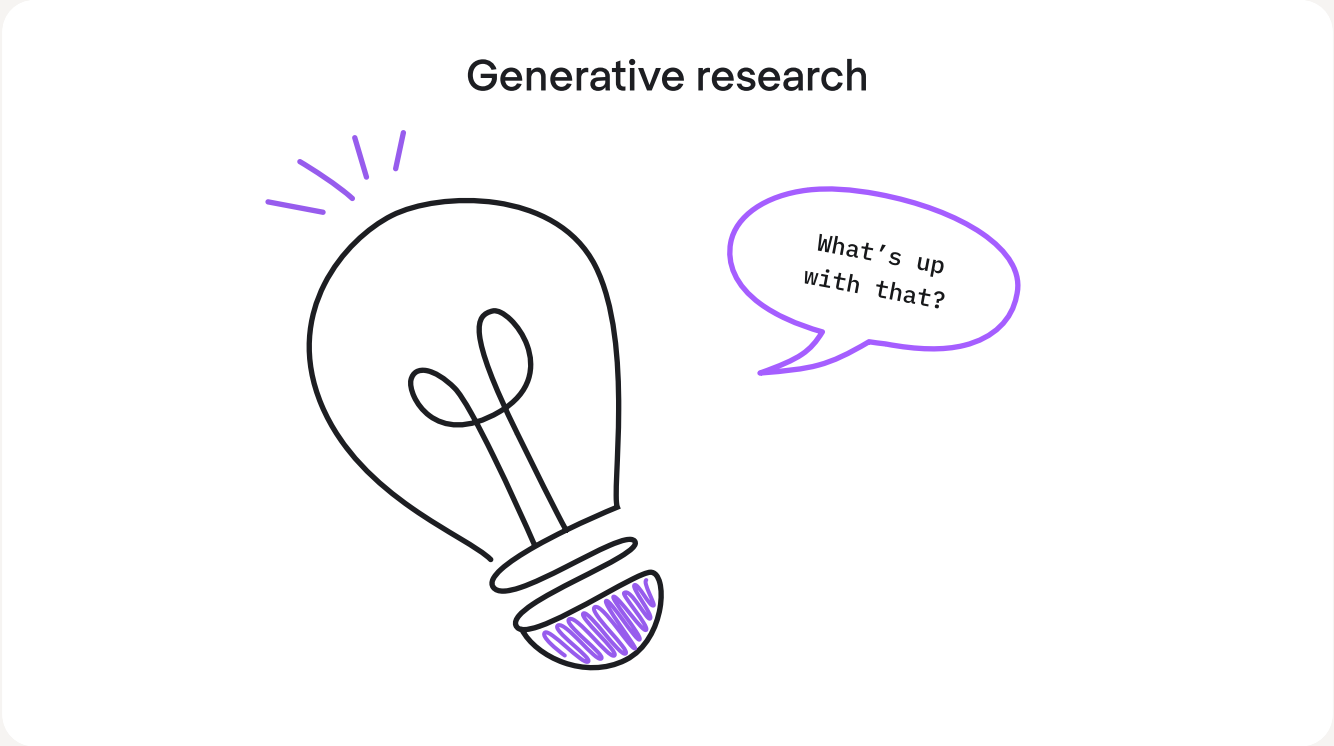
Erika Hall, in Just Enough Research, defines UX research as a systematic inquiry. You want to know more about the foggy topic in front of you, so you go through a research iteration to increase your knowledge. The type of research depends on what and when you want to know.

Types of UX research and how they can benefit you

There are many, many ways to classify types of user research. The one I've chosen for you helps to understand what kind of research can be useful at different stages of your design process.

- Generative UX research
- Descriptive research
- Evaluative research
- Causal research

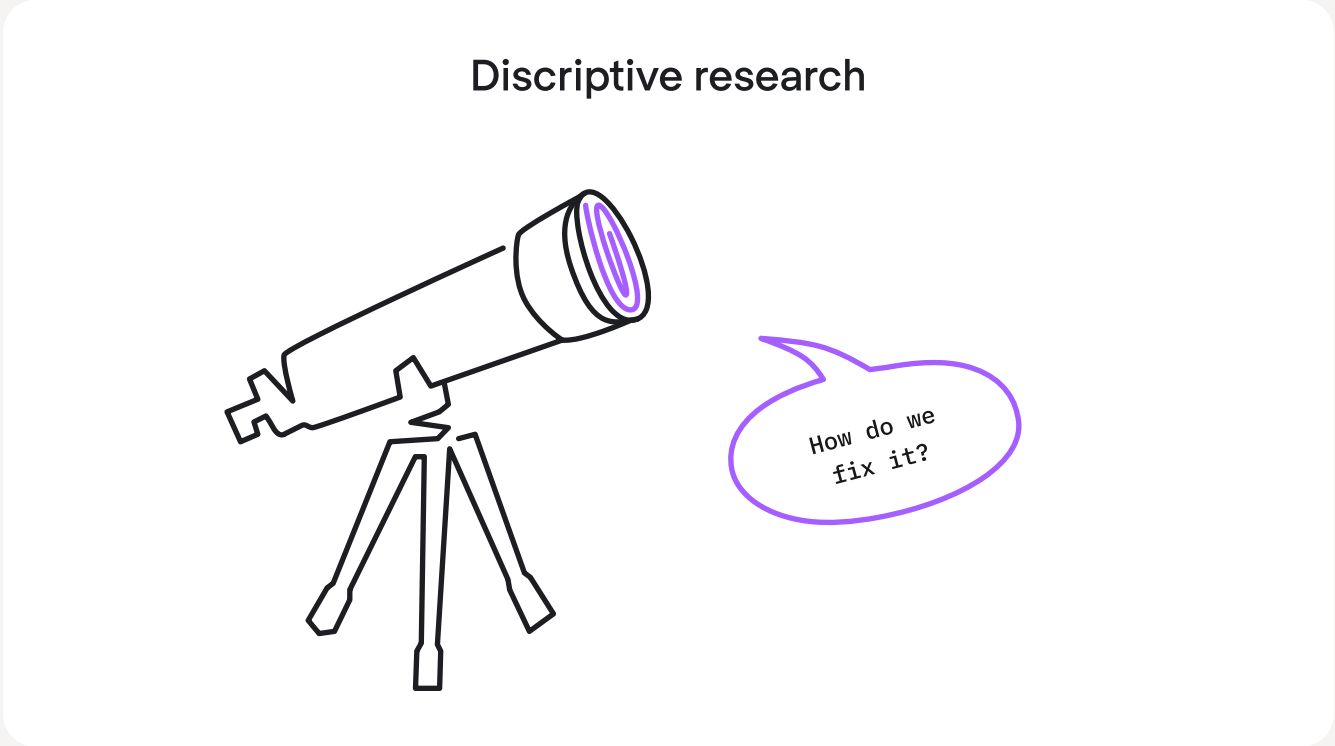
Generative UX research



You run the generative UX research to find the endpoint of our design project when staying in front of a fog bank. Such research leads to ideas and helps define the design problem. The generative toolkit includes googling, reviewing all the existent solutions in the niche, conducting interviews and field observations.

We, as a design agency, rarely have to deal with generative research. Take one of our clients, TextMagic. Originally, the app helped companies connect with clients via text messages. But the team figured out that their audience would appreciate some new features for marketing, customer support, and sales. This is when they turned to Eleken — when a round of generative research was in order.

Descriptive research



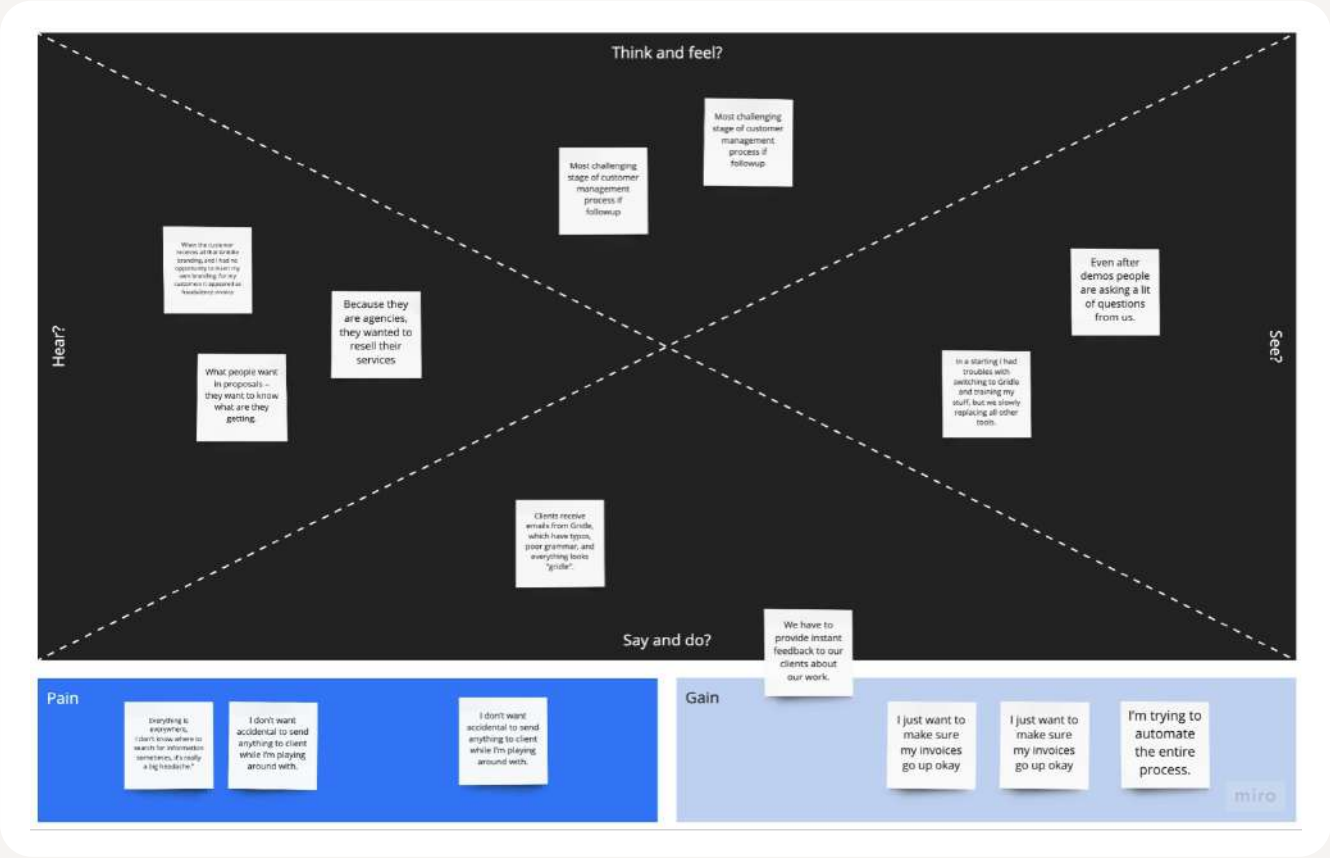
Descriptive user experience study is our alpha and the omega, and the bright morning star. This is what we do when we already have a design problem, aka our endpoint. We're looking for the optimal way to the point — the best way to solve the problem that was identified during the generative research phase.

