

05

User experience (UX) design

In this chapter, you will learn:

- » To think about web projects with a UX mindset
- » To recognise and create usable and enjoyable experiences for desktop and mobile users
- » The nuts and bolts of implementing UX strategy step-by-step
- » About a variety of awesome UX tools.

5.1 Introduction

Have you ever visited a website that was confusing, with broken links and long, rambling text? Or, conversely, have you had a web experience that just worked, where everything was clear, easy and enjoyable to use? If so, you've encountered the extremes of user experience design. Excellent UX can delight and convert customers. Bad UX can lead to lost revenue and less chance of repeat visitors.

In practice, great UX can differ based on the audience and context. The principle remains the same, make it easy for your users to find what they need and to convert to your desired goal. UX is the first, foundational step of an effective digital asset.

5.2 Key terms and concepts

Term	Definition
Above the fold	The content that appears on a screen without a user having to scroll.
Accessibility	The degree to which a website is available to users with physical challenges or technical limitations.
Breadcrumbs	Links, usually on the top of the page, that indicate where a page is in the hierarchy of the website.
Call to action (CTA)	A phrase written to motivate the reader to take action such as sign up for our newsletter or book car hire today.
Content audit	An examination and evaluation of existing content on a website.
Content strategy	In this context, a plan that outlines what content is needed for a web project and when and how it will be created.
Convention	A common rule or tried-and-tested way in which something is done.
Conversion	Completing an action or actions that the website wants the user to take. Usually a conversion results in revenue for the brand in some way. Conversions include signing up to a newsletter or purchasing a product.
Credibility	In this context, how trustworthy, safe and legitimate a website looks.
Fidelity	An interface design. A low-fidelity prototype will be basic, incomplete and used to test broad concepts. A high fidelity prototype will be quite close to the final product, with detail and functionality and can be used to test functionality and usability.
Information architecture	The way data and content are organised, structured and labelled to support usability.
Navigation	How a web user interacts with the user interface to navigate through a website, the elements that assist in maximising usability and visual signposting so users never feel lost.
Prototype	Interactive wireframes, usually of a higher fidelity, that have been linked together like a website, so that they can be navigated through by clicking and scrolling.

Responsive design	A design approach that enables a website display to change depending on the size of the viewport or screen, regardless of the device on which it is displayed.
Search engine optimisation (SEO)	The process of improving website rankings on search engine results pages.
Sitemap	On a website, a page that links to every other page in the website and displays these links organised according to the information hierarchy. In UX terminology, this is the visualised structural plan for how the website's pages will be laid out and organised.
Usability	A measure of how easy a system is to use. Sites with excellent usability fare far better than those that are difficult to use.
User-centred design (UCD)	The design philosophy where designers identify how a product is likely to be used, taking user behaviour into consideration and prioritising user wants and needs. UCD places the user at the centre of the entire experience.
User experience design (UXD)	The process of applying proven principles, techniques and features to create and optimise how a system behaves, mapping out all the touchpoints a user experiences to create consistency in the interaction with the brand.
User interface (UI)	The user-facing part of the tool or platform i.e. the actual website, application, hardware or tool with which the user interacts.
Wireframe	The skeletal outline of the layout of a web page. This can be rough and general, or very detailed.

Table 1.

5.3 Understanding UX design

User experience (UX) can be defined as all the experiences – physical, sensory, emotional and mental – that a person has when interacting with a digital tool. The field of UX is full of similar sounding jargon, so here's a quick guide to the terms you should know.

User experience (UX) is the overall satisfaction a user gets from interacting with a product or digital tool.

User experience design (UXD, sometimes UED) is the process of applying proven principles, techniques and features to a digital tool to create and optimise the user experience.

User-centred design (UCD) is the design philosophy that prioritises the user's needs and wants above all else and places the user at the centre of the entire experience. This often entails research and testing with real users of the site or product.

User interface (UI) is the user-facing part of the tool or platform and is the part of the actual website, application or tool that the user interacts with.

Usability refers to how user friendly and efficient a digital product is.

Online UX can be divided into two broad categories:

1. **Functional UX.** This covers the elements of the user experience that relate to actually using the tool, such as working technical elements, navigation, search and links.
2. **Creative UX.** This is the bigger, harder to define impression created by the tool. The so-called 'wow' factor that covers visual and creative elements.

There are six qualities that make up good UX:

1. **Findability.** Can I find it easily? Does it appear high up in the search results? How long does it take me to find something on the site? Does the three-click rule work on this site?
2. **Accessibility.** Can I use it when I need it? Does it work on my mobile phone, or on a slow Internet connection? Can I use it as a disabled person?
3. **Desirability.** Do I want to use it? Is it a pleasant experience, or do I dread logging in?
4. **Usability.** Is it easy to use? Are the tools I need intuitive and easy to find?
5. **Credibility.** Do I trust it? Is this website legitimate?
6. **Usefulness.** Does it add value to me? Will I get something out of the time I spend interacting with it?

NOTE

User experience design roles differ in the skills needed and the functions performed.

NOTE

The three-click rule suggests that a user should be able to access what they need from your site with no more than three mouse clicks.

5.3.1 The benefits of UX

There are some real, tangible benefits to applying UX design to digital marketing strategies.

Good UX is an excellent way to differentiate your brand in the market and give yourself a competitive advantage. If your online touchpoints are easy, intuitive and awesome to use, your customers won't have any reason to look elsewhere.

Good UX research and design allows you to find the best solution for your needs.

Every business, website and online service is unique in some way, which means that the way it is constructed must be unique too.

Amazon's US \$300 million button is perhaps the most dramatic example of how a simple UX fix can impact the business. Amazon managed to gain an extra US \$300 million worth of sales simply by changing their 'Register' button to one that read 'Continue' instead. The number of customers increased by 45% because they no longer felt they needed to go through an onerous registration process simply to fulfil a basic shopping action. In fact, nothing else about the purchase process had been changed! (Spool, 2009).

Every marketer knows that the ideal customer is a happy customer. Customers who love the experience you give them will become loyal clients and possibly even brand evangelists.

