UX Design Principles & Best Practices Guidelines

"Methods" will not solve the world's most difficult problems. Only hard work, persistence and life experience can bring about the real change that we as designers strive for.

Introduction & Objective

The purpose of this document is to outline the **UX Design Principles & Best Practices Guidelines** to be followed by UX design team, it will also help Business Analyst in requirement gathering and project manager to understand the process and review the project deliverables. These guidelines provide a check list for reviewing, evaluating and adherence to the industry standards.

The immersive user experience is based on providing meaningful and relevant experiences to users based on solid ux process, including aspects of branding, design, usability and functionality.

Here are a few key reasons how UX design principal and best practices can help any business:

1. Customer Acquisition and Retention
2. Customer Satisfaction
3. Improved Consistency
4. Increased Productivity
5. Brand Building
6. Increased Conversion
7. Reduced Development Cost, Time, and Support
8. Avoid common errors
9. Faster development
10. Greater control
11. More user engagement
12. Gaining Credibility
13. Understanding Problems
14. Reducing the Resource Burden
15. Improving Estimation

This document is not intended to be a series of explanations of how to design but how to deliver a great user experience by using industry best practices and design principles.

Audience

1. UX Designer
2. Visual Designer
3. Business Analyst
4. Project Manager
5. Development Team

Introduction to Design & brief History of Design

As a designer, it is important to understand where design came from, how it evolved, and who shaped its development. The more you deal with past, present, and future design trends, styles, and designers, the bigger your problem-solving toolbox. The bigger your toolbox, the more effective you can be as a designer.

Cueva de las Manos in Perito Moreno, Argentina. Via Wikipedia

It looks as if human beings have constantly had an inherent force toward art, evidenced with the aid of using the early cave artwork relationship lower back to prehistoric times. Subjects range from animals at hand imprints to activities like hunting, and they have got been discovered all around the world (Australia, Spain, Indonesia, France, Argentina, simply to call a few). Historians debate the exceptional information as to who those had been intended to talk with (whether or not every different or their gods), however one element it really is clean is, proper from the start, humanity displayed a knack for speaking with visuals.

Good design is much more than creating an attractive product. It's about creating a positive user experience at every point of contact and interaction. Design influences the way we think, our feelings, and on our decisions.

When we think that there is no part of our day to day that design does not affect, from the products we buy to the spaces in which we live and work. Whether we are aware of it or not, design surrounds us, design is at the center of everything we do, be it digital product, industrial design, game design, etc.

UX is simply a user experience. It refers to what a user experiences when interacting with a product, service, or system. You may be wondering why some people prefer one product to another or buy Brand X products over Brand Y? It all comes down to experience.

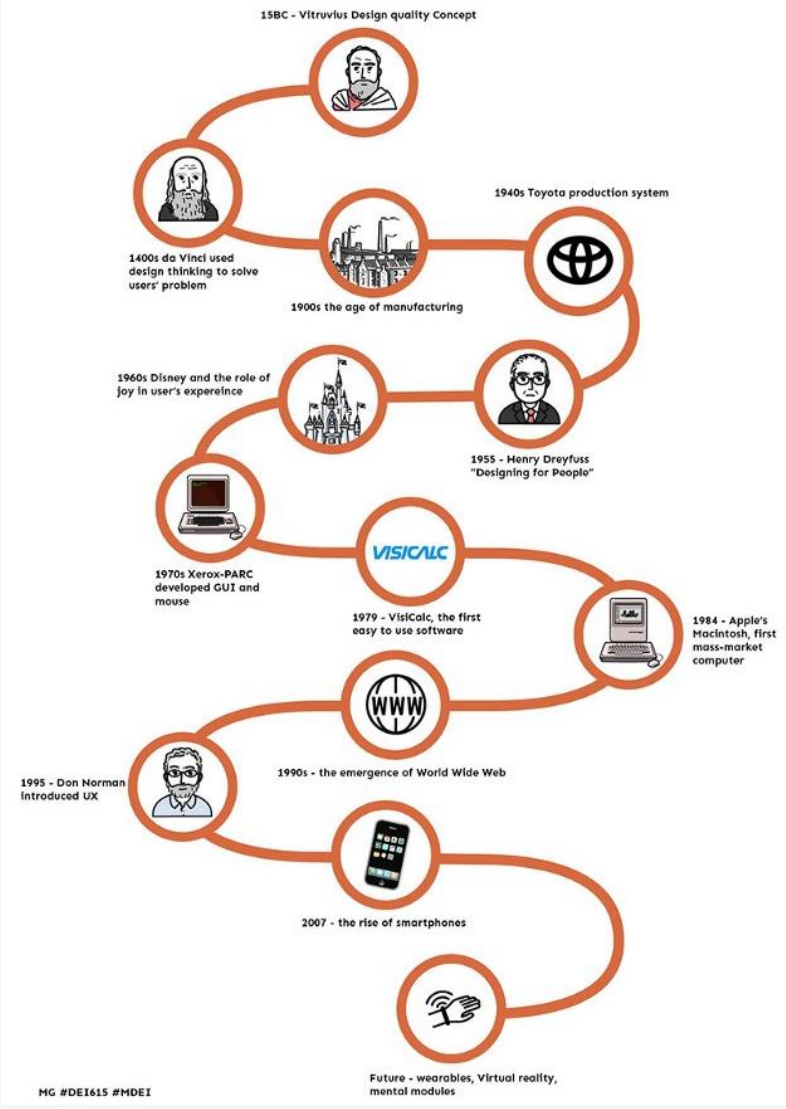
The interaction builds a relationship between the product and the user. In fact, it creates a portal that establishes a user's relationship with the brand. Our perception is formed from the moment we enter the store, interact with the seller, purchase the product, unpack it and use it. For example, Apple and Nespresso use this concept to create a customized experience for their customers. Thus, using UX to stand out from the competition.

A great experience is an inherently user-centered experience that puts the user at the center of the design and development process. This is where the meaning of UX comes in. This is beneficial for both users and businesses.

The goal of UX is to create a smooth and fluid experience. When designing and creating a product, the designer takes into account all information, details and use cases. Thus, many disciplines overlap and interact in this process.

Design is not art. Design has to function. Art is meant to provoke thought and emotions, but it doesn't solve problems.

Because "ART" is open to interpretation and design is communicating a clear message. It's about solving a problem. If design has to be explained, it didn't serve its purpose. Design is focused on achieving solutions with a process that is used to systematically solve problems; great design is not just a solution, it is the elimination of the problem.



UX as we know it today, but how did it evolve into its current form over time?

Although it is a modern field, the basic principles of UX are old. A Roman architect named Vitruvius introduced the concept of **design quality**. In his book De architectura he argued that a structure must have three properties: firmitas, utilitas and venustas. This means that a structure must be durable, usable and beautiful. The concept of him formed the basis of other works, especially Leonardo da Vinci. In the 14th century, da Vinci created a conveyor belt to move food from the kitchen to the dining room. Although his invention was a failure, it was one of the first documented attempts to use design thinking to solve a user's problem.