To find the optimal way, we need to put ourselves into the users' context — to ensure that we design for the audience, not for ourselves. Based on your goals, resources, and the timeline of the project, you can choose from a wide landscape of user research methods to gather the info you need.

Look how we did descriptive research for Gridle, a client management app that came to us for a redesign.

We figured out that the Gridle team used Inspectlet, a session recording app, for their internal web analytics. So we got a chance to examine recordings of how visitors were using Gridle.

With zero research budget and in the shortest term possible, we understood which features users couldn't live without and which ones they didn't mind skipping. Just as if we were looking over their shoulders. Thus, we've learned what was good and **what could be improved**.



Empathy map we did for Gridle

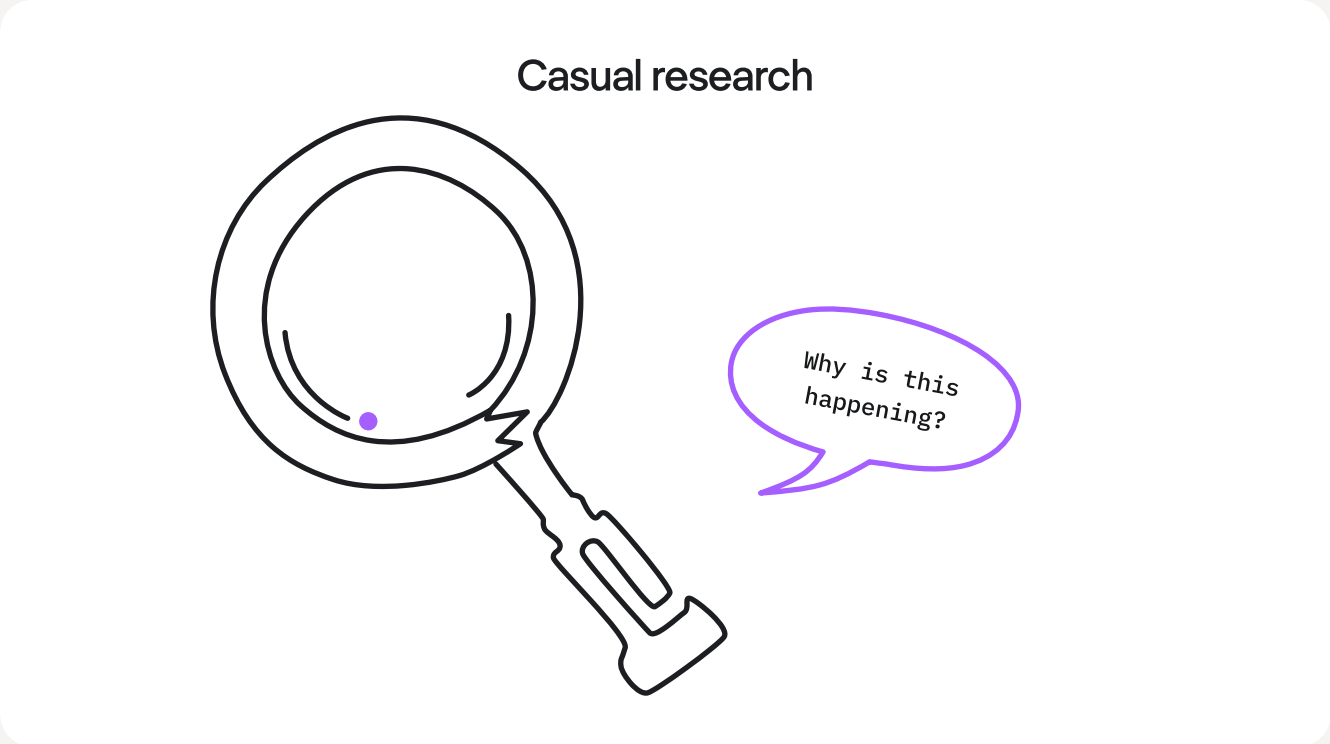
Next, we wanted to understand how we should improve the app to make it more valuable for users. Gridle had a strong customer base on Facebook, so it was easy to find volunteers for one-hour user interviews. As a result, we could understand and prioritize users' needs, and transfer them to an empathy map.

Evaluative research

Once we have a clear idea of the problem we're trying to solve, and the way we're going to solve it, it's time to roll up our sleeves and start working on potential solutions. In the process, we need to check how we are doing to fix any issue before it causes further mistakes.

When you're doing such ongoing testing, you're doing evaluative research. It works best when you test your progress iteratively as you move through the design process. The most common method of evaluative research is usability testing, but any time you put your solution in front of your client or the audience, the feedback you get counts as a round of evaluative research.

Causal research



As your app or website is live, you may notice that people behave unexpectedly. Maybe something went wrong, or surprisingly good. When you want to understand what happened, you resort to causal research.

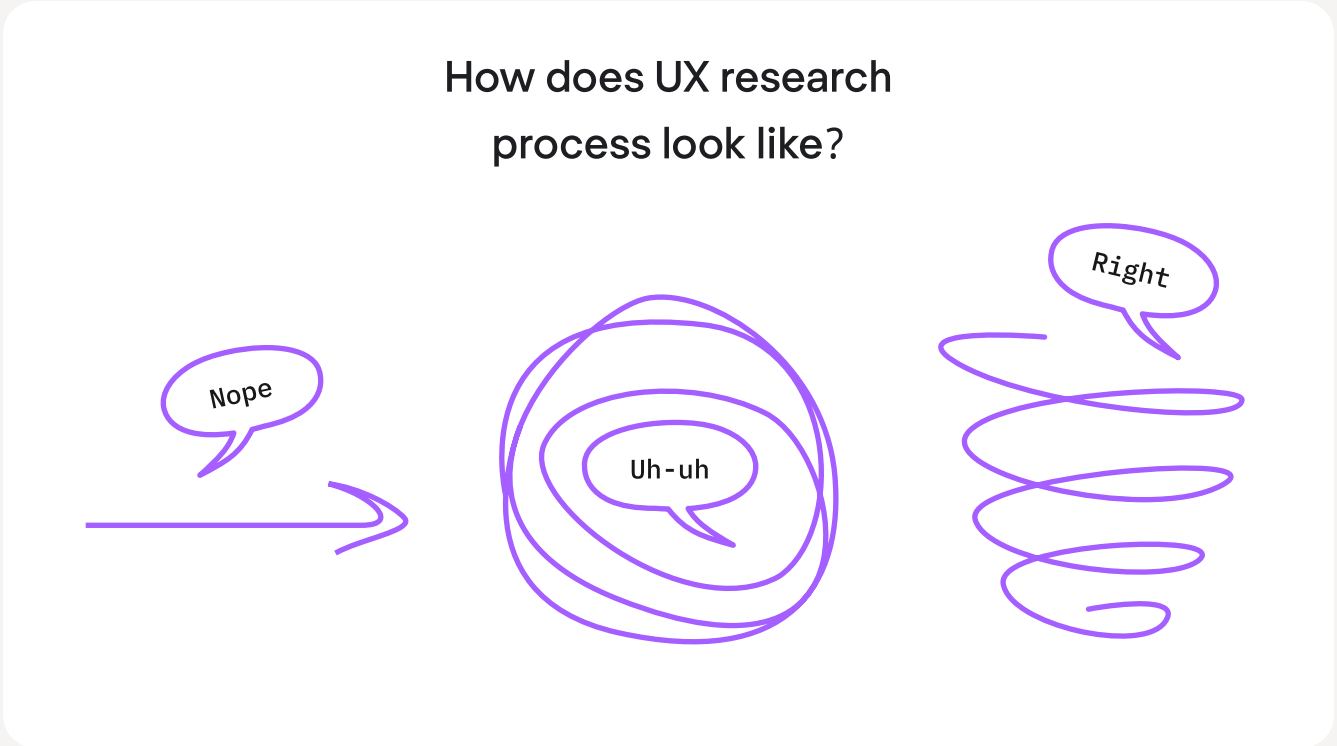
For instance, we at Eleken have figured out that a part of our leads isn't a great fit for our business model. We're focusing on UI/UX design for SaaS apps. That's what we know best, and that's what we are brilliant at. Yes, we can help our loyal customers with marketing design, for instance, but if a notable part of leads comes to us for marketing design specifically, there's something to be adjusted inside of our landing page. The task of casual research here is to find an element that needs to be adjusted.

UX Research Process

If you ask Google, you'll figure that the user experience research process is some kind of a systematic study to gather insights that will drive and inform your UI/UX design decisions.

The important word here is "systematic". The methodical process of designing a research project is what saves your precious time and brain, and helps to get maximum value from research.

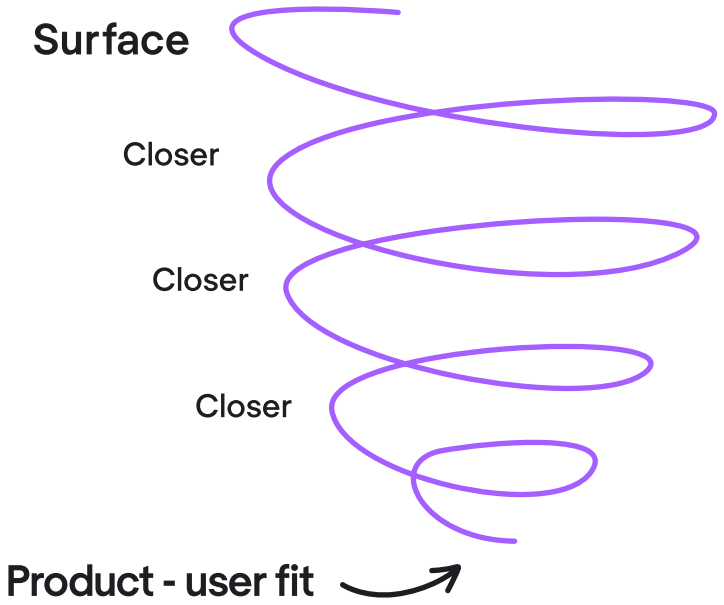
Sounds good but flat, let's try to visualize our research process.



Seems like any process can be shown as a line or a chain of steps. The same must be true for the design process, right?

But every time designers argue that they are rather buzzing around their research subject than moving from point A to point B. Thus, the UX discovery studies feel more like a loop, where you discover, define, design, and rerun it all one more time. But a closed loop as a route gives us a migraine. It shows no progress.

Let's better make our research process model look like a spiral with many loops. We start with wide discovery research when we know nothing about the product, the audience, and the market to learn a few rough ideas on the topic, then spiral back, making connections between the ideas. Then keep lurking around, again and again, gradually adding new insights, validating or discarding our assumptions, and making more connections, checking if each idea is consistent (or inconsistent) with the users' expectations.