Applying UX principles allows you to get your digital tools working earlier, with much better functionality, at a lower cost. You can cut out features and elements that you simply don't need and focus on the core-user experience. This optimised development process in turn leads to sites that are easier and cheaper to maintain, upgrade and support across multiple platforms.

5.4 Core principles of UX design

5.4.1 User-centric design

While this may seem like the most obvious point, it's surprising how often the user is forgotten in the user experience. Business owners, marketers and web developers frequently focus on creating the web platforms they want and think are best, instead of really interrogating what the user needs. Often, the performance of web assets is compromised when the design process is driven only by internal business needs, for instance, ensuring that each department in the company has a space that it controls on the home page at the expense of what the user needs.

When designing for the user, you need to ask the following questions:

- Who is the user?
- What are the user's wants and needs from your platform?
- Why is the user really coming to your website?
- Where is the user most likely to be in their customer journey when they visit your site?
- What are the user's capabilities, web skills and available technology?
- How can the site facilitate the customer journey to conversion and purchase?
- What features would make the user's experience easier and better?

The answers to these questions will come out of user research, as discussed in the **Market research** chapter earlier in this book.

NOTE

The customer journey is introduced in the chapter on **Strategy and context**. It refers to the steps your customer takes when engaging with your brand.

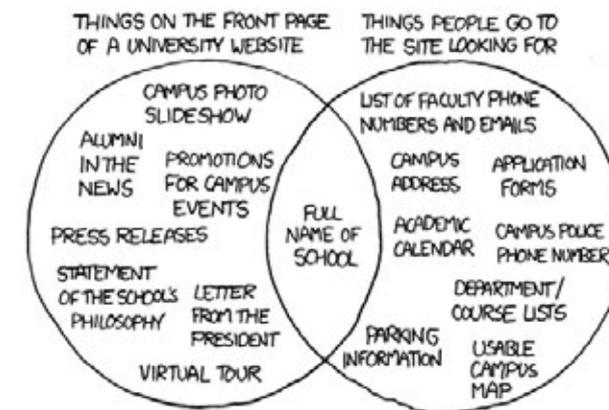


Figure 1. It's essential to give users exactly what they need.

Of course, many users may not know exactly what their wants and needs are. It is the UX practitioner's job to discover these through research and interpret them in the best way possible. Keep Henry Ford's famous quote in mind here: "If I had asked people what they wanted, they would have said faster horses." (www.goodreads.com)

Mobile users

When discussing user-centric design, whatever you have gleaned about the user context must be considered. Today more than half of web traffic originates from a mobile device, with users accessing the Internet through either a smartphone or tablet (Think with Google, 2016). This number is increasing every year and is expected to be over 70% by 2019 (Internet Society, 2015). Therefore, designing for mobile must be a priority.

The context of mobile users affects the way in which they use their devices. Mobile users are:

- **Goal orientated.** Mobile users turn to their mobile devices to answer a question, quickly check email, find information or get directions. They often have a distinct purpose in mind when using their phone.
- **Time conscious.** There are two aspects to this. On the one hand, mobile users are often looking for urgent or time-sensitive information, such as the address of the restaurant they are looking for, so answers should be available as quickly as possible. On the other hand, the mobile device is also frequently used to kill time or as a source of entertainment, such as reading articles on the couch, or playing games while waiting in a queue, so content is also crucial. User research will tell you which of these groups your users fall into and how you need to structure your site accordingly.
- **Search dominant.** Even users who know what they are looking for tend to navigate there via search, for example, typing the brand name into Google, rather than accessing the page from a bookmark or typing the URL directly into the browser bar.
- **Locally focused.** According to Google search data, 30% of all mobile searches are for location (Think with Google, 2016). Since mobile phones are always carried, users turn to them to find information on things in their surroundings, from local businesses to more detail on a product they have just seen.

Usability is especially challenging with mobile. One of the biggest challenges is the sheer number of different device categories and models available. The OpenSignal report from 2014 identified 18 796 distinct android mobile devices, running a myriad of operating systems (The Next Web, 2014).

The limitations of mobile create additional considerations for the UX designer to address to ensure that visitors have a pleasant user experience while visiting the site. These limitations include:

- **Small screens.** Even the largest smartphones are screens many times smaller than a standard laptop and tablets fall somewhere between the two. This means that the user has a much smaller window through which to perceive and understand the website, so it may be difficult to get an overall impression of where things are or what's important.
- **Difficult inputs.** Mobile phones don't come with full-sized keyboards and mice, so they are usually a lot more difficult to operate fluidly and accurately than desktop computers. Touchscreens may be the exception here, although they also have their own pitfalls.
- **Slow connection speeds.** Many mobile phone users, especially in developing countries, are on slow Internet connections. Even fast options such as 3G can often be more sluggish than a desktop equivalent. This makes loading large

NOTE

Some mobile users use their phones for browsing in a similar way one would use a desktop computer. How does your audience use their devices?

websites or images slow and frustrating and can be expensive in terms of data costs.

- **Slow hardware.** Sometimes the slowness comes from the hardware itself. The more basic the phone, the slower its processing components making the simple act of opening the browser and loading a page time consuming.

There are three main approaches to creating mobile-accessible content:

1. Mobile websites (called mobi sites)
2. Native and web applications (called apps)
3. Responsive websites (websites that adapt to the device).

5.4.2 Usability and conventions

Usability is about making the digital assets we build easy and intuitive to use. To paraphrase Steve Krug, don't make your users think: they should just do (Krug, 1997–2013).

One of the most important aspects of usability involves sticking to conventions, which are simply common rules or ways of displaying or structuring things on the web. Popular conventions include:

- Links that are blue and underlined
- Navigation menus at the top or left of the web page
- The logo in the top left hand corner which is linked to take the user back to the home page
- Search boxes placed at the top of the page, using standard wording, such as 'search', or a magnifying glass icon.