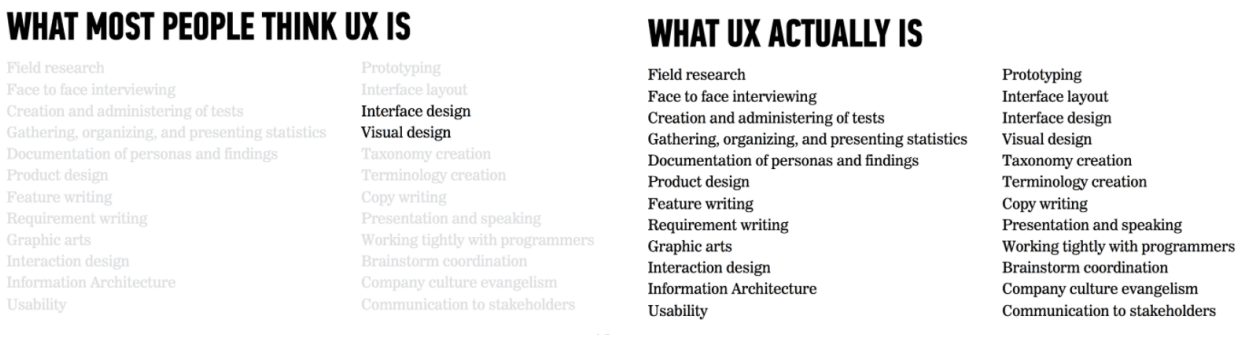
At the turn of the 19th and 20th centuries, production increased. The main emphasis was on the use of technology to improve production efficiency and increase profits. In the 1940s, Toyota implemented a humane manufacturing process. Instead of focusing only on technology, the focus is now on making technology fit for human capacity. Then, in the **1950s, Henry Dreyfuss** wrote a book called "**Designing for People**". In his book, Dreyfus approached industrial design in the same way that a UX designer approaches it today. He explained that product development should be focused on the needs

and context of the user. Holistic thinking should be applied to all stages of development, from design processing to final packaging. In addition, he emphasized the need for research, prototyping, testing and replication of products. The idea of using pleasure and emotion to create user experiences was introduced by Disney in the 1960s.

In the 1970s and 1980s, the design of personal computers and interfaces was born. Xerox-PARC developed the graphical interface and mouse, VisiCalc was introduced as the first easy-to-use software. In 1984, the Macintosh was born, the first mass computer. Thus, Apple began to focus on the user context and interaction with the product. Www (World Wide Web) was introduced in the 90s and offered richer possibilities for visual design. In 1995, Don Norman, vice president of Apple Advanced Technology Group, coined the term UX.

> *"I invented the term, UX, because I thought human interface and usability where too narrow. I wanted to cover all aspects of person's experience with a system that includes industrial design, graphics, interface, physical interaction and the manual".*
> *— Donald Norman.*

What most people think UX is and what UX is?

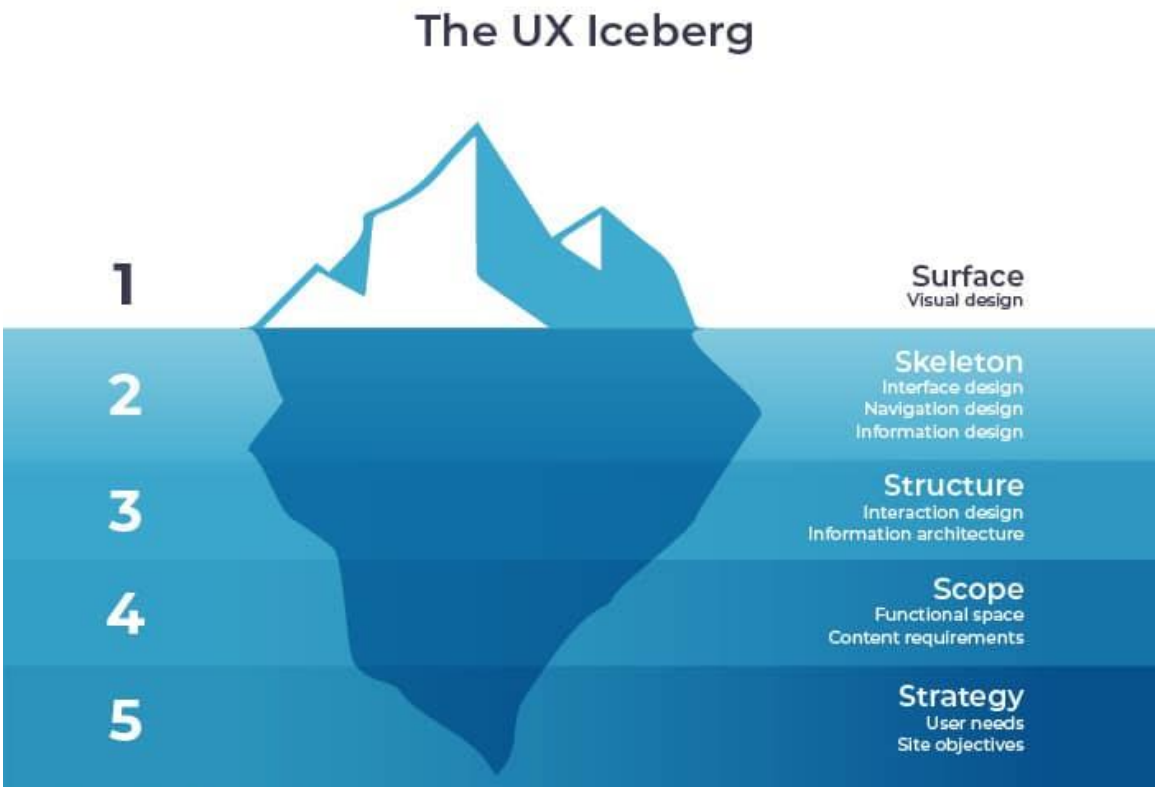


UI design isn't always UX. UI refers to the actual user interface of a product; the visual layout of the screens a user navigates when using a mobile app or the buttons they click while browsing a website. User interface design deals with all the visual and interactive elements of a product's interface, from typography and color palettes to animations and navigation touchpoints (such as buttons and scroll bars). You can read more about the work of the UI designers here.

UX and UI go hand in hand, and the design of the product interface has a great impact on the overall user experience. Read this guide to learn more about the difference between UX and UI design.

UX design is everywhere: the design of a supermarket, the ergonomics of a vehicle, the ease of use of a mobile application. While the term "user experience" was first coined by Don Norman in the 1990s, the concept of UX has been around for much longer.

One of the common misconceptions about UX is that it only deals with visual design. In fact, the visual design is the only visible layer of different layers that includes the UX process. One way to understand how UX works is to imagine an iceberg. An iceberg is a large floating ice sheet. The top part is visible, but not the massive part submerged under water. UX is very similar to this. It consists of various basic elements that are not visible on the surface. What people see is the final interface that is created.



Another way of thinking about UX is the intersection of science and art. Much quantitative and qualitative research is used to achieve results in this process. From user research, analysis, prototyping to testing. It is also an art form as it generalizes solutions, assembles components and includes a wide picture to meet the needs of users.

Why UX is important and its benefits 

UX Design strives to provide the right solution in the right way at the right time and delight people when interacting with the digital system. It is important to engage an experienced UX designer to gain a deeper understanding of the user and optimize digital products with the goals of stakeholders and end users in mind.

UX designers have a knack for replacing others and empowering them - "walking a mile in the user's place" - which allows them to create value in the relationship between brands and consumers.