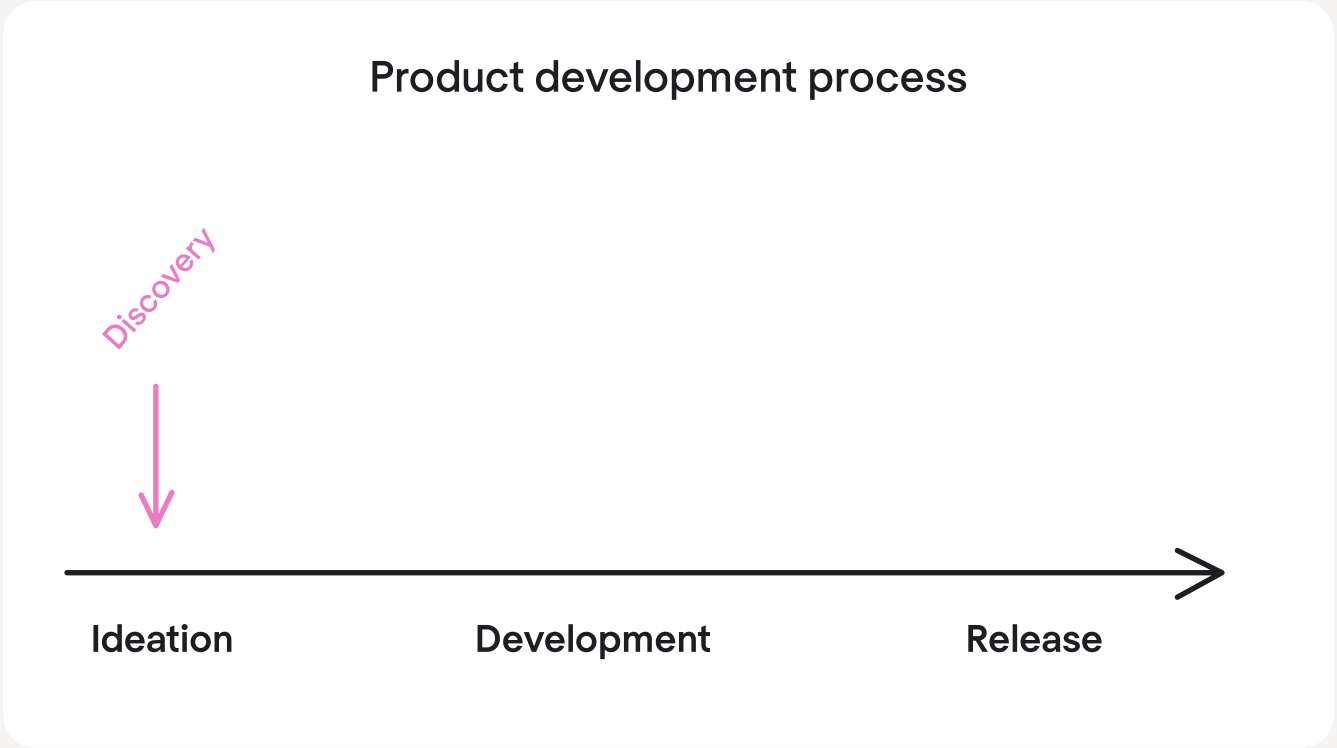


With every new loop, we're getting closer to our goal — the perfect fit between the product and the audience's needs. Now, when we understand the approximate path, let's see what elements it consists of.

User research discovery phase

The discovery phase is a way to deal with the uncertainty that is inevitable at the onset of any project. To beat the uncertainty, you're googling and doing qualitative interviews to collect and analyze information about the app, its audience, and intended market.

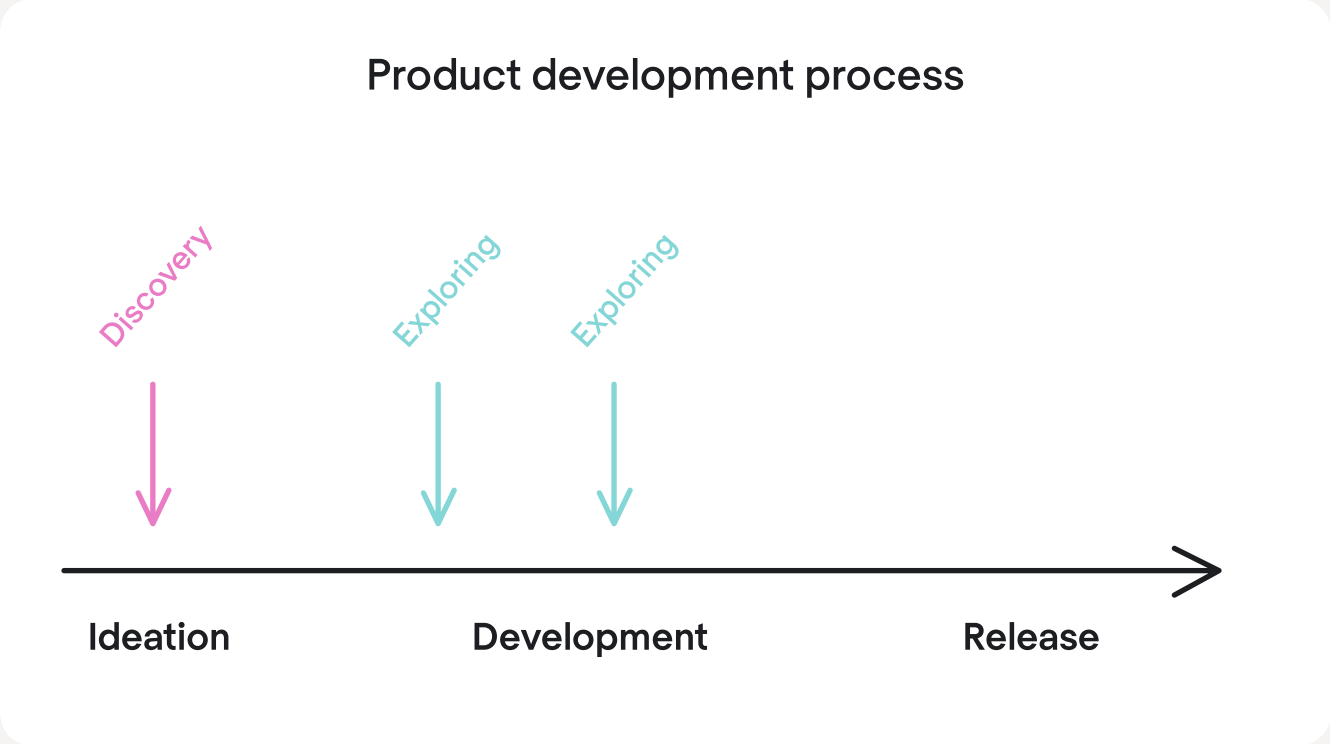
Discovery helps to clarify the goal and the direction of further movements.



Exploring research phase

During this phase of exploration, you dig deeper into the topic to solve applied problems of design that appear in front of you in the working process.

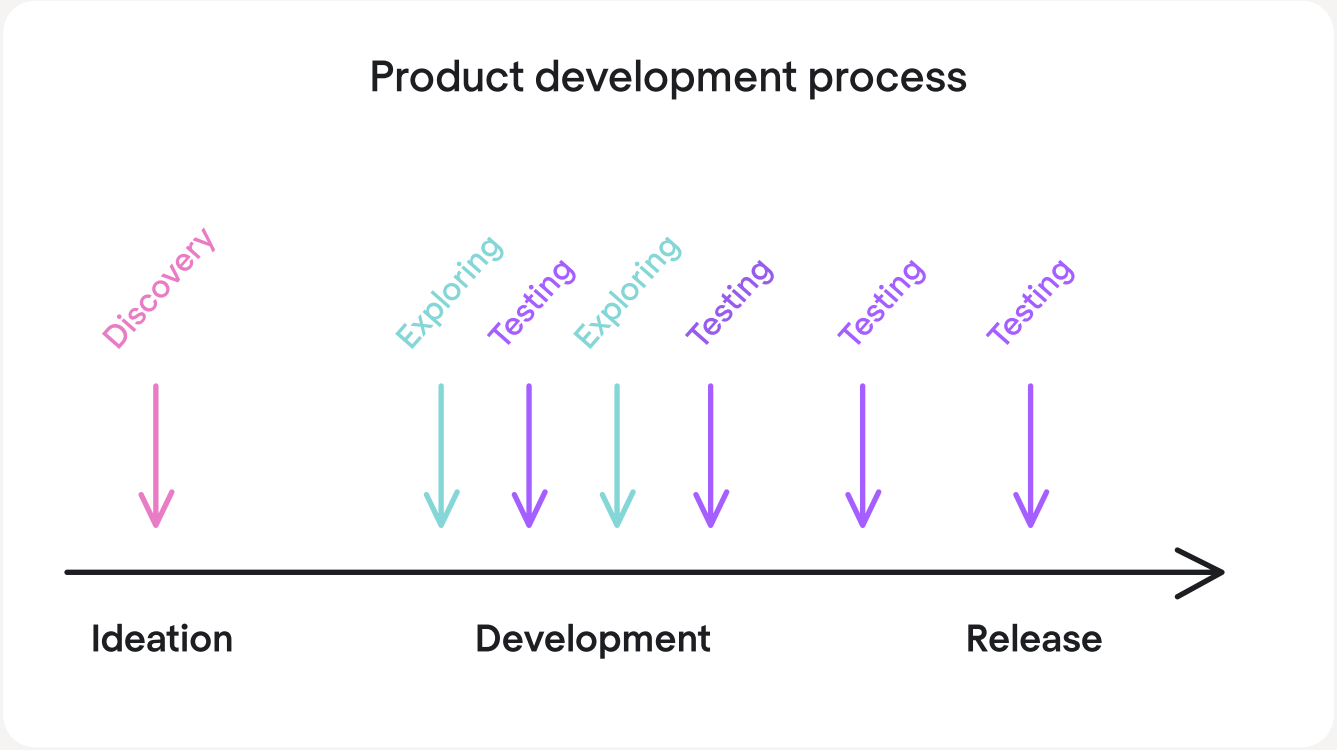
You conduct competitors analysis, create user personas, analyze users' tasks, and so on.



Testing research phase

The research to ensure that your design is easy to use is mostly done as usability testing. We will look closer at usability testing later.