Ensure that all website elements, such as menus, logos, colours and layout, are distinct, easy to find and kept consistent throughout the site. There are some key 'don't's' when it comes to building a user-friendly and usable website:

- Never resize windows or launch the site in a pop-up.
- Do not use entry or splash pages (i.e. a page that site visitors encounter first before reaching the home page).
- Flash is no longer used to design websites. Unaided, most search engine spiders cannot effectively crawl Flash sites and Flash doesn't work on many mobile devices.
- Don't distract users with 'Christmas trees' such as blinking images, flashing lights, automatic sound, scrolling text and unusual fonts.

And finally, while the following principles apply to desktop as well, they are especially valid for mobile:

- **Reduce loading time.** Try to keep content and actions on the same page as this ensures better performance as there are fewer page loads. Encourage exploration, especially on touchscreens. Users like to browse elements and explore. This makes them feel in control.
- **Give feedback.** Ensure that it is clear when the user performs an action. This can be achieved through animations and other visual cues.

NOTE

One design approach places 'content first'. This means that you should decide which content to provide on your site depending on whether users are viewing it from a mobile or a desktop computer and then adapt the layout and material to that device.

NOTE

Read more about this in the [Web development and design](#) chapter.

NOTE

Can you think of any other web conventions? How have these evolved over time and how important is it to stick to the rules?

NOTE

There is an increasing number of one-page websites, especially for sites with limited content and large images. One-page sites load quicker. Check out this article that provides guidance on what types of sites should opt for one-page sites: www.webinsation.com/should-i-have-a-one-page-website. This approach is less effective in countries where data costs are prohibitive.



Figure 2. Animations providing feedback to the user about the action they have requested.

- **Communicate consistently.** Ensure that you deliver the same message across all your touchpoints. For example, using the same icons on the website as you would on the mobile app prevents users from having to relearn how you communicate.
- **Predict what your user wants.** Include functionality, such as autocomplete or predictive text. Remove as much manual input as possible to streamline user experience.

NOTE

Mobile users prefer to scroll in one direction.

It's useful to consider usability guidelines to ensure that your website is on track. Stay In Tech provides a usability checklist online at stayintech.com/info/UX.

5.4.3 Simplicity

In UX projects, the simpler option is almost always the more user-friendly one. Even if your service or product is complex, your customer-facing web portals need not be. In fact, it's important to remember that most customers want the most basic information from you, such as "What is this?" and "How does it work?"

Simplicity can mean several things:

- **Lots of empty space.** In design terms, this is referred to as negative or white space. Though, of course, it need not specifically be white. Dark text on a light background is easiest to read. In general, the more effectively 'breathing room' is placed between various page elements, lines of text and zones of the page, the easier it is for the user to grasp where everything is.
- **Fewer options.** Studies have found that people faced with fewer choices generally choose more quickly and confidently and are more satisfied with their decision afterwards (Roller, 2010).
- **Plain language.** Unless your website is aimed at a highly specialised technical field, there's usually no need to get fancy with the words you use. Clear, simple, well-structured language is the best option when creating a great user experience.

NOTE

Read more about this in the [Digital copywriting](#) chapter

- **Sticking to conventions.** As we've said before, conventions are excellent shortcuts for keeping things simple for users. There's no need to reinvent the wheel and try to teach your users a whole new way of navigating a website.



Figure 3. The Fresh Books homepage is clean, simple, inviting and easy to use.

When it comes to mobile, it's even more important to simplify. Show information only when it's needed. While you should ensure that the mobile asset provides all the same information as the desktop equivalent, this doesn't need to be presented in the same format or volume.

5.4.4 Credibility

Credibility refers to how trustworthy and legitimate something looks and is a big consideration for web users when deciding to use your website or not. Here are some of the cues that visitors use to determine the credibility of a website:

- **Looks** – does it look professional and beautiful?
- **Prominent phone numbers and addresses are easy to locate** – this assures the visitor that there are real people behind the website and that they are easily reachable.
- **Informative and personal 'About us'** – some customers want to see the inner workings of a company and are interested in the head honchos. Consider including employee pictures and profiles to add personality to the site.
- **Genuine testimonials** – testimonials are a great way to show potential customers what your current customers have to say about your organisation. Trust is vital and this is one way to encourage it. Video testimonials can be particularly effective, assuming your audience does not face data restrictions.

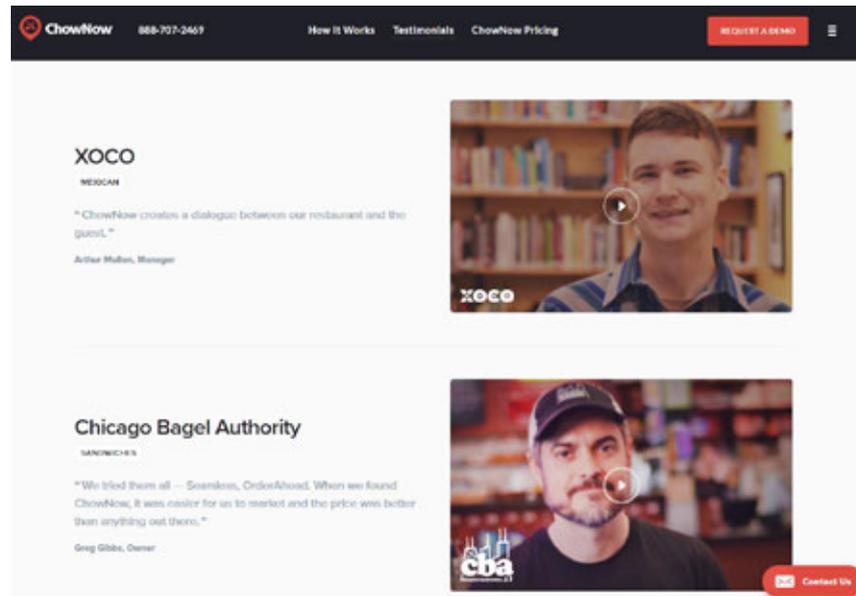


Figure 4. Genuine user testimonials can create a sense of credibility, like this example from Chow Now which includes text and video testimonials.