After all, if your design is considered an investment in product success, engaging early on with a good user experience designer is a great way to solidify that investment in the long run.

Whether you're trying to intentionally create a good user experience or not, people will always have an experience (good or bad) when using your product or system. For consumer products, a good user experience is essential to selling, and a bad user experience can lead to the following negative consequences:

1. Decreased sales
2. Dissatisfied customers
3. Poor ratings and reviews
4. Negative word of mouth
5. Negative impact on brand
6. Increased need for documentation and training
7. Increased support requests and costs

In the case of business systems used by employees, the emphasis is not on sales, but on efficiency, effectiveness and productivity. Business systems with a good user interface help employees work efficiently, productively and concentrate on important work. Systems with a poor user interface can lead to the following consequences:

1. Decreased productivity
2. Increased errors
3. Increased support costs
4. Increased training costs
5. Decreased job satisfaction
6. Increased employee turnover

The business impact of user experience

	Bad UX	Good UX
Sales	Lower sales	Higher sales
Customer Satisfaction	Dissatisfied customers Fewer purchases Fewer renewals	Satisfied customers More purchases More renewals
Impressions of the product and the company	Poor ratings and reviews Negative word of mouth Negative feelings about brand	Good ratings and reviews Positive word of mouth Positive feelings about brand
Documentation	More documentation needed Higher costs	Less documentation needed Lower costs
Training	More training needed Higher costs	Less training needed Lower costs
Support	More support requests More support personnel needed Higher costs	Fewer support requests Fewer support personnel needed Lower costs
Productivity	Lower productivity Higher costs	Higher productivity Lower costs
Errors	More errors Higher costs Customer dissatisfaction	Fewer errors Lower costs Customer satisfaction
Employee satisfaction	Lower satisfaction Lower productivity Poor product quality Poor customer service Increased absenteeism Higher turnover Increased hiring and training costs	Higher satisfaction Higher productivity Higher product quality Better customer service Decreased absenteeism Lower turnover Lower hiring and training costs
Development costs and time	Longer projects Missed requirements Problems discovered late in the process More rework to fix problems Higher costs	Shorter projects Better requirements definition Problems discovered early during the design process Lower costs

Reduced Development Cost and Time

Integrating user experience design activities into the standard software development process is likely to add time and cost to projects. However, these activities save you time and money by designing the right solution from scratch and finding and fixing problems early in the project when changes are easy and inexpensive. At least. When the user interface is designed by someone who knows and applies human factor principles and best design practices, many user experience problems are avoided. Iterative usability testing and redesign identify and resolve issues and confirm design direction. Before development begins, both the company and the user validate the design, avoiding costly change requests due to unmet requirements and usability issues at a late in the development process.

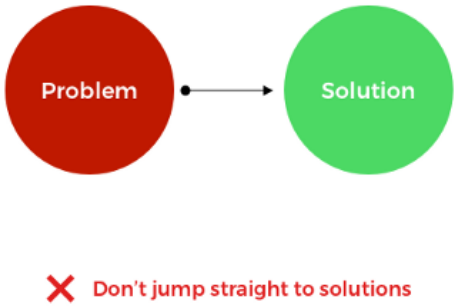
It is much cheaper to make changes during the requirements definition and design phase than to make changes during or after development. Forrester estimates that for every $ 1 to fix a problem during design, it will cost $ 5 to fix the same problem in development, and it will cost $ 30 to fix the same problem after the product is released.

Examples of reduced development cost and time

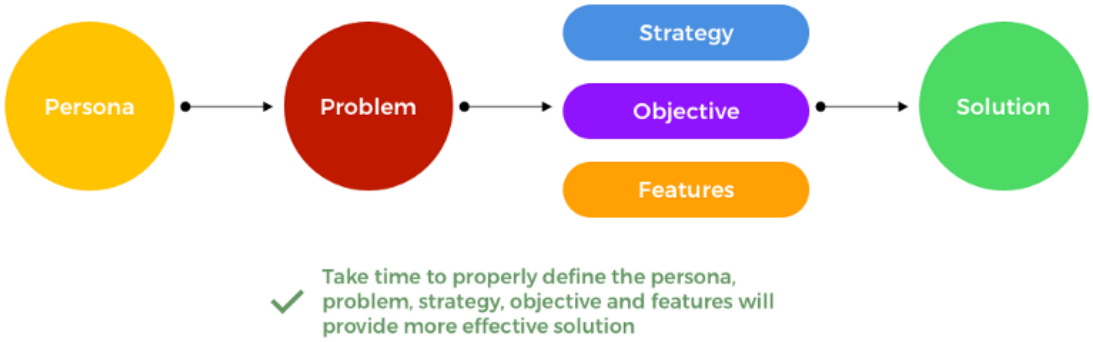
Benefit	Details
Cost of fixing usability problems down 60 – 90%	By correcting usability problems during the design phase of their website, American Airlines reduced the cost of those fixes by 60-90%.
Reduced defects by 79%	Sodala Software Company introduced use case scenarios into their development process to model the design around user needs, reducing defects by 79% and increasing customer satisfaction.

How do we solve a problem in UX

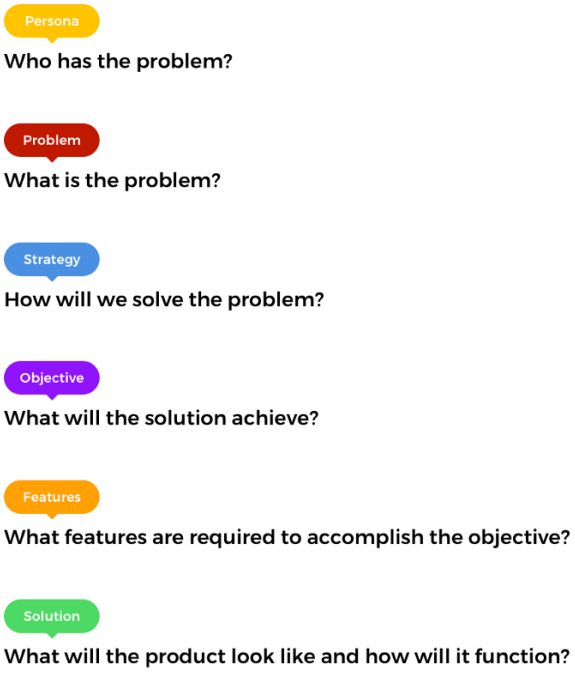
When a client comes to the designer with a problem, most of the designers jump straight to solutions.