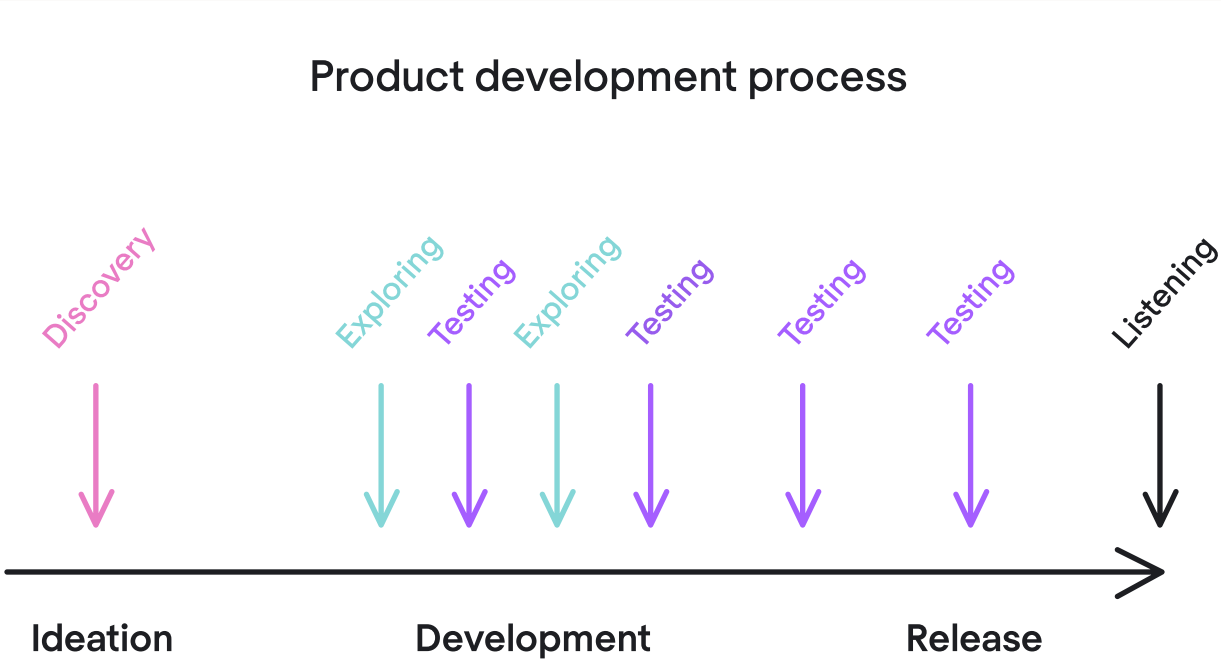
Testing research happens repeatedly during the design process and beyond so that you have time to make changes to your design if the test shows that such changes will benefit the product.



Listening phase

You can't anticipate everything by testing your interfaces on small samplings. Your final and your most reliable test team is your actual users. So after your product is released, you should listen carefully to the feedback and monitor user problems, successes, and frustrations.

This observation may trigger a new circle of design and development changes called to improve the user experience even more.



At different stages of the process, we use different research methods. Below we describe our all-time favorites.

The table below will help you to figure out when to use each of them.

Discovery	Exploring	Testing	Listening
Field study	Design interview	Usability testing	Survey
Diary study	Persona building	Accessibility evaluation	Search-log analysis
User interview	Task analysis	Benchmark testing	Usability-bug review
Stakeholder interview	Competetive analysis		Analytics review
Requirements gathering	Prototype testing		FAQ review
	Exploring		
	Write user stories		
	Card sorting		

UX Research Methods

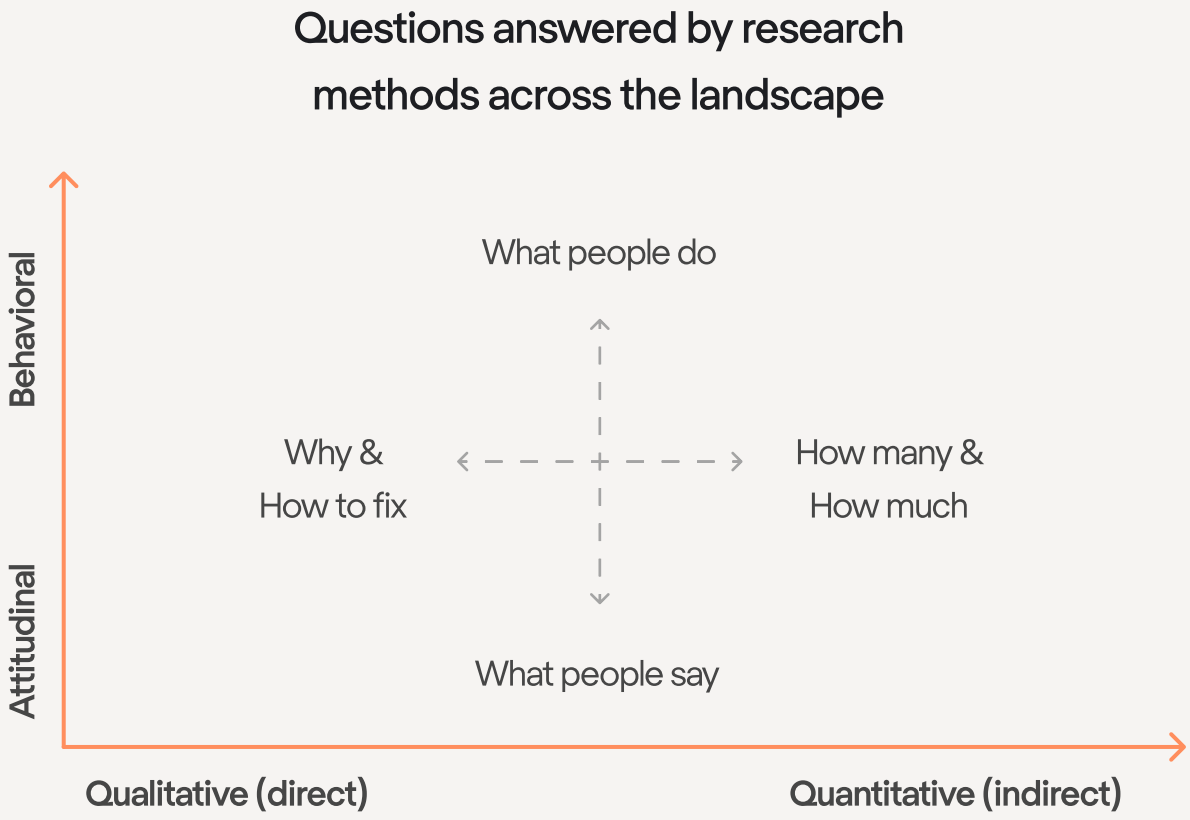
- Attitudinal vs. behavioral
- Qualitative vs. quantitative
- Diary study
- Ethnographic (field) research
- Mouse tracking & click tracking
- Eyetracking
- Interviews
- Surveys
- Focus group
- Card sorting
- Tree-testing
- Competitors analysis & benchmarking
- Usability testing
- A/B testing

Attitudinal vs. behavioral

The attitudinal vs. behavioral distinction helps us identify the gap between *what people say* and *what people do*. Usually, on discovery and exploring phases you need self-reported data, gathered from interviews and card sorting. Behavioral data is especially useful when you're testing your interfaces.

Qualitative vs. quantitative

Now, let's explore the difference between qualitative and quantitative methods. Qualitative studies observe the event or behavior directly, as is the case with focus groups. They are perfectly suited for answering questions about *why or how to fix a problem*. Quantitative studies gather the data indirectly, through an analytical tool, for instance. Thus, they are useful when your questions start with *how many and how much.*



Diary study

Used: to learn users, their feelings and habits deeply

👍 may open new insights in the areas that were out of the attention of the researchers

👎 depends on how motivated and dedicated the users are

This is the ultimate UX research method that lets you get inside the mind of the users. For a diary study, you have to ask users to write a diary for a period of time. The diary would contain all the reflections related to the subject of the study: thoughts, actions, emotions, desires, etc. It can last for a week or more, depending on the subject and the time available.

Diary study works great at the initial stages, when it is important to understand user goals, jobs-to-be-done, and problems well. Collected information makes a solid foundation for the user persona.

Ethnographic (field) research

Used: to see how users interact with the product

👍 studies real situations, not modeling

👎 not always accessible

Ethnographic Research (aka Contextual Inquiry) is a process of observing users in their natural environment, analyzing their ways of acting in certain situations. It is the same process that an ethnographer does, but with a very concrete focus on the product, activity, or problem that the UX researcher is interested in.

Observing people in real-life situations is not always feasible. For example, visiting a bank headquarters to study how employees use the CRM system is easier than observing how people use dating apps.

Mouse tracking & click tracking

Used: to test a prototype or find issues in the ready product

👍 can collect data about behavior patterns of a large number of users

👎 risk of incorrect conclusion

Figure 2. Heatmaps of all click positions (left) and recorded cursor positions (right) for the query *[lost finale explanation]*. Heavy interaction occurs in red/orange/yellow areas, moderate interaction in green areas, light interaction in blue areas.

Image credit: Christopher Mims

Compared to other user research techniques that involve a researcher following the user interactions in real-time or in screen recording, this method allows a UX researcher to process more data from a large number of users and see the major tendencies of user interactions. To choose the right software for that, check out our list of best UX research tools below.

Here are some of the insights that heatmaps of mouse tracking reveal:

- What parts of the interface have the most clicks?
- What buttons have fewer than expected clicks?

And so on. Click heatmap doesn't give direct answers, but it certainly highlights the areas that need some improvement.

Eyetracking

Used: to test user interface

👍 highly precise

👎 requires special technical resources

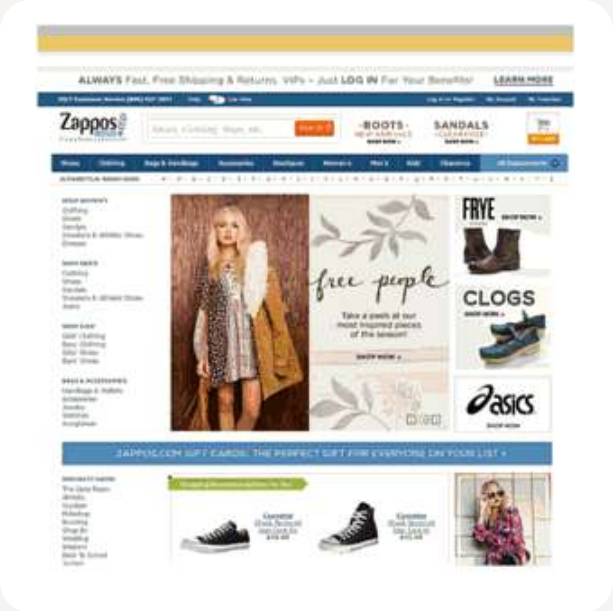


Image credit: MeasuringU

If eyetracking sounds like a thing from an anti-utopia novel, don't worry. It is a relatively new technology, but it does not require very sophisticated devices. Unlike some other techniques described here that require just a researcher, a user, and a notebook, this one can't be done without special software. However, it is more affordable than you would expect. Eye trackers use cameras, projectors, and algorithms to catch the user's gaze.

While click tracking shows actions that involve thinking and intention, eyetracking captures the reactions that might be hard to reflect on, and therefore would not appear in user interviews. Like when people tend to focus too much on the picture that is supposed to be just a background to the text.

Interviews

✓ In-depth interview (IDI)

Used: at any stage

👍 allows to get lots of insights and be flexible when asking questions

👎 takes a lot of time to cover many respondents

As you may guess, this method of UX research implies one-on-one talk between the researcher and the user. There are two types of interviews: directed (following a prepared list of questions) and non-directed (letting the interviewee talk about their experience, with as little interruption as possible). The latter technique gives an opportunity to find some insights about the user experience that the researcher was not aware of.

When you have the list of questions ready, estimate the duration of the talk and inform the interviewee in advance.

✓ Intercept interview

Used: at any stage

👍 random but well-targeted selection of respondents

👎 hard to get detailed information since people may not be ready to dedicate much time to it

To run this type of interview, the researcher has to "catch" users or potential users in the place of their natural habitat, in a situation when they would be using the product.

Let's say we want to see how people interact with a supermarket loyalty app. To do this, we go directly to the supermarket, watch people using it, and ask questions.