- **eCommerce** – using a reputable sales channel helps your websites credibility.
- **Social media** – having a social media presence often goes further towards establishing credibility than testimonials, which could have been faked.
- **Logos of associations and awards** – if you belong to any relevant industry associations or have won any awards feature them. Not only does this go a long way towards establishing your credibility, but it will show that you're at the top of your game, a notch above the competition.
- **Links to credible third-party references or endorsements** – this is a way to assert your credibility without tooting your own horn.
- **Fresh, up-to-date content** – a news section that was last updated a year ago implies that nothing has happened since or that no one cares enough to update it.
- **No errors** – spelling and grammar mistakes are unprofessional and while the large majority of readers may not pick them up, the one or two who do will question your credibility. This extends to broken links, malfunctioning tools and interactive elements that don't work as advertised.

5.5 Implementing UX design

The UX design process happens before, during and after the website is being built. It ties in very closely with strategy and research, web development and design, SEO, content strategy and creation and later conversion optimisation.

As discussed in section 5.4, Core principles of UX design, mobile should not be an afterthought, in UX or any other digital endeavour. It should be prioritised in

strategy, design and implementation. The 'mobile first' movement supports this notion, aiming to create mobile-user experiences first and then adapting these for the web (instead of the other way around). Designing this way has many advantages, since the principles of good mobile UX works just as well on full sites using simple designs, linear interfaces and clear buttons and features.

5.5.1 Conduct research and discovery

Step one involves conducting detailed research on the business, the users and the technology involved. This is covered fully in the **Data-driven decision making** chapter, which includes user research. Doing this lets UX practitioners know exactly what they need to do to address the needs of the business and audience. This will generate a lot of data that needs to be filtered and organised.

5.5.2 Create the site's basic structure

Information architecture (IA) is about managing information, taking a lot of raw data and applying tools and techniques to it to make it manageable and usable. Categories and pages should flow from broad to narrow. An intuitively designed structure will guide the user to the site's goals.

IA operates on both the micro and the macro level covering everything from the way individual pages are laid out, from where the navigation and headings are, to the way entire websites are put together.

Most websites have a hierarchical structure, which means there are broad, important pages at the top and narrower, more specific and less important pages further down. Hierarchical structures can be very broad and shallow, having many main sections with few lower pages, or very narrow and deep, with few main sections and many pages below. It's up to the UX practitioner to find the right balance of breadth and depth.

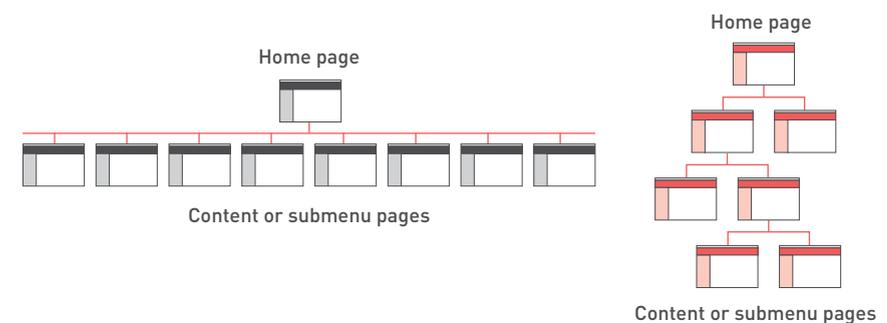


Figure 5. A broad, shallow hierarchy on the left and a narrow, deep hierarchy on the right.

5.5.3 Analyse content

If you're working on a website that already exists, it will be populated with a wide variety of content. In this case, you need to perform a content audit, which is an examination and evaluation of the existing material.

If the website is new or if you plan to add new content to an existing website, you need to put together a content strategy. This is a plan that outlines what content is

needed and when and how it will be created. There's no single template or model for this so every content strategy will be unique.

NOTE

Read more about this in the **Content marketing strategy** chapter.

The content strategy is largely the responsibility of the strategy, copy and concept teams, but the UX practitioner needs to get involved in a few key roles. The points that UX needs to address are:

- **What the site should achieve.** Naturally, the content should work towards achieving the site's and business' objectives.
- **What the user wants and needs.** By conducting thorough user research, you should be able to answer this question. Provide only content that will add real value to the user.
- **What makes the content unique, valuable or different.** Content needs to provide value to the user. A content strategy will help ensure content is updated regularly and will include up-to-date information.
- **The tone and language used.** You need to consider the tone, whether it's fun, light or serious, the register, whether it's formal or informal and the style you will use across your content. Make sure tone, style and register are consistent across text, images, videos and other content types. Correct grammar and spelling are important considerations as they speak to the credibility of the site.

Principles of creating content

There are three key points you should consider here:

1. Structure

Content needs to be written so that users can find the information they need as quickly as possible. The chapter on **Digital copywriting** will cover this in more detail.

Copy can be made more easily readable by:

- Highlighting or bolding key phrases and words
- Using bulleted lists
- Using paragraphs to break up information
- Using descriptive and distinct headings.

2. Hierarchy

On the page, use an inverted pyramid style or F structure for your copy. The important information should be at the top of the page, to make for easy visual scanning. The heading comes first and is the largest and boldest type on the page. The subheading or blurb follows this and then the content is presented in a descending scale of importance. Sentences should be short and important words should appear early in the sentence, especially in bullet points. Eye-tracking research has shown that the F structure is the still the most user-friendly structure, as this is the natural flow of the eye (Hanes, 2016).

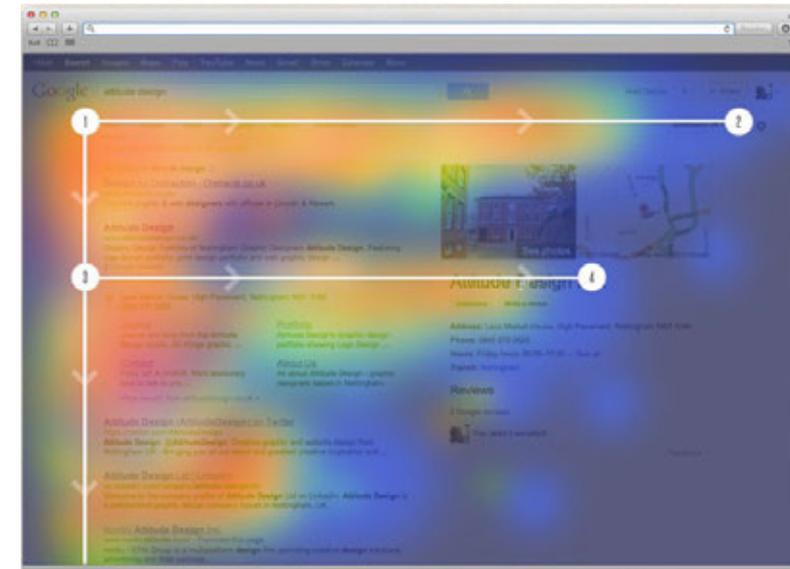


Figure 6. Users read websites in an F structure and your site should enable this.