Solving problems the UX way looks like this



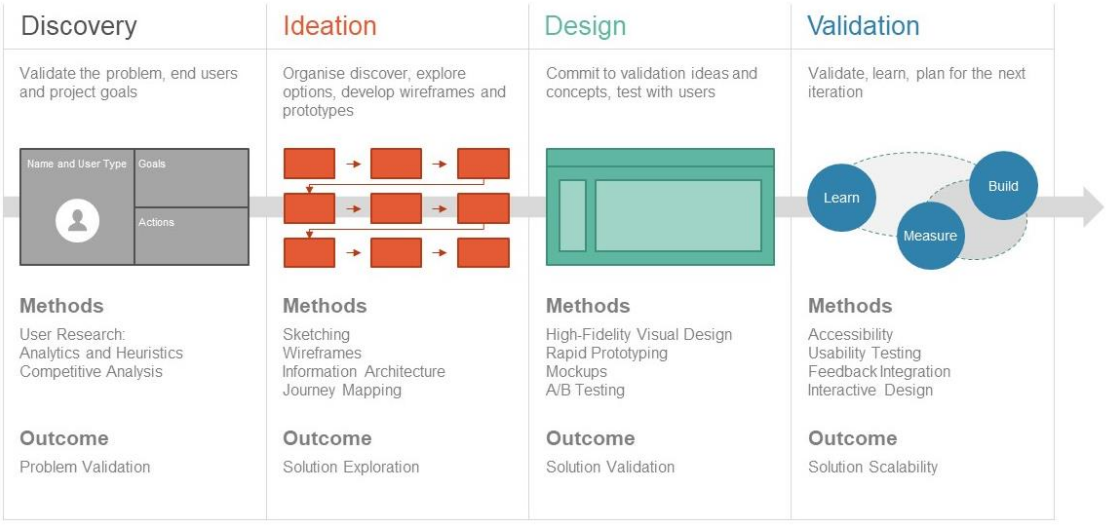
Smart user experience design starts by identifying the problem and guiding all ideas to solve that problem. Before starting to solve problems, let's answer these questions.



The UX process

A method is a standardized, repeatable, structured, and systematic way of doing something. run counter to the ethos of creativity, about the magic of creating something out of nothing.

Adapt your design process for the product you design UX process is a make-it-or-break-it aspect of UX design. Without a solid UX process, a designer could be completely moving in the dark. A clear and concise ux development process, on the other hand, makes it possible to craft amazing experiences for users.



General UX design flow. The UX process depends heavily on the project.

Many designers believe that there's one universal UX process that can be applied to all projects. Unfortunately, there's no such thing as one-size-fits-all UX design. While it's possible to define individual steps for each project, a precise UX process should always be selected based on project requirements — each project is unique and has its own needs. This means that to create the best possible user experience a designer should be ready to adapt their design process based on project specifics. For example, if you are designing a new product you might need to spend more time on user research and requirement clarification. But if you're redesigning an existing product then you might need to spend more time on design validation (conducting usability and A/B testing, or working with analytics reports).

UX Design Best Practices

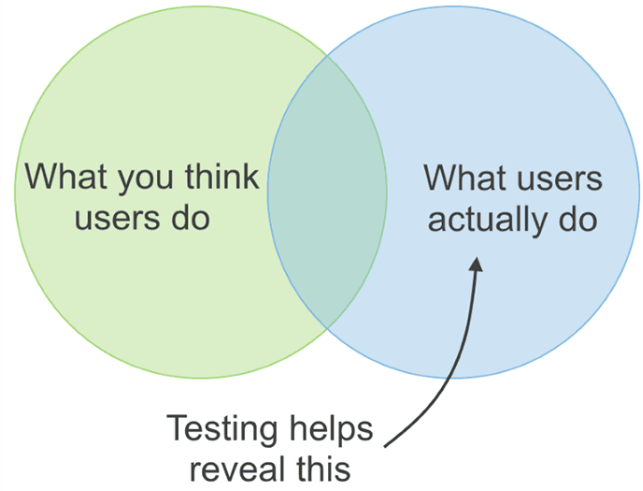
The best practices for designing good user experience and Interface: Everything stems from knowing your users, including understanding their goals, skills, preferences, and tendencies. Once you know about your user, make sure to consider the following when designing experience and interface:

1. **Know your audience:** User research is a natural first step in the design process. It should come as no surprise that one of the most important factors you should consider when designing a product is the audience. If you plan to design a product your users will love, you must have an idea of what your audience actually wants and needs. And this means user research should be an essential part of the UX design process. It's critical to keep your users top of mind before you start designing! This will allow you to provide value for people who'll use your product and focus on benefits instead of features.

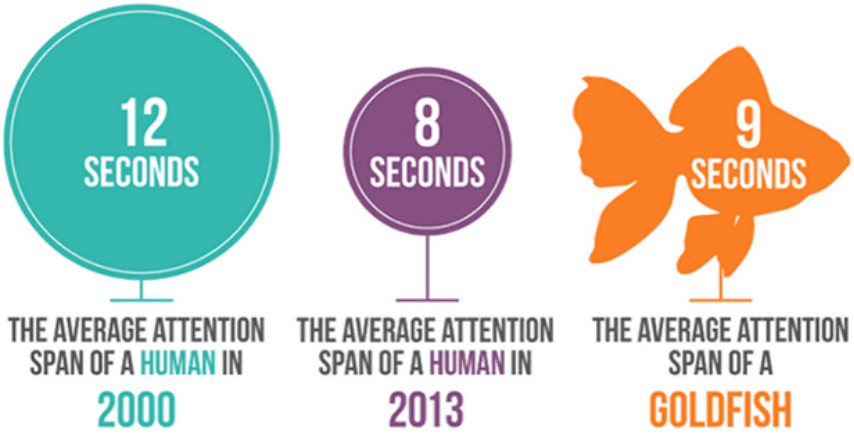
2. **You are not the user:** Testing with real users is an essential part of the design process. Designers often assume that people who will use their interfaces are like them. As a result, designers project their behaviors and reactions onto users. But thinking that you are your user is a fallacy. This effect in psychology is called the false-consensus — a tendency to assume that others share our beliefs and will behave similarly in a given context.

   Most probable, the people who'll use your product have different backgrounds, different mindsets, different mental models, and different goals. In other words, they are not you.

   There is a technique the helps designers overcome false-consensus bias, called usability testing. If you want to build products that users love, then you have to focus on testing. Testing with real users (not your teammates, friends, or family) allows designers to learn how to create products that are right for those who will use them. This may be time-consuming, but it's the only way to be sure that you're moving in the right direction.



3. **Adapt design for short attention spans; don't overwhelm users with too much information:** An attention span is defined as the amount of time someone concentrates on a task without becoming distracted. A 2015 study conducted by Microsoft found that the average human attention span has declined from 12 seconds to 8 seconds. This means that we now have a shorter attention span than goldfish. Designers need to adjust to cope with this behavior, with the goal of getting people the information they need as quickly as possible.



Designers should simplify interfaces by removing unnecessary elements or content that does not support user tasks. One technique that allows designers to achieve that is functional minimalism. At the same time, this doesn't mean that experiences should be limited. All information should be valuable and relevant.

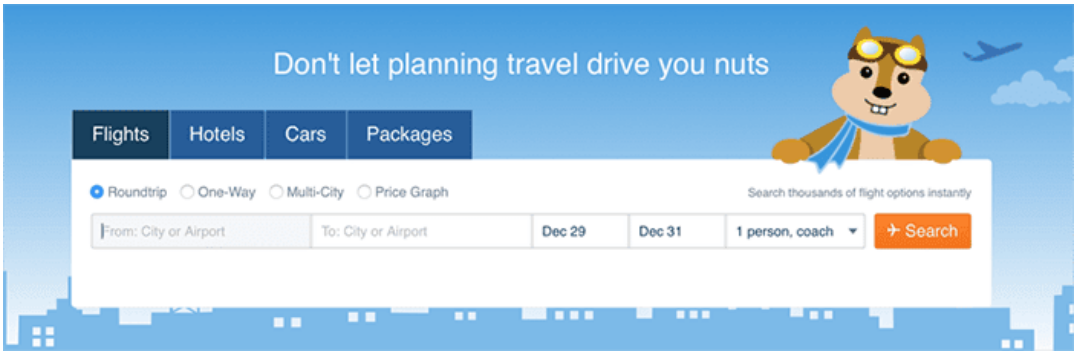
4. **Prototype before you build a real product; The design phase for digital products should include a prototyping stage:** Skipping prototyping and putting a lot of effort into building an actual product is another common (and dangerous) mistake among many design teams. When we put a lot of effort into creating something that we believe is great, it can be really stressful to realize that our solution doesn't work as expected when we release it into the wild.