Looks like you don't need much technical skills to conduct interviews, right? The only tricky thing here is posing questions correctly. All the history of philosophy teaches us how important it is to ask right questions. It is not easy indeed, but there are few rules for question-making that will help you avoid most common mistakes during interviews and usability testing:

✓ 5 Golden rules of UX research interview questions

1. **Think of your target audience** and make sure that the questions are clear for them. If your audience consists of people who are not very tech-savvy, avoid using professional slang.

2. Go for **open-ended questions that imply longer answers**, not just yes or no.

   👍 Do you use habit tracking apps?

   👎 Please tell me what you do when you want to acquire a new habit?

3. Use **neutral words instead of value judgments**.

   👍 Was the X feature hard to find?

   👎 Please describe your impression when you saw the app

When avoiding neutral words is complicated, use both “negative” and “positive” features.

👍 Was it easy or hard to find the “change language” button?

This question implies a short answer, so it is good to follow it with a more detailed one, like

👍 What made it hard to find?

4. **Be careful with “why”**. It seems to be the easiest way to make interviewees open up and tell more, but many people feel intimidated by “why” questions. If you see that the user is a bit confused by “why” questions, try using alternatives, such as:

- What made you click this button?
- Tell me what is your typical process of making an online purchase?
- What are you thinking of?

5. Make your **questions consistent with the goal of the research**. The goal is something you should always keep in mind, but it is a good idea to pass through all the questions at the end to see whether they give.

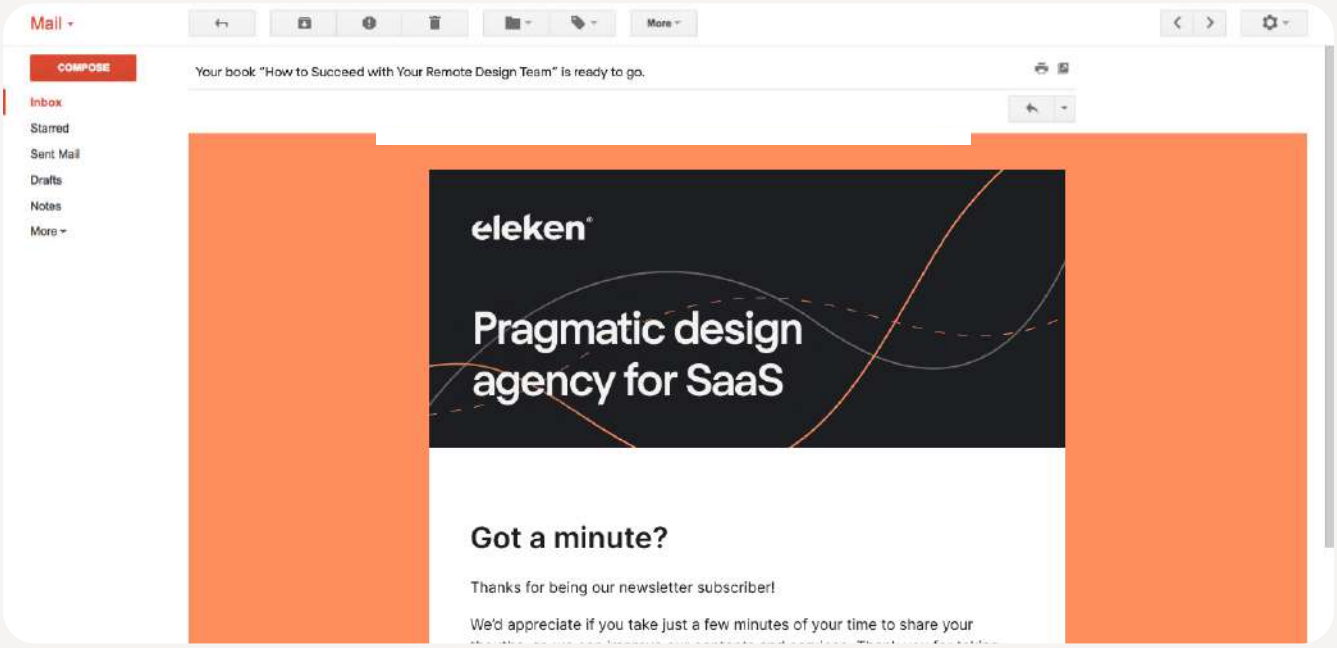
Surveys

✓ Email survey

Used: at any stage

👍 cheap and accessible

👎 risk of non-response error (you miss the valuable input of people who are frustrated with the product or just don't want to fill in email surveys)



This is one of the most natural ways to reach a large number of target customers. It is much easier to get people to answer a few questions than going for an hour-long interview. Needs no coordination in time and space, no geographical limits.

Email survey works best with an existing database of users. When you are doing a UX research for a new product without a customer database, you have to be sure to send out your emails to contacts that belong to the target audience.

You can include a couple of questions regarding demographics to know whether their profiles are relevant to the product.

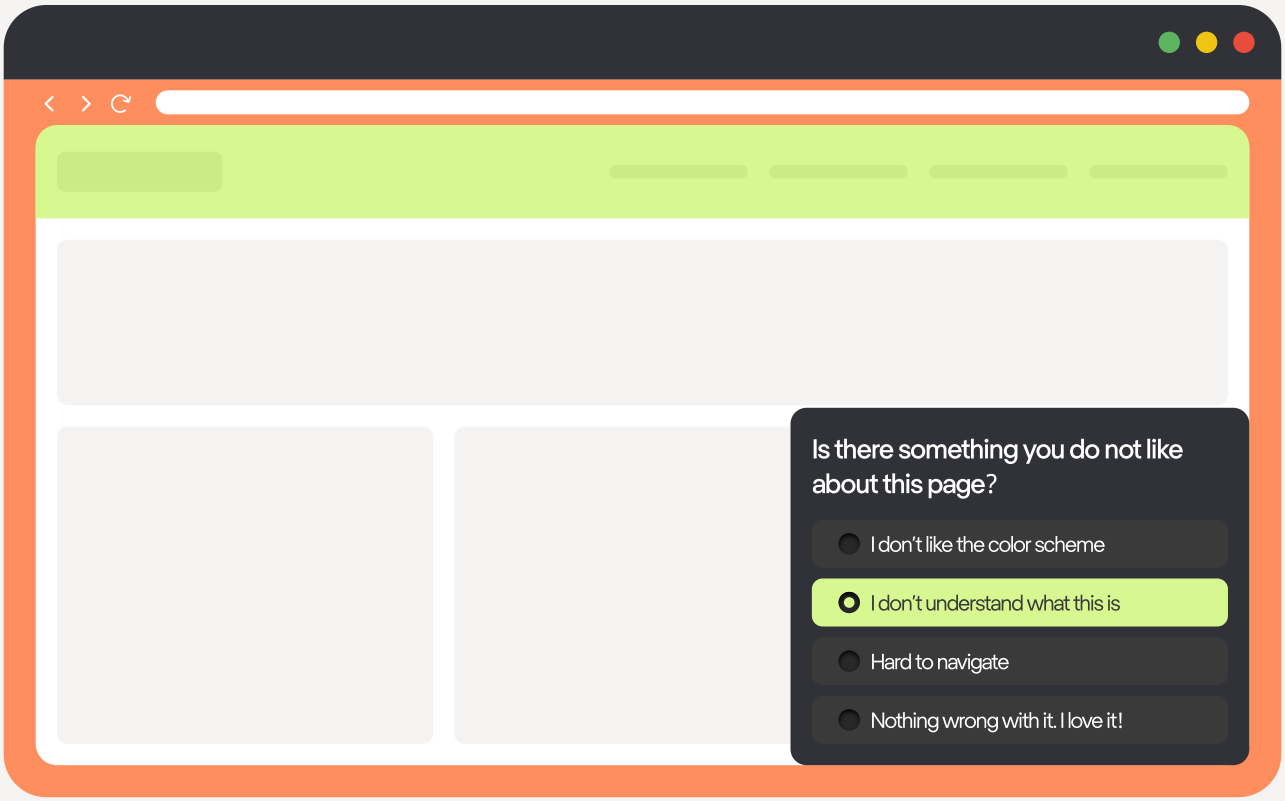
Email surveys don't have to be paid, but to increase the amount of filling in surveys, you can give small presents to those who finished it.

✓ On-site survey

Used: to understand what users think of an existing product

👍 captures the experience of real users at the right moment

👎 possible only when the product is already out there and functionin



This survey appears on the page right after the user has interacted with the product. This way, very direct questions can be asked like what was the user intent, whether they succeeded, and what were the issues. An on-site survey allows the research to cover any segment of users: those who are using a particular feature, or those who exit the website without purchase, and so on.

Surveys are some of the most common and easy to execute UX research techniques. With a survey, you can collect both quantitative and qualitative data with close-ended and open-ended questions. However, trying to insert too many questions is dangerous: the longer the survey, the fewer the responses. Good practice is to warn users how long the survey will take before it starts.

Focus group

Used: to discover users needs and feelings

👍 takes less time compared to individual interviews

👎 hard to conduct online

A focus group is when a researcher has a conversation with a group of users at the same time. The average number of participants is 6-9 persons. Focus group is not just for saving time on personal interviews: the results can vary. People behave differently when they are around peers.

Working with a focus group requires special preparation: knowledge of psychology helps create the right atmosphere and get valuable insights.

Card sorting

Used: when building informational architecture

👍 Requires little preparation

👎 The results may be inconsistent and hard to analyze

Card sorting is a method that helps build the very fundamental architecture of the product. All the main units are written on separate cards and users are asked to sort them into categories. This tool prevents designers from blindly following habitual structures that they have used before.