3. Relevance

Above all, the content on the page must be relevant to the user and the purpose of the page itself. If a user clicks to read about a product but ends up on a page with content about the company, their experience is going to be tarnished.

5.5.4 Create a sitemap

In UX terminology, a sitemap is the visualised structural plan for how the website's pages will be laid out and organised.

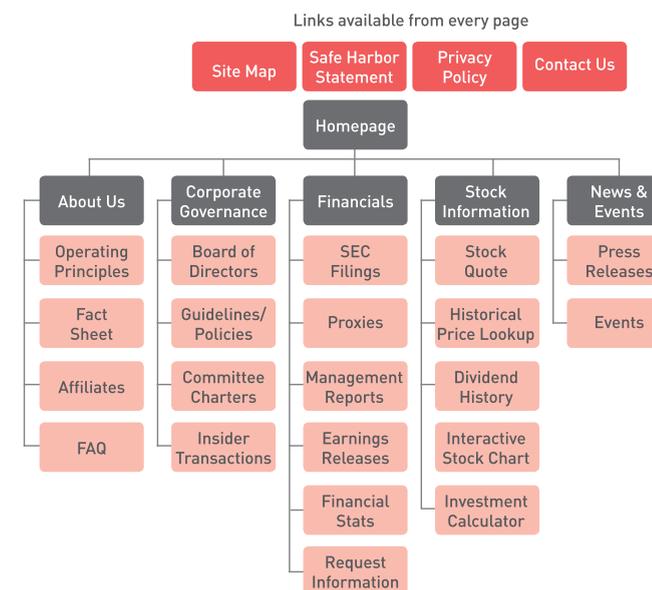


Figure 7. An example of a sitemap.

To create the visuals for your sitemap, you can follow this process:

1. Start by **defining your home page**. This should be the top item in the hierarchy.
2. **Place the main navigation** items below this.
3. **Arrange your pages of content** below the main navigational items, according to the results of your user testing and insight and your information architecture structure.
4. **Add pages** below this until you have placed all your content. Make sure that every page is accessible from at least one other page. It may seem obvious, but you'd be surprised how often this is overlooked!
5. **Define any other static navigation elements** (i.e. the footer, sidebar, header navigation, search tools). Place these in your diagram possibly branching off directly from the homepage or as separate blocks.

Which sitemap is which?

The term 'sitemap' can have two meanings. One is the way it's defined above – the structural plan of the website. The other is a page on your website that lists all the pages available in a logical and accessible way. An example is the Apple website's sitemap: www.apple.com/sitemap. This sitemap should be available from every page. Dynamic sitemaps can be employed so that the sitemap is updated automatically as information is added to the website. Different sitemaps exist for different purposes, so investigate what your users would find most useful.

5.5.5 Build the navigation

The navigation should guide users easily through all the pages of a website; it is not just about menus. Successful navigation should help a user to answer four basic questions:

1. Where am I?

Navigation should let the users know where they are in the site. Breadcrumb links, clear page titles, URLs and menu changes all help to show the user where he or she is. The larger your site is and the more levels it has, the more important it becomes to give your users an indicator of where they are in relation to everything else on the site. This helps the users to understand the content of the page that they are on and makes them feel more confident in navigating further through the site.

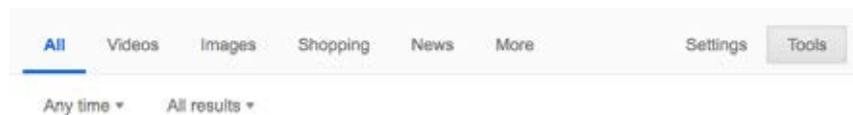


Figure 8. Google's search results have clear navigation options.

2. How did I get here?

Breadcrumb navigation often indicates the general path a user may have taken. In the case of site search, the keyword used should be indicated on the results page.

3. Where can I go next?

Navigation clues let a user know where to go to next, such as 'add to cart' on an eCommerce site, or a contextual link that indicates 'read more'. The key is making the options clear to the user.

4. How do I get home?

It has become convention that the logo of the website takes the user back to the home page, but many users still look in the main menu for the word 'home'. Make sure that they can get back to the beginning quickly and easily.

5.5.6. Create the layout

A web page can be broken down roughly into four zones:

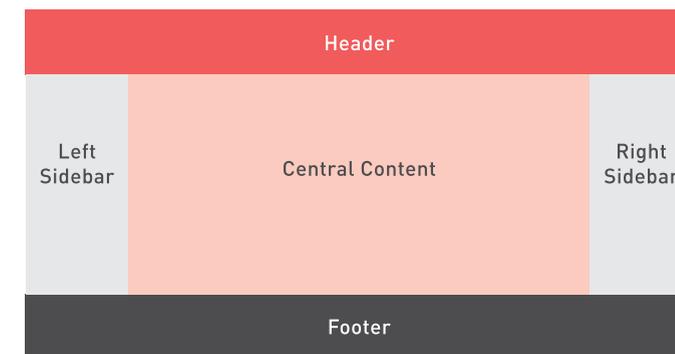


Figure 9. The four main zones of a website.

Each of these typically contains certain types of elements and content, such as:

1. **The header** (at the top of the page) – used to identify the site and provide basic tools:
 - Logo or identifying mark (possibly including the brand's tagline)
 - Main navigation
 - Login feature
 - Search bar.
2. **The central content area** – used to present the main content:
 - The actual content specific to the page, such as text, images, videos and more (this can be broken into several columns)
 - CTAs of various kinds, such as "Sign up"; "Get started"; "Claim your free trial".
3. **The sidebar** (either on the left or the right, or sometimes on both sides) – used to present secondary content and tools:
 - Secondary navigation bar, or other navigation features (for example, blog article archive by date)
 - CTAs, including buttons and signup forms
 - Additional content, like links or snippets.