   Prototyping is creating a model of a product so that it can be tested. Prototyping tools allows you to test your hypothesis before spending time with an engineering team building the actual product. Designers can use different design techniques for prototyping. One useful prototyping technique is called rapid prototyping. It's a popular way of quickly creating the future state of a product, be it a website or an app, and validating it with a group of users.

5. **Use real content when designing; Avoid Lorem Ipsum and dummy placeholders:** Almost every product is based around content, whether that's text, images, or videos. It can be said that design is an enhancement to the content. Yet many designers don't take content into account during the design phase — they use Lorem Ipsum instead of real copy and placeholders instead of real images. While such design might look great on a designer's artboard, the picture might be completely different when the same design is filled with actual data.

   Our goal as designers is to get as close to the real customer experience as possible. Thus, we shouldn't abstract ourselves from the real experience.

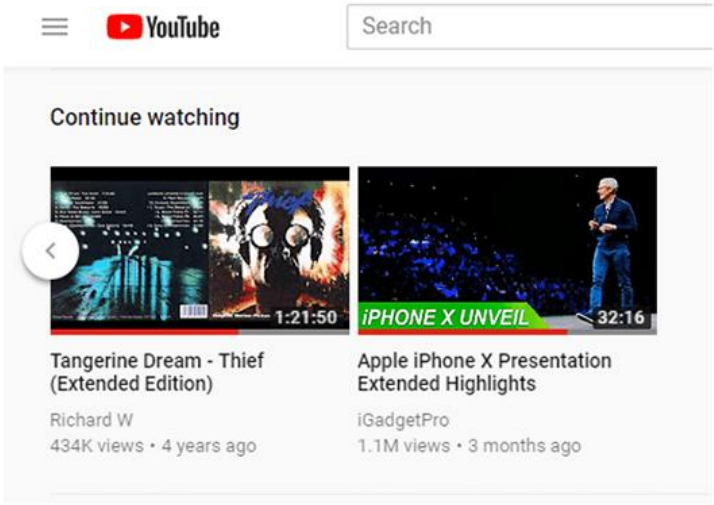
6. **Keep things simple and consistent; the hallmark of a great user interface is simplicity and consistency:** In the context of digital products, simplicity means that's it's easy to understand and interact with a product. Your users shouldn't need to read instructions to understand how to use an app or have a map to navigate through it. It's part of your job as an interface designer to make things clear and subtly guide them from where they are to where they need to go.



The most important elements on Hipmunk's homepage are highlighted to get users to focus on them. This makes it clear to the user what to do next.

Remember to apply the Principle of Least Astonishment to your product design.

7. **Recognition over recall; Showing users elements they can recognize improves usability versus needing to recall items from scratch:** Due to the limitations of human memory, designers should ensure users can automatically recognize how to use certain features of their product instead of making them recall this information. Strive to minimize cognitive load by making information and interface functions visible and easily accessible.

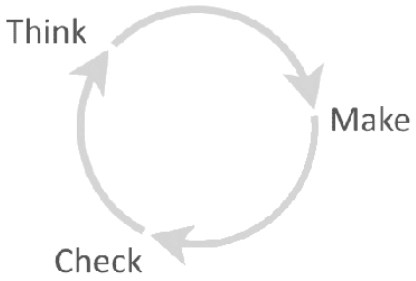


YouTube uses recognition instead of recall by showing users lists of items they recently watched. These lists help users remember to watch a video they may have started a few days ago.

8. **Make design usable and accessible; Design for a diverse set of users that will interact with your products:** When it comes to design, designers often obsess over look and appeal instead of functionality and accessibility. Most of us try to make things look beautiful. Quite often this leads to a situation where aesthetics become more important for designers than usability. Of course aesthetics are important and we definitely should try to make our designs appealing, but only after we have usable products. The most important job of digital products and services is to perform a function. You can find a lot of helpful information on how to make interfaces more accessible in WCAG 2.0 and Material Design guidelines.

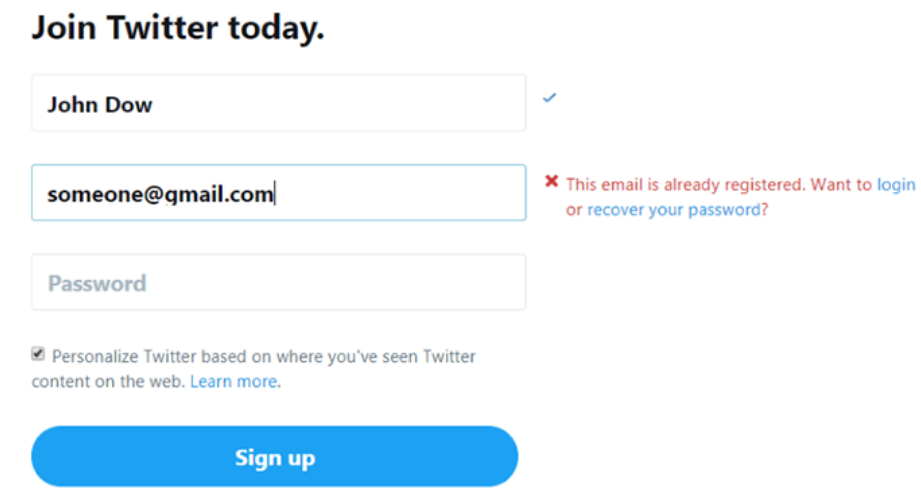
9. **Don't try to solve a problem yourself; Design is team sport — don't work in isolation:** As Lyndon Johnson once said, "There are no problems we cannot solve together, and very few that we can solve by ourselves." Great user experiences are a result of collaboration between designers and developers, stakeholders, and users. There's no such thing as a "solo genius." When designing, you need to work with as many people as possible to get their ideas, insights, and thoughts on your work.

10. **Don't try to solve everything at once; Design is an iterative process:** It's important to understand that UX design isn't a linear process. The phases of the UX process (ideation, prototyping, testing) often have considerable overlap, and usually, there's a lot of back-and-forth. As you learn more about the problem, the users, and the project details (especially any constraints), it may be necessary to revisit some of the research undertaken or try out new design ideas. Don't think that it's possible to make your design perfect right after just one iteration. Instead, refine ideas to the point where you can test them with real users, collect valuable feedback, and iterate based on this feedback.



UX design isn't a linear process. To make great products, you need to make lots of changes and test them. The key is to define assumptions, test them, refine, and repeat.