Tree-testing

Used: when you have to verify information architecture or test how it works with user tasks

👍 works both online and offline

👎 only tests informational architecture without taking into account other factors

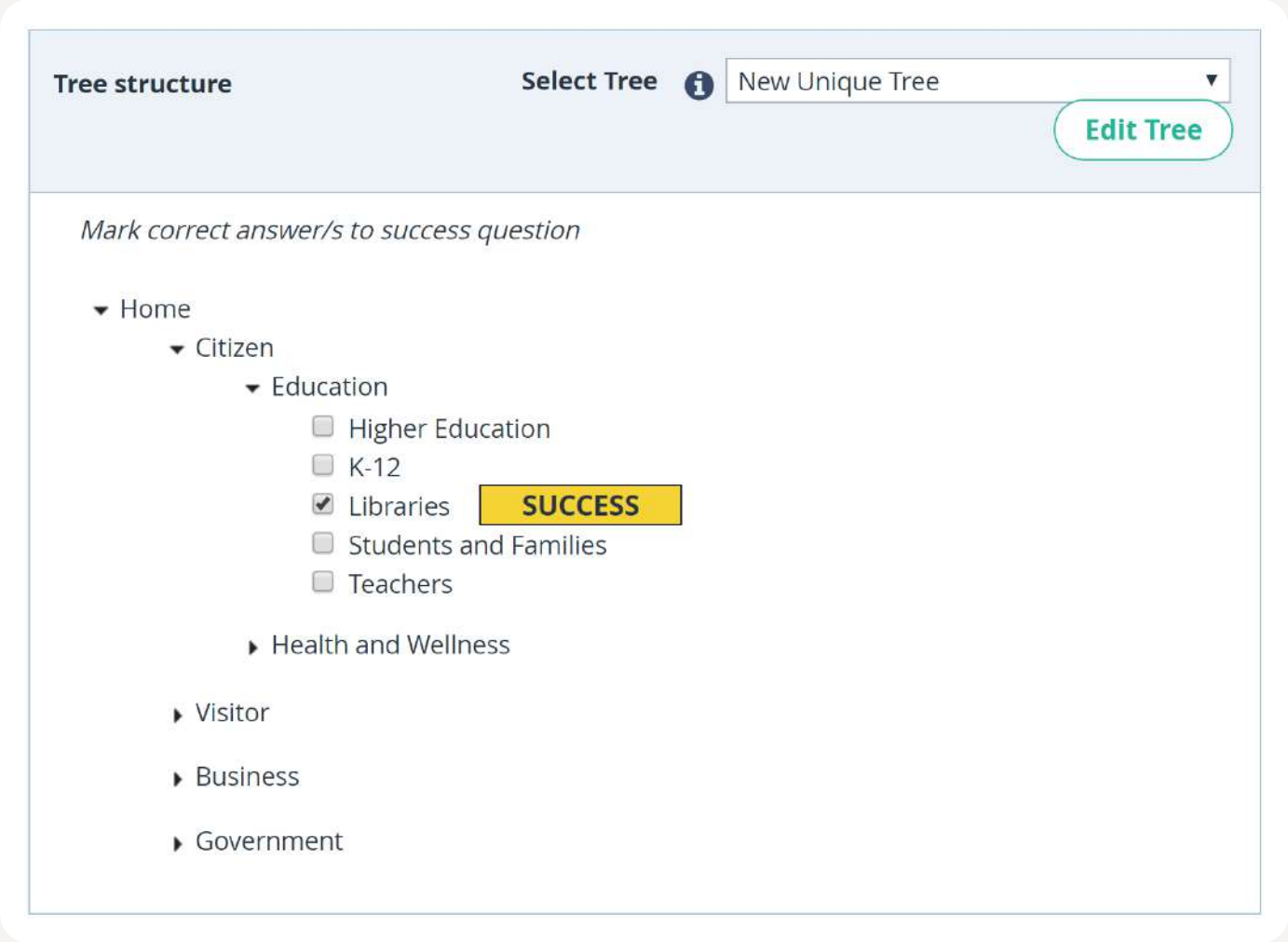


Image credit: Nielsen Norman group

This method can be the next step after card sorting or can be used separately when the informational architecture is already created and needs to be verified.

To start, you present a complete hierarchy of all the categories. Then, the researcher asks the user to find a particular category.

Try to avoid giving direct indications, like “Find UI/UX services”. Let’s imagine we are testing the navigation of this website. The task may sound something like “You are about to launch a SaaS startup and you are looking for designers to make an MVP. What page would you go to?”.

Competitors analysis and benchmarking

Used: at the initial stages of development and when analyzing the existing product

👍 good tool for finding product-market fit

👎 excludes real users

Finally, there is a UX research method that doesn’t require talking to strangers. Seems like an obvious step in developing a product, but you’d be surprised to find out how many product owners skip deep research and rely on what they already know about the market.

Why do you need in-depth competitors analysis? First of all, it saves you from reinventing the wheel. Sometimes when you commit too much to design thinking, you end up crafting a solution that is already present on the market. Secondly, analyzing competitors helps you find their weak points that you would address, and define a value proposition that will make your product stand out.

Usability testing

Used: to analyze how user-friendly the product or prototype is

👍 allows to see the interaction and talk to users to understand them better

👎 limited amount of users studied

Usability testing is how most people imagine UX research. A researcher follows a group of users while they are performing tasks with the product. Usability testing also includes asking questions to understand the motives of the actions.

Based on the results, a researcher can define potential issues and solve them in the next iteration.

A/B testing

Used: to compare two versions of a solution

👍 Shows clearly which version is chosen by the majority of users

👎 Hard to execute in some cases

For the A/B test to work, a group of users has to be divided randomly in two. Two versions of a product are offered to each group, and the results compared to understand which one performs better. A/B testing can be executed on its own or in combination with another UX research method: for example, tree testing of two different hierarchies.

It is important to make the A and B versions not too varied so that the results of the study wouldn't be interpreted adversely.

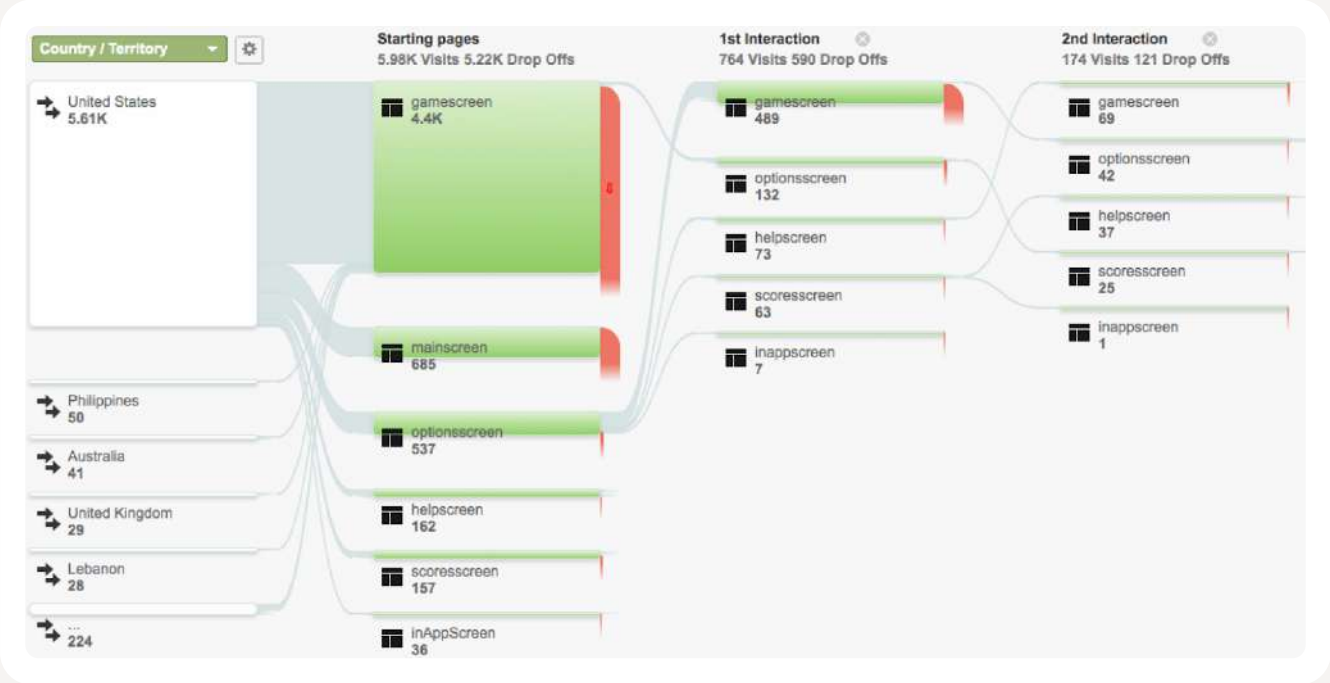
UX Tools

UX analytics software

✓ Google Analytics

To improve the overall user experience, at the UX audit step we want to surface as many trouble spots as possible. For these tasks, using Google Analytics for UX is indispensable as ever. It helps to understand how long users stay on a website, what pages they visit and what pages they are missing, what are typical user flows, etc.

Some might argue that Google Analytics for UX designers is overwhelming, but if you know what specific information you need and where to find it within, it is not exactly as unbearable as it seems. You can check it right now — Google has a demo account that you can access and explore the possibilities of this tool.

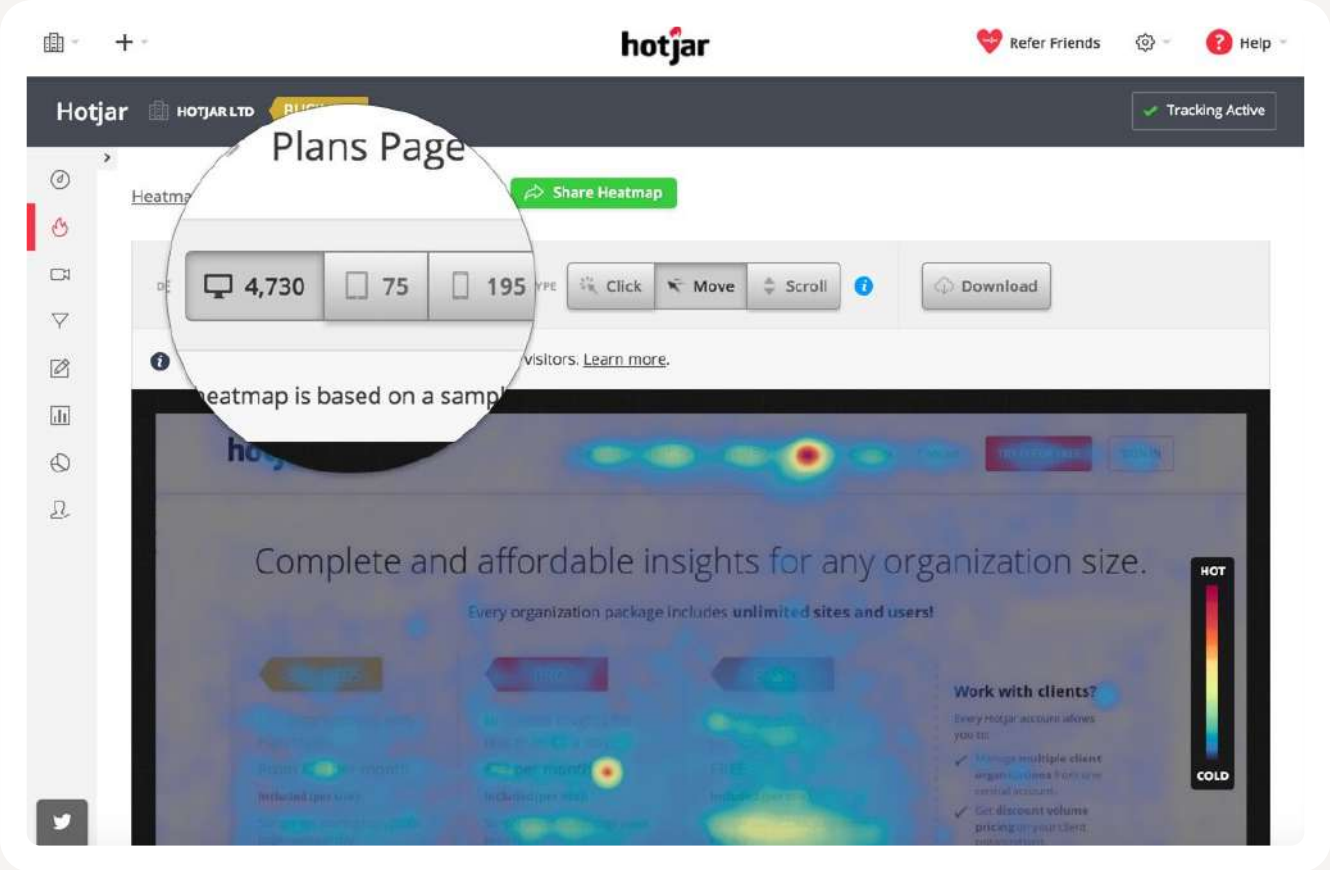


Google Analytics for UX research

- Free trial: a full set of basic features is free
- Pricing: a paid version of Google Analytics, known as Google Analytics 360, starts at $150,000 per year

✓ Hotjar

Hotjar, as our designer Maksym calls it, is a "standard in the market of UX analytics". What does Hotjar do? This tool is all about qualitative data. With its famous heatmaps, Hotjar shows you how users are really experiencing your site without drowning in numbers (this tool teams up perfectly with Google Analytics' scary quantitative graphs and tables).