NOTE

There is a tendency, when thinking about navigation, to plan in only one direction, from the home page down the chain of pages in the hierarchy. But very often, users arrive at the site from a link or search result that drops them deep in the website. This makes it equally important to look at reverse navigation, getting from the bottom level pages back to the top.

NOTE

Users consider information in side bars to be less important, so don't put your key message here.

- The footer** (at the bottom of the page) – used for important but non-prominent content and resources. Legal information, privacy policy and disclaimers. Additional navigation elements.

The most important consideration for any page layout is the content – what needs to be included, what is the most important action or piece of information and how can this be structured to meet the user’s needs? After all, web pages are created to support a user’s journey. All pages on your site should not necessarily look identical.

Creating sketches, wireframes and prototypes

Wireframes are the skeletal outlines of the layout of a web page. Their purpose is to map out the placement of various elements on the page as a guide for the designer to create the visual design and the web developer to create the code and interactivity required. Wireframes can be low fidelity (very rough and basic sketches, barely resembling the final output) or high fidelity (very detailed, complex layouts including creative elements). Any website project will have several wireframes, at least one for each template page. Capture your first ideas on paper; it’s the fastest and best way to capture good ideas.



Figure 10. Low-fidelity and high-fidelity wireframes.

Prototypes are a step up from wireframes, in that they are interactive. Prototypes are essentially sets of wireframes that have been linked together like a website, so that they can be navigated through by clicking and scrolling.

Prototypes are excellent tools for testing the flow and function of a proposed website before diving into the costly and lengthy design and development phases. They can save a lot of time, money and effort by helping to identify problems and improvements upfront. Again, paper prototyping is the best method for fast, iterative UX design.

5.5.7 Assemble the other elements

Once you’ve defined your content and mapped out the basic layout of each page, you need to add all the extra elements that your website will need. Remember that the page should only ever contain the elements a user might need to support them in their task. These can include:

- Calls to action.** CTAs can take a variety of shapes and forms, from in-text links to large buttons.
- Forms.** These are interactive fields where users can enter their contact details or other information, for example, to sign up for a newsletter or enter a competition.
- Search.** Many sites can benefit from having a search function, both to help users navigate and to make finding specific information easier.

Calls to Action

Successful CTAs are simple, quick, clear actions that don’t require the user to do anything scary or to make a commitment. They should always do exactly what they state in order to instil confidence and clarity. It’s all about managing user expectations: do they actually go where they think they will or perform the action users expect?

Positioning

The primary CTA should usually appear above the fold to capture the attention focused here. Other CTAs can appear below the fold and the main CTA can also be repeated lower down.

Prioritisation

A single web page can be built around one CTA, or could incorporate a wide range of possible desirable actions. This all comes down to what the page and website overall is seeking to achieve, based on the business requirements.

When multiple CTAs are used, there should be one that stands out strongly and the others should be more muted, playing a supporting role. CTAs can be differentiated through colour, shape, placement and size; the fewer the choices, the better.

NOTE

Paper prototypes make testing quick and easy. They’re portable, easy to use and don’t require complex tools, Internet connections or user skills. Mobile apps like Pop (popapp.in) easily turn paper prototypes into clickable demos. See section 5.8, **Tools of the trade** for more information on Pop.

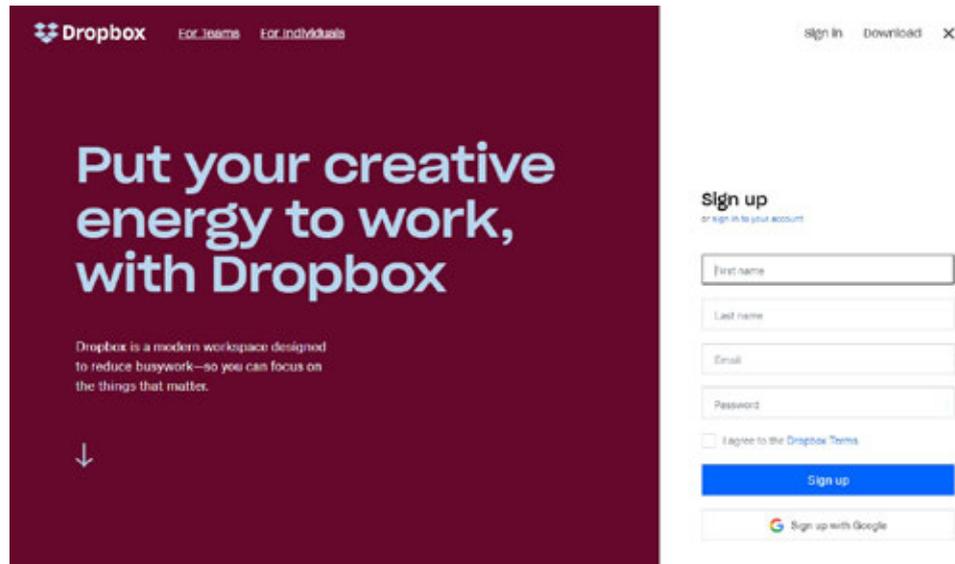


Figure 11. The Dropbox website has a clear primary CTA for 'Sign up' and secondary "Sign in" and "Download" CTAs.

Clickability

Any CTAs that can be clicked must look tactile or touchable. This means they must stand out somehow from the background and from static elements. One approach is to make the button look like a real button, standing out from its environment. Another train of thought advocates for the flat design approach as a more elegant and modern expression of this.



Figure 12. Clickable CTA buttons.



Figure 13. Buttons with a flat design.

Quantity

Finally, be sure not to overwhelm users with too many choices. Stick to one central CTA per page, making it obvious to users what the main goal, action or outcome of the page is.