11. **Preventing errors is better than fixing them; whenever possible, design products to keep potential errors to a minimum:** To err is human. Errors often occur when people engage with user interfaces. Sometimes, they happen because users make mistakes, and other times they happen because an app fails. Whatever the cause, these errors and how they are handled have a huge impact on the user experience. Users hate errors and hate the feeling that they triggered such behavior even more. Thus, you should strive to either eliminate error-prone conditions altogether or check for them and notify users before they commit to the action.



Twitter prevents users from entering a wrong email. The service suggests the action — you can either login to your account or reset the password.

12. **Offer informative feedback; an app or website should always keep users informed about what is going on:** As one of the original 10 of Jakob Nielsen's heuristics for usability, visibility of system status remains among the most important principles in user-interface design. Users want to know their current context in a system at any given time and apps shouldn't keep them guessing — they should tell the user what's happening via appropriate visual feedback. Providing instant visual feedback, such as an animated indicator when a user initiates an operation, is a great way to inform users that an interface is working.

You can use a simple animation, such as a loading spinner, as a feedback message to inform your users that the system is processing a request. Image by Tumblr.

13. **Do Not Put Everything in a Single Screen:** Putting all of the application's menus, features, and buttons in a single screen is a bad UX practice, but one that is commonly seen. In this scenario, UX Designers and Developers start with a tight interface, but over time they add features that result in a screen full of buttons.
    The arguments for putting everything onto a single screen include the following:

    - "Fewer clicks are needed"
    - "An overview is created"
    - "Users hate scrolling"

    To a UX Designer, this kind of app looks like a Swiss Army knife with all the tools unfolded, but the only one being used is the bottle opener.

14. **Avoid Overwhelming Design:** Packing all the options for your app into one screen may seem like it creates overview, but your brain can only understand nine options at a time at best. And let's be honest, the end-user may not use 90% of your app's buttons that often, so there is no need to overwhelm them.

15. **Prioritize Visual Proximity:** Buttons should be close to the data that they influence. This means that when you have fewer buttons on one screen, you gain visual proximity.

16. Remember, Users Do Not Hate Scrolling!: The "users hate scrolling argument" is often a side-effect of being unable to provide an end-user with the right context at the right time. The workaround is then forcing as much information as possible into a single screen to help create context.

    The issue here is not the need to scroll, but the amount of information on the screen. Placing more information higher on the page does not mean the end-user will necessarily absorb that information. It may make them tire of your app more quickly and even leave.
    For more information, see Miller's Law and the Law of Proximity.

17. **Do Not Put Everything in Drop-Down Menus:** The arguments for using drop-down menus and packing them full of options often include the following:

    - "There will be more focus and less clutter"
    - "It will be easier for the end-user to find what they need"

    The guidelines below address what you really need to consider when designing drop-down menus.

18. **Do Not Double Up the Pop-Ups:** Have you ever pressed a button in a mobile app that opens a notification pop-up window, and in that notification there is another button leading to another pop-up window?

19. **Simplicity, hierarchy, and consistency:** Simple, hierarchical, and consistent UX design enables users to quickly and easily find what they're looking for and do what they came to do. Whenever possible, your product should use the simplest design, the simplest copy, and the simplest actions to get users where they want to go.

Examples of bad design

The world is full of bad product design examples. Door handles, control panels, and keyboards are universally frustrating. Many apps and websites are confusing to users. Wearable technology may be the future, but several large companies have been derided for launching lackluster products, like glasses.

Bad design makes life more complicated. We often see this in examples of bad product design. An object is intended to make a task easier or faster, but it ends up confusing the user or failing to perform as expected. Bad design is also unnecessary, meaning it leads to objects that aren't truly needed.

Good product design can be simple or complex, but ultimately, it provides people with things that they actually need, things that improve their lives. By contrast, poorly designed products are superfluous, confusing, and typically frustrate users. Good design is a byproduct of understanding the needs of users.

Examples of Design Gone Terribly Wrong:

1. Ever come across a confusing sign that just can't be explained?

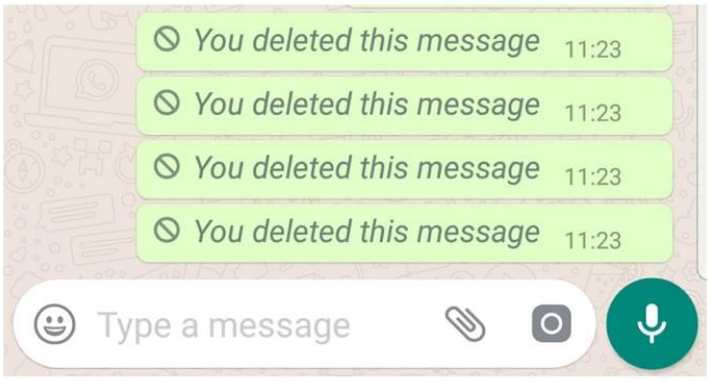
2. Social Media Icons on Print Ads: Why are social media icons in print ads? A magazine is not a computer— no one can click icons!

3. Pedestrian Countdowns: Pedestrian countdowns are supposed to reduce accidents. But studies have suggested that they in fact increase accidents. The study speculated the increase could be from motorists who speed up when they see they have little time left to cross an intersection.

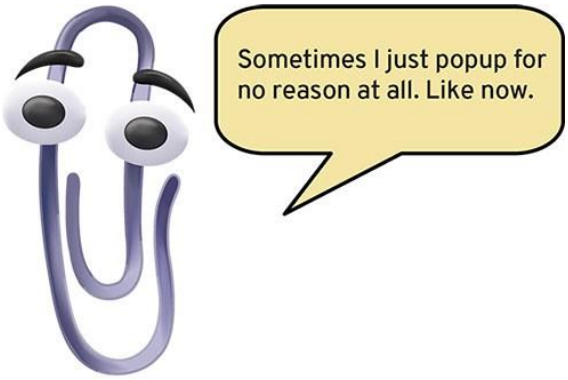
4. Doors that don't indicate which side to push: You have a 50% chance of getting this door right—which side is the hinge on!?

5. Whatsapp Deleted Message Feature: You might have come across this scenario - you draft a personal message for your close friend and accidentally send it to somebody else. You want to delete the message and not let the person know and yes, you can do that. Can you pretend like it never happened though? No.

   On WhatsApp, when you try to delete your message for everyone, it hides the content of the message but presents both sides with a “message deleted” message. Informing the recipient that the sender has deleted a message defeats the purpose of deleting it in the first place, doesn’t it?



6. Microsoft introduced a fictional small character called Clippy: here are cases when enhancing a user experience can go wrong. For instance, Microsoft introduced a fictional small character called Clippy in their old word versions. Clippy was created to ease user’s experience by offering guidance and assistance when needed. They tried to create a sense of dialogue between the software and the person. However, it did not create pleasurable experience. Instead it was a source of frustration, confusion and annoyance. It kept popping up when it was not needed, offered irrelevant suggestions and disrupted work flow.