Just look at that adorable Hotjar's heatmap! Image credit:hotjar.com

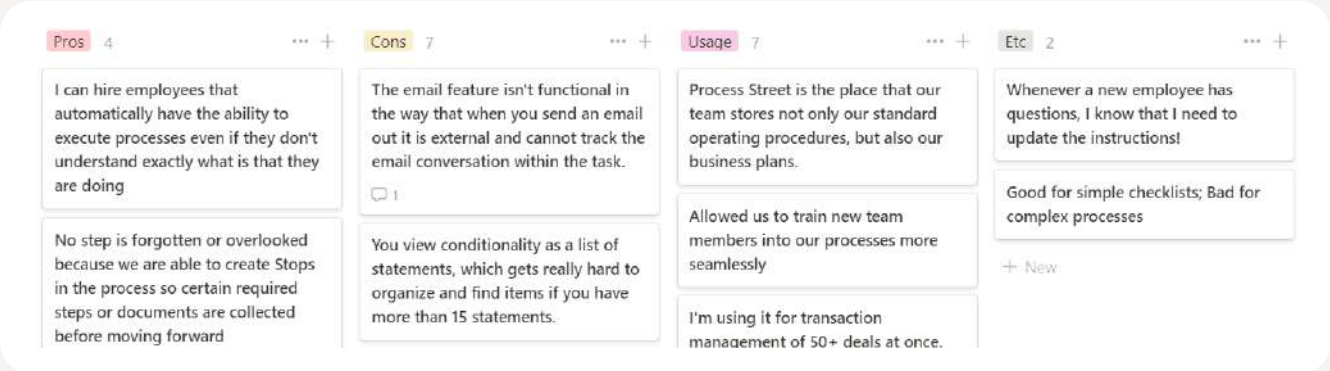
Hotjar analytics enables you to look at users' behavior and to see where they get stuck — those are the UX problem areas that require your attention. You can even run surveys on the spot to collect users' feedback.

- Free trial: Hotjar offers a 15-day trial
- Pricing: starts at $99 per month

UX documentation tools

✓ Notion

Notion is our command center, where we store and constantly update our agency's aggregate wisdom. It is a super-flexible tool that helps to organize project documentation, prepare for interviews with either clients or their product users, accumulate feedback, or simply take notes.



A fragment of competitor analysis made in Notion

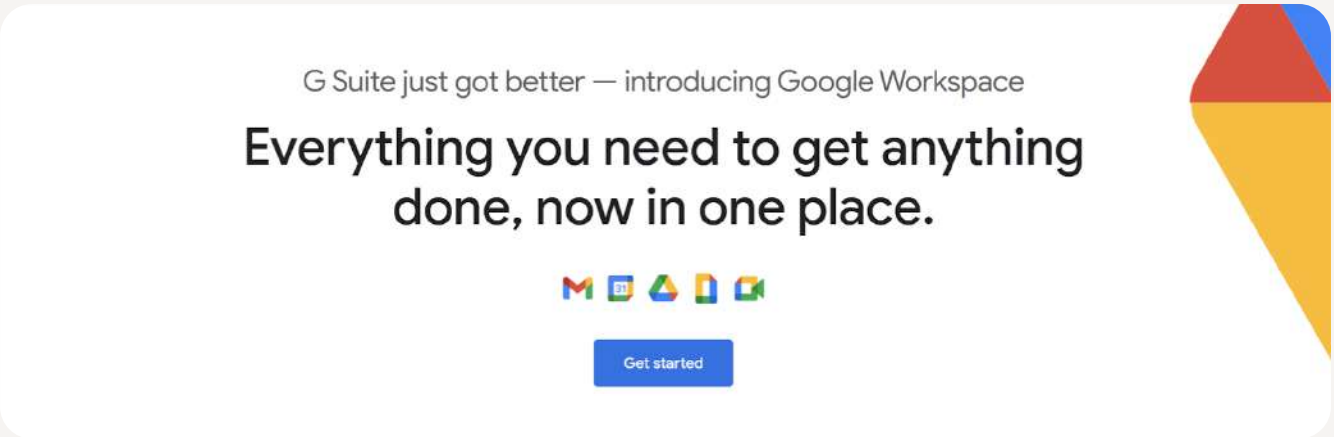
- Free trial: freemium tier limited by 5 team members
- Pricing: for unlimited team members use, pricing starts from $8 per member per month

✓ Google Workspace (Formerly G Suite)

Like any other remote-first company in the world, Eleken uses G-suite products, especially Sheets and Docs, for notes, and for some frameworks.

Needless to mention how convenient it is to access your cloud-based docs online, share and edit them within your team. If you're a personal user of Google, you have probably tried Google Docs, Slides, Forms, etc. They all don't cost you a dime, which is pretty awesome.

However, if you need over 15 GB of drive space for storage and a custom domain for your email address, you'll need to pay for a business version called Google Workspace.



Google urges you to start testing workspace

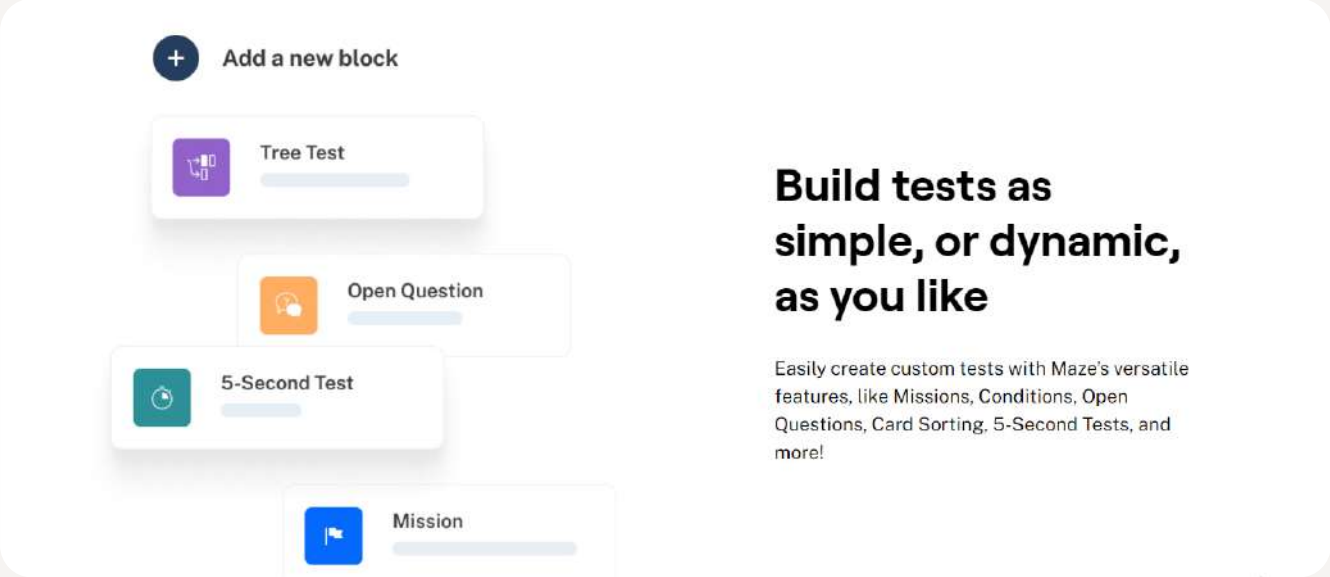
- Free trial: free for personal use with basic tools and drive storage of 15 GB
- Pricing: Google Workspace starts at $6 USD per user per month, with extra features and drive storage of 15 GB

Usability testing software

✓ Maze

Maze is a-mazing remote user testing platform for unmoderated tests. With Maze, you can create and run in-depth usability tests and share them with your testers via a link to get actionable insights. Maze also generates a usability study report instantly so that you can share it with anyone.

It's handy that the tool integrates directly with Figma, InVision, Marvel, and Sketch, thus, you can import a working prototype directly from the design tool you use. According to our designer Maksym, Maze is his top pick for prototype testing precisely because it works so smoothly with Figma.



Maze urges you to start testing

- Free trial: there's a freemium tear for 1 seat and 1 active project
- Pricing: $42 per month for individual designers and $25 per seat per month for teams

Besides unmoderated usability testing, Maze can help with different UX research methods, like card sorting, tree testing, 5-second testing, A/B testing, and more.

✓ Lookback

Lookback is a user experience research platform great for moderated tests, where you're talking to your testers, seeing their reaction to your prototypes, guiding them through the tasks, and getting their feedback in real time.