Forms

Forms are extremely useful tools for gathering user information and encouraging interaction on the site. Users are generally familiar with them and have some experience filling them out and there are lots of web conventions that govern how

these should be set up. As a general rule, the shorter you make your form, the better. The fewer fields users have to fill out, the more likely they are to complete the process.

Steps and sections

Simple forms with only a few fields can be assembled as a series of boxes. For forms that are longer (i.e. those in eCommerce checkouts or complex registration processes) it makes sense to split them up into manageable portions. Manage users' expectations by clearly indicating what the next step is.

Relevance

Simplicity is a key consideration. Forms should be as short and clear as possible. The effort must be equal to the reward gained. All of the fields included must be clearly relevant to the purpose of the form. Otherwise, users may get confused or suspect that you are harvesting their information.

It is important that users are notified about which fields are required and which are optional. If all the fields are required, then the form should indicate this clearly.

Assistance

It is a good idea to include help for users filling out forms. This is especially the case where a specific field requires inputs to be entered in a certain way and doubly so for password fields with special rules. Users will not instinctively know the rules associated with specific fields, so you must provide plenty of guidance along the way.

A form should be well designed and intuitive rather than provide tips and text to users on how to complete it. Ideally, users shouldn't need any help at all.



Figure 14. A newer interactive form that provides assistance to users by moving the label text from being a placeholder to hovering above the field.

Validation

Validation means giving the user feedback on the inputs they have submitted, whether correct or incorrect. Validation can happen at two points: after the user has submitted the form, which is submission validation, or during the process of filling out the form, which is live inline validation. Submission validation is essential for protecting the database, but will also assist in catching user errors. Live inline validation usually results in much better user experiences as the users then know that their information is correct before submitting the form.

NOTE

Be aware of local laws that define what information you're allowed to collect and how you can use it.

Your contact details

We need your name and phone number, so we can call you in the **next hour** to confirm this and **check you're happy to go ahead**. After 10pm, we'll call you back by 10am the next morning.

Title	Mr	✔
First name	Graham	✔
Last name	Charlton	✔
Phone number	02072691450	✔
Confirm phone number	0207691540	✘ Those phone numbers don't match. Please check and try again.
Alternative phone number		
Email address		✘ Please give us a valid email address.

Figure 15. A simple, intuitive sign-up form that provides clear guidance.

Error messages are an important part of validation that is shown to users. Error messages are often ignored in UX development and are a huge source of frustration for users.

Some best practices to consider:

- These messages should be easy to understand. The user should not struggle to understand the error or how to fix it.
- The error message should stay visible until the error has been corrected.
- The tone of the message should match the rest of the site.
- It is important to remember that a form is a conversation with users. It's an interactive dialogue even though you are not present.

reCAPTCHA

reCAPTCHA is a free service offered by Google that requires users to answer questions to prove they are not bots. It helps to protect websites from spam and abuse, but does reduce conversions and in certain instances can render the site unusable for users. Despite these accessibility issues, reCAPTCHA is still an important factor when developing forms in order to protect your website.

Figure 16. An example of reCAPTCHA included in a form.

Search

Search has three useful functions on a website. Not only does it help users to find specific things, it also serves as an essential navigation aid for larger sites and collects valuable data from keyword research about what the user is looking for. From the UX practitioner's perspective, there are some important non-technical principles to bear in mind.

For large sites, it can be useful to allow users to search within categories. On Amazon, for example, you can search just within the category 'books'.

Figure 17. The advanced search within 'Books' on Amazon.com.

Positioning

Search will either be the primary starting point for your site, or it will be a useful additional tool. In the former case, for example, on a large eCommerce site such as Amazon, the search tool should be positioned centrally and visibly to encourage the user to use this as the main navigational tool. In the latter case, best practice dictates that it should be in the top right corner, or easily accessible in the sidebar.

Accuracy

The better you can interpret what your user is searching for, the more relevant and accurate the search results can be. Google works very hard to fine-tune its search algorithm to ensure that users don't just get what they searched for, but what they actually wanted in the first place.

User research can suggest why users would search your site in the first place and what they would typically be looking for. Popularity and recentness of content are other key considerations.

Results

When it comes to displaying search results, there are a few key questions to ask:

How many results should be displayed per page?

Ten to 20 results per page is generally a good benchmark.

What order should results be in? Most popular first? Cheapest? Newest? Closest match?

This will depend on the nature of the site.

Can results be filtered?

Some websites allow users to do a second search constrained to the results of the first one.

What happens if there are no results?

If no search results are found, the search function should provide hints and tips to the user on how to search better on the site. The fact that there are no results should be stated clearly, followed by a list of the closest match of content to the search query. It's quite possible the searcher didn't know the exact term from what they are looking for or made a typo, though the site should be forgiving of these. Hints could include wildcards or breaking up the terms into smaller pieces. The message shown to users should be helpful and relevant and not simply copied from Google's advice.

5.5.8 Define the visual design

Before users interact with your carefully considered content, your excellent navigation structure and slick search bar, their first impression comes from the look of the website, such as the colours, graphics and overall design elements. As people are spending more and more time on the web, they are less tolerant of websites that don't look good or credible. While a website is not an art installation, it is a design project and the fundamentals of good design apply.

While much of the visual design expertise will come from the graphic designer, it's valuable for the UX practitioner to know the following principles of visual design:

Colour

Colour has an incredible psychological effect on people. Based on our culture, preferences and learned cues, people interpret colours in very specific ways and this can be used to inform and steer user experience.

When choosing the colour palette for your website, be aware of legibility and accessibility concerns. Using a lot of open or white space often makes sites appear simple and easy to read.