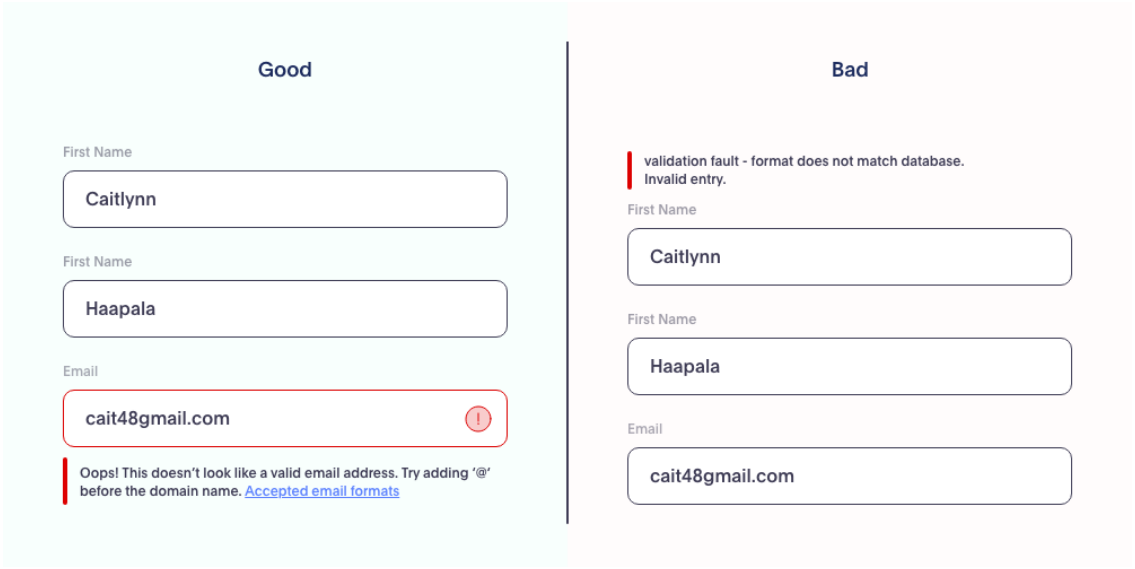


Clippy, Microsoft word user assitant
Recreated by Marim_g

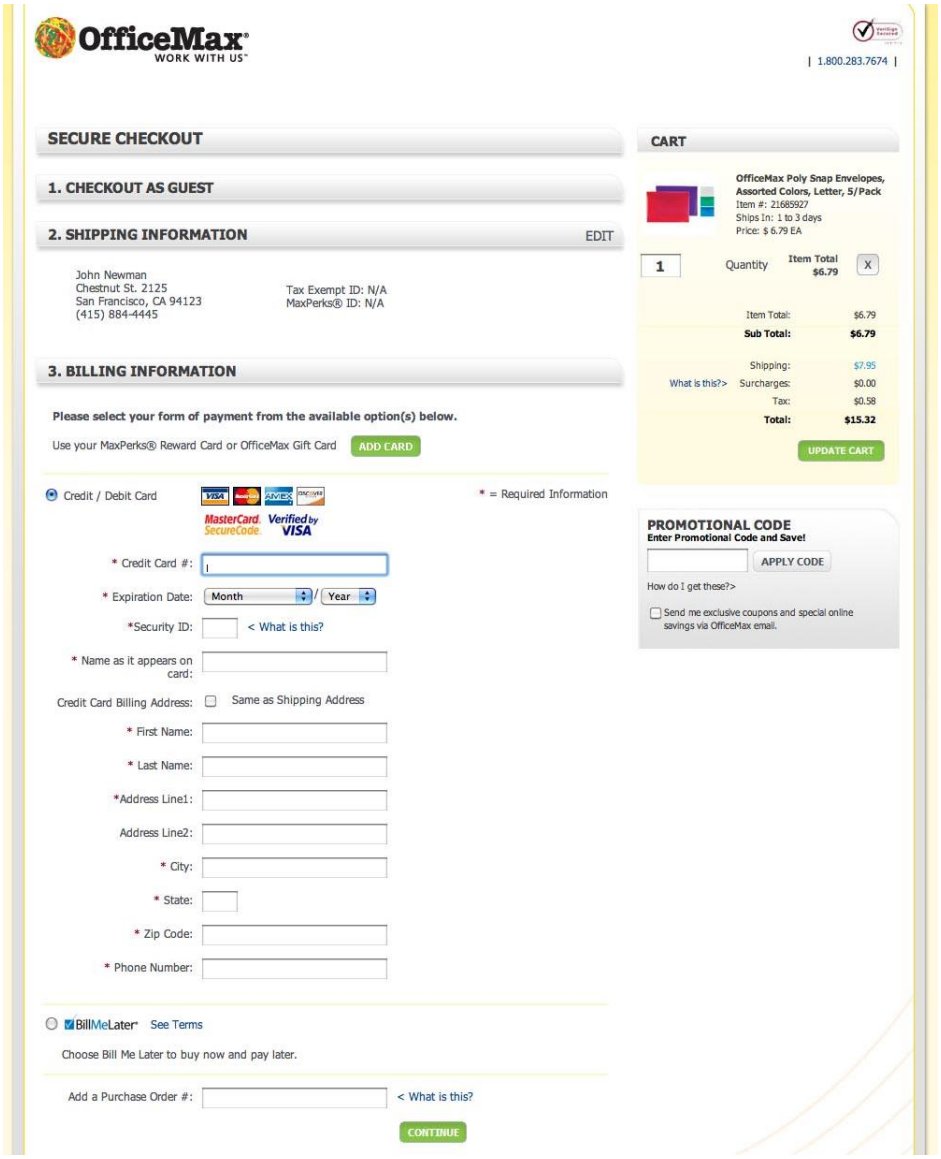
7. Philippe Starck Alessi lemon juicer retrieved from designswan.com: Another design that failed despite its popularity, is Philippe Starck Alessi lemon juicer. Although the juicer invoked positive emotions and focused on usability, it did not succeed in the market. Some complained that it was not functioning effeciently and others said it did not add value. Why did Alessi juicer fail,

despite following design guidlines and principles? Why some products are widely accepted while others not? Finding an answer to this question requires a deeper understanding of humans and their environment.

8. Communicate errors and next steps: When the inevitable errors happen, it's important to communicate to the user. Language, tone and design is important in these communications. It is important to provide a clear and understandable reason for an error (where possible), and give instructions so that the error can be remedied. Leaning on technical language, or database error terms will not be beneficial to the user. Color is also important as it can help indicate the severity of an error or warning.



9. OfficeMax offers two options for payment: **credit card payment** and "**Bill Me Later**", however other option is placed so far that users won't be able to find it. The credit card information is push down the "Bill Me Later" option far down the page



Future of design

"We spend a lot of time designing the bridge, but not enough time thinking about the people who are crossing it." – ***Dr. Prabhjot Singh, Director of Systems Design at the Earth Institute.***

The future of UX design is in a combination of intuitive/predictive AI as well as quality voice/chatbots. Being able to interact with technology in a natural Human-like manner will accelerate technological adoption and increase user satisfaction.

The UX designer future lies in professional's ability to master human-centered design skills such as empathy, storytelling, and design ethics. Though technology trends come and go, understanding human needs and applying them to design is the combination of intuitive/predictive AI as well as quality voice/chatbots. Being able to interact with technology in a natural Human-like manner will accelerate technological adoption and increase user satisfaction.

Embracing the Future of UX: UX professionals are faced with a world dominated by technology, and it's easy to be drawn in by the tools from the latest trend. However, in order to truly embrace and survive the future of UX, it's important to master human-centered design skills while also striking a balance with UX technology.