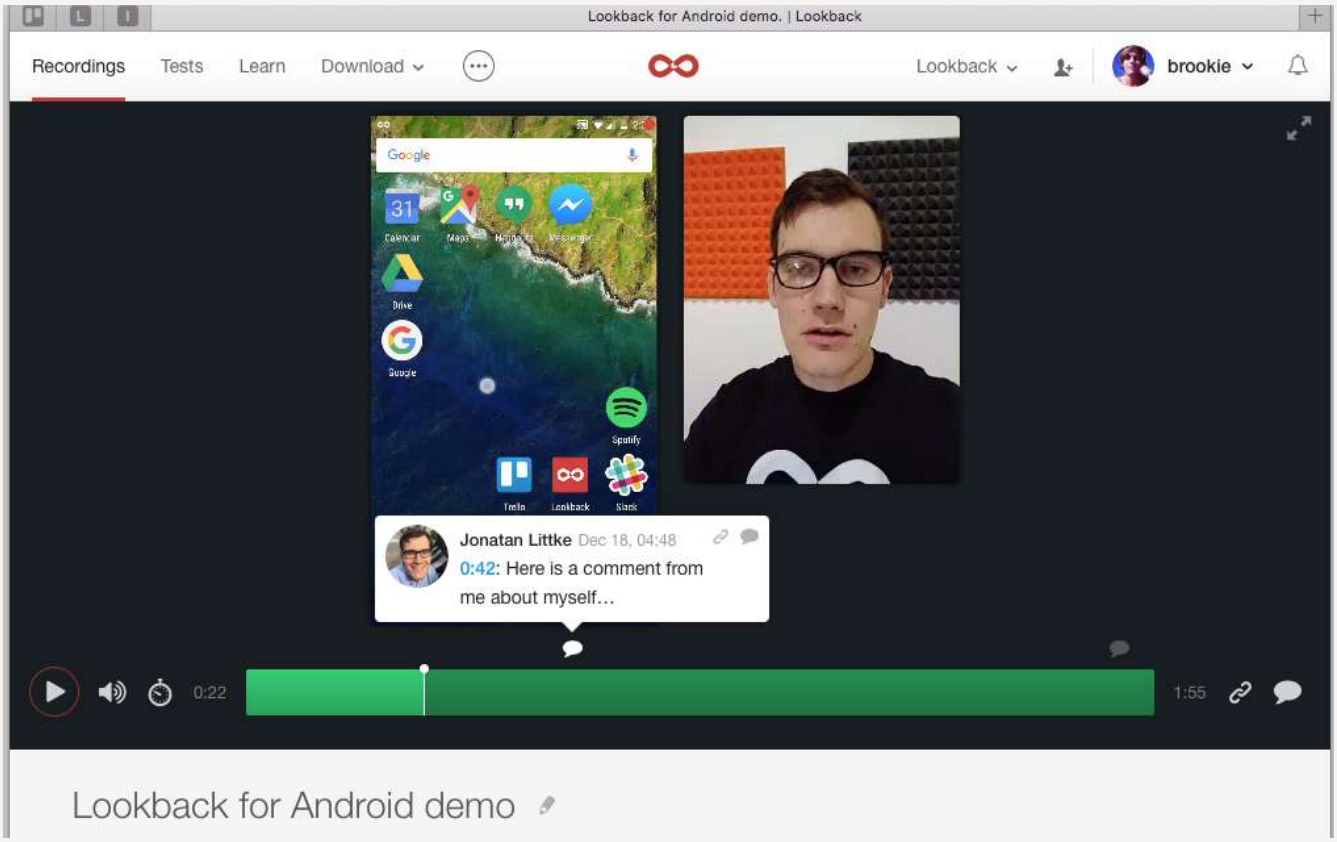


Image source: appinstitute.com

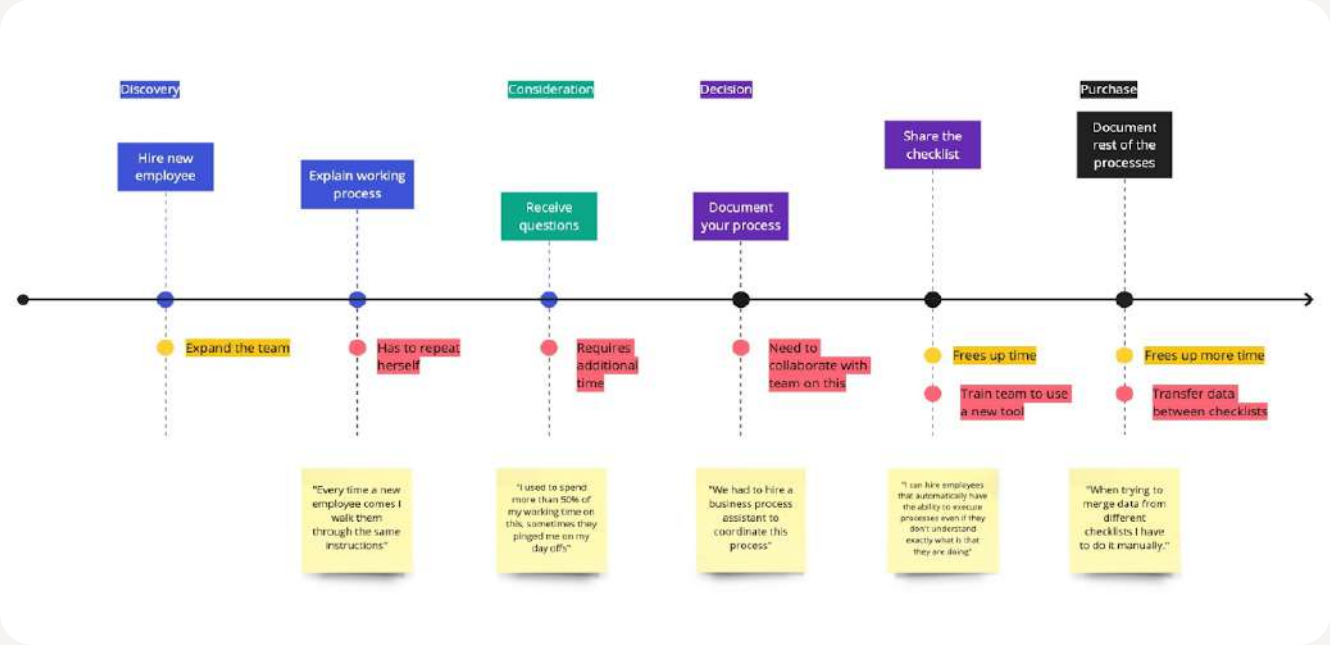
- Free trial: 14-day free trial
- Pricing: starts at $99 per month

The tool allows you to broadcast your researches and sync all your customer feedback on a collaborative dashboard to share it with your team and stakeholders. The best part is the ability to add comments right on the seekback while watching and examining the videos.

UX research presentation tools

✓ Miro

There is a lot of magic in the Miro UX tool. If you're a visual person, like most designers, this app will make the visual parts of your brain shake with delight. We at Eleken love this tool, we even included Miro's website to the list of our favorite landing pages.



Daria's customer journey map, made in Miro

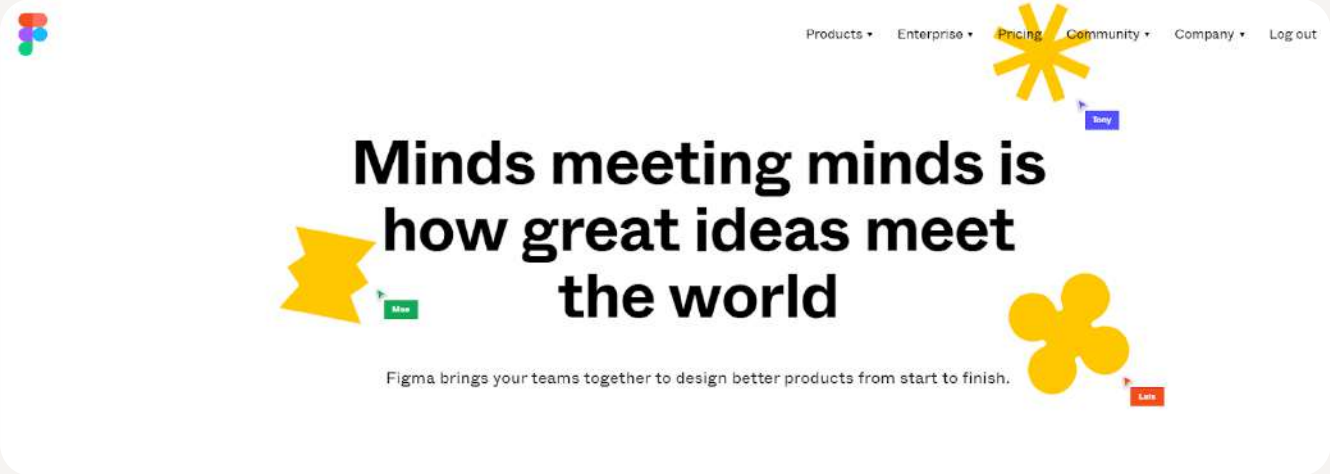
It is a simple and pleasing to the eye collaboration whiteboard that works perfectly as a free-form ideation tool. We use it at the discovery phase of UX research for mood boards, user flows, customer journey maps, UX audit, competitors and feature analysis.

Daria, our UI/UX designer and Miro's advocate, says she prefers this tool for her research because it's "cut out for making schemes and models, with an ideal balance between default features and flexibility".

- Free trial: there's a freemium option that gives you 3 editable boards
- Pricing: for an unlimited number of boards, prices start at $8 per member per month

✓ Figma

Just recently, Figma enabled switching between different accounts and workspaces, and now, everything about Figma is lovely. Everything.



In Figma We Trust

We use Figma for UI/UX design, for drawing illustrations and logos, and for almost everything else. Moreover, we use Figma to present the results of UX research. Those presentations may be shown in a prototype view or saved as pdf sequences.

Much like Google Docs, Figma allows multiple designers to work with a single document, and it's probably the main reason why it clearly surpasses the competitors.

- Free trial: freemium tier for 1 team project
- Pricing: for an unlimited number of projects, the price starts at $12 per editor per month

Who's responsible for UX research?

The easy answer would be “the UX researcher”, but the reality is that UX research is something that all the team members should prioritize: from the executives, who make decisions about allocating resources to research activities, to developers, who have to understand why they have to iterate one more time just because user testing showed a slightly different task time.

The main user researcher’s role is to listen to users, gather data from them, and translate it into valuable information for the design team.

While in huge companies there may be many UX researchers, in small startups it is common to have one person perform the role of both UI/UX designer and UX researcher.

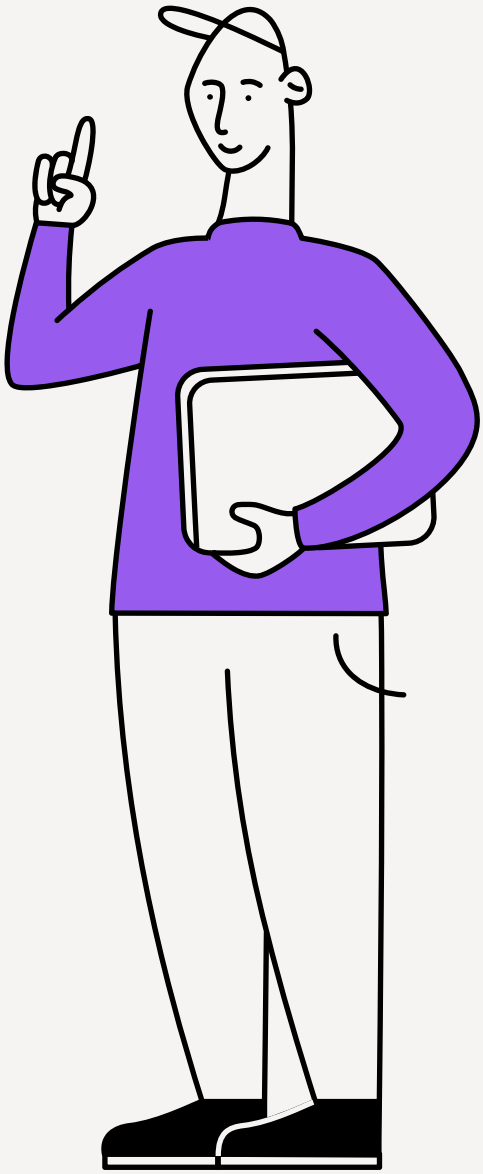
That is how we work at Eleken design agency: our product designers have expertise in both UX design and research and thus can have a wholesome look at the project. In our case, the narrowing comes with the focus on one type of business: we work exclusively with SaaS products.

Want to get your UX research on track right now?

AS SOME WISE MEN HAVE SAID

Never put off till tomorrow what you can delegate to someone else today.

Delegate us your research →



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