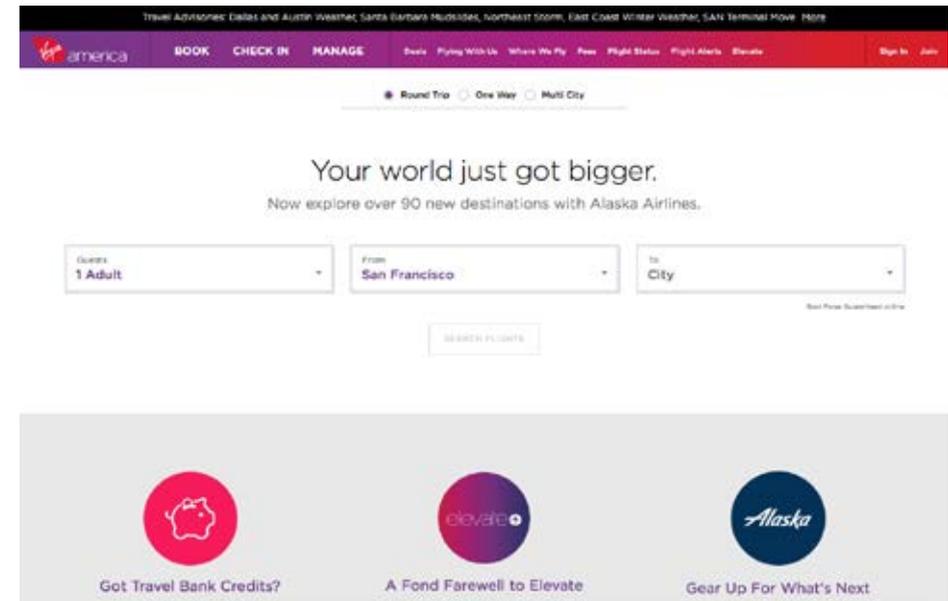


Figure 18. The Virgin America website places the most important information upfront and uses colour to draw the eye to the important buttons/forms.

Imagery

The choice of images used on the website can have a massive effect on how users behave and interact on the page. You can never be quite certain which images will have the best results, so this is one area where you will need to do a lot of testing (more on that below).

Humans tend to gravitate towards and identify with pictures of other humans. Content strategy should include an image strategy, especially if the site is rich in images. Camera angles, content, brand strategy and the tone of the visuals all need to be considered. Images must always be relevant and not used as fillers or pure decoration.

5.6 Advantages and disadvantages of UX design

Ensuring you adhere to all the principles of UX design can be costly and time consuming. Testing each development or aspect of the site can be very drawn out. However, the advantages that UX provides far outweigh the costs.

Good UX means users will have a pleasurable experience on your site and are more likely to return and recommend your site, both of which lead to sales and help you to meet your business objectives. Poor UX means users have negative and disappointing experiences; they may not return and may relate their negative feedback to others, which in turn loses any potential sales.

Including UX from the beginning helps to keep costs low and on budget. It is estimated that for every US \$1 spent in the initial phases to improve UX, it would cost US \$10 to fix during development and upwards of US \$100 to fix after the product is released (Gray, 2016).

NOTE

Read more about this in the **Web development and design** chapter

5.7 Conduct Testing

Measuring how successful your UX has been cannot be left until the final website is complete and ready for launch. The key to an effective user-friendly site is testing each step during the design, development and implementation process. User testing is crucial to UX.

User testing means giving one or more users access to a website or prototype and observing how they behave when using it. The purpose of this is to discover problems and gain insights that can be used to improve the final product.

The goal of user testing is not to eliminate every potential problem on a website; that's simply not possible, especially if you consider how subjective this can be. The goal is to work towards creating the best possible experience for users by constantly improving and optimising.

NOTE

The two biggest questions around testing tend to be "What do I test?" and, "When do I test it?" The answers are simple: **test as much as possible, as often as possible and as early as possible.**

Of course, in the real world, time and budget limitations will certainly have an impact on how much you can test, but our goal should always be to maximise testing, in whichever way you can. Learn more in the [Conversion optimisation](#) chapter.

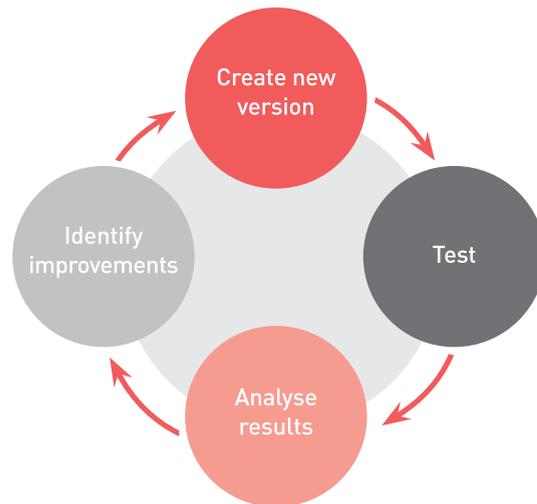


Figure 19. Iterative UX testing process.

User testing follows a set process:

1. Formulate a question to test
2. Choose a test and prepare
3. Find subjects
4. Test
5. Analyse
6. Report
7. Implement
8. Start again.

5.8 Tools of the trade

UX tools range from rudimentary (pen and paper) to highly sophisticated (web applications and tech tools). Here is a brief roundup of popular options:

Balsamiq (balsamiq.com) bills itself as a 'rapid wireframing tool' and is great for creating fun, low-fidelity wireframes and simple prototypes.

Axure (www.axure.com) is an all-purpose prototyping tool that allows you to create fully interactive wireframed websites without needing to code anything. A useful feature is that it also generates technical specifications for developers to work from based on the interactions and links created in the prototyping process.

Gliffy (www.gliffy.com) is a web-based tool that allows you to create a wide range of diagrams, everything from wireframes to sitemaps to charts.

Invision (www.invisionapp.com) is a web based tool that allows you design prototypes across web and mobile.

Morae (www.techsmith.com/morae.html) is a good place to start if you're looking for a web-based replacement for user labs.

Pop (marvelapp.com/pop) or Prototyping on Paper, is a free app for prototyping apps on mobile.

5.9 Case study: AO becomes customer-centred

5.9.1 One-liner

UX testing increased sales at ao.com, a UK-based, online, large-kitchen-appliances (white goods) store, by 9.5%.



Figure 20. ao.com logo.

5.9.2 The challenge

ao.com was using its senior management's hunches to inform its development roadmap and was not considering customers' needs. The conversion manager knew that to become a market challenger in the online, white goods market, the company needed to become customer-centred.

5.9.3 The solution

To become properly customer-centred, the brand needed to