Working with Developers

A Designer is the champion of users and their needs. Working effectively with developers and the entire team is extremely important to ensure a smooth and cohesive development process. Whatever tools a designer may use to work with developers, the entire team has the responsibility of working in tandem and this can be ensured by the product manager. The key is clear ***communication*** and building a coherent philosophy about the product that everyone on the team understands. After designing, prototyping and testing solutions we/designer should have a more official review with all the dev leads as a final sign off before it gets into development so everyone is on the same page.

When designs have been tested and approved we /designer should use a tool like Zeplin / XD developer hand over the designs to the developers. It's a simple tool to allow developers to pull all the assets and specs for the design without needing to ask us a lot of questions, need documentation or own Sketch. Developers have found it very useful in getting what they need with the least friction."

Final Thoughts

Ultimately, the goal of good user interface design is to make navigating a website or application easy and user-friendly. This encourages users to explore your product or service without feeling that it is too difficult or afraid of failing.

These best practices and guideline will help you shape the ultimate user experience in the context of a user-centric approach.

Remember that every time you complete a design, no matter what rules you follow or how well it performs in your eyes, you should always run usability tests.

Did you know?

- The man who officially came up with the term “User Experience”, however, is Donald Norman. Donald Norman used to work at Apple and the Nielsen Norman Group is an influential thought leader in UX to this day.
- Google announced in March 2018 that they’ll start indexing and ranking the mobile versions of pages over desktop versions.
- Mobile users will leave a site that takes more than three seconds to load. You’re going to need as many speed boosts as you can get since, according to Google, the majority (53%) of your mobile visitors will leave a page that takes longer than three seconds to load.
- 80% of all internet users own a smartphone.
- 53% of mobile users leave websites in 3 seconds.

Tools

Freemake Video Converter converts video and movies between 500+ formats

Adobe Type Kit comes with a vast library of web safe fonts

Google fonts making the web more beautiful, fast, and open through great typography.

A/B Testing Guide : Everything you need to know about A/B Testing - from why to how, challenges to examples

What is Usability Testing tools and guide.

Enhance Your In-App User Experience By Rapidly Testing New Ideas

Wireframing & Prototyping UX Design Tools

Balsamiq is an amazing wireframe tool that’s focused on low-fidelity.

XD is a solid prototyping tool that allows you to create elements and then generate animated transitions (micro interactions) with said elements.

The best thing about Figma is the ability to co-edit live with your colleagues. Besides that, the tool has a nice interface that allows for the insertion of elements, animations and code in order to create high-fidelity prototypes.

Sketch has a clean and easy-to-use interface that'll make it easy for you to create nice-looking mock-ups. Collaboration is an issue though — especially since Sketch works on mac OS only.

Usability Testing UX Tools

User Testing didn't get the creative juices flowing when coming up with the company name, but the platform is great for finding suited candidates to test new designs on. You can talk with users while they engage with your work.

Applause is another platform to source usability testing participants. As a premium player on the market, it takes a hands-on approach and provides you with a qualified UX expert to help you with your usability study

UXCam is a qualitative analytics solution for mobile apps that lets you get a deep understanding of user behavior.

Lookback is another candidate in our list of tools and offers three different types of usability testing

UserZoom offers different versions of finding usability problems: remote or in the lab, moderated or unmoderated.

With Testbirds, it's easy to find the right target group of participants to let them test your mobile app. You can test websites, wearable technology and smart devices.

User Testing is similar to Lookback in terms of features. Although it's a terrific standalone user testing tool with a huge repertoire of experienced user testers (with Marvel you'll need to find user testers yourself), User Testing seamlessly integrates with InVision, too.

Hotjar makes it easy for teams to optimize user experiences by combining user feedback with analytics, heatmaps, clickmaps, scrollmaps, and visitor recordings. Where heatmaps and clickmaps illustrate where users are moving and clicking their mouse respectively, scrollmaps indicate at which point users might be losing interest.

Similar to Hotjar, Crazy Egg is used to optimize user experiences and conversion rates by analyzing user behavior with heatmaps and visitor recordings, although it also includes easy-to-use A/B testing tools to help decipher what is and isn't working.

Flowchart UX Tools

Overflow is a user flow solution that integrates with Sketch, Figma and XD. It lets you impact designs from those tools, add device skins and rearrange them. Then you can connect and annotate them.

FlowMapp offers a low-fidelity, wireframe-style approach to mapping user flows. With it you can build simple diagrams through shapes, lines and icons.

Who doesn't need a reality check? You may think that users flow through your app in a certain way, but what are they actually doing? You can easily find out with UXCam's Screen Flow feature.

Links for More Resources

Apple's Human Interface Guidelines

Another brilliant useful resource to preserve reachable is Apple's Human Interface Guidelines for mobile layout. They are smooth to study with a lovely format and peppered with high-satisfactory practices, tips, and Apple's personal tackle layout principles. For mobile UX designers those pointers are a brilliant useful resource for handing over excessive great person experiences. Apple mobile UI Design Dos and Don'ts

Design Videos from Apple

Google's 25 Mobile UX Design Tips

In 2015, Google published 25 best practices for mobile UX design based on internal research. These tips were recently updated to be more relevant. The author also includes a downloadable PDF with all 25 tips to help you with any UX project on mobile.

Material Design for Android

Material design is a comprehensive guide for visual, motion, and interaction design across platforms and devices. To use material design in your Android apps, follow the guidelines defined in the material design specification and use the new components and styles available in the material design support library.

UX best practices for games on Google Play Instant

Games on Google Play Instant are a great way to remove friction for your players and increase your reach. This guide expands upon the UX best practices for apps on Google Play Instant and presents best practices specific to games.

UX best practices for apps on Google Play Instant

UX best practices for apps on Google Play Instant, Google Play Instant provides a new way for users to consume apps. These apps, called instant apps, are native Android apps, but they run without being installed on the device. Each instant app has a corresponding version that users can choose to install.

Collection of best practices to delight your users - Google

After looking at several hundred retail sites, we realized that there were certain universal UX elements that helped create a frictionless shopping...108 pages

A design system for the federal government.

USWDS Design Principles support and reflect the important guidance codified in the 21st Century Integrated Digital Experience Act. These design principles are intended to help teams across government align on important common goals and better use the design system — to be an evaluative lens for

design and implementation decisions. Regardless of how you build, any USWDS project should support these principles.

Digital Services Playbook

The American people expect to interact with government through digital channels such as websites, email, and mobile applications. By building digital services that meet their needs, we can make the delivery of our policy and programs more effective.

Digital.gov the government community deliver better digital services

We provide popular guides and resources to the federal government with the tools, methods, practices, and policy guidance they need to deliver effective and accessible digital services. Transform how government learns, builds, delivers, and measures digital services in the 21st century.

Usability.gov

Usability.gov is the leading resource for user experience (UX) best practices and guidelines, serving practitioners and students in the government and private sectors. The site provides overviews of the user-centered design process and various UX disciplines. It also covers the related information on methodology and tools for making digital content more usable and useful.

Six user experience guidelines for creating a mobile product.

Designing for every screen A column by Steven Hoober

Usability First is operated by Foraker Labs of Boulder, Colorado. Foraker Labs provides web application development and user-centered design services for clients around the world.

Ethical Design Checklist: A focused tool to guide decision-making for ethical design.

Regret test: A simple heuristic for weighing the effects of design decisions.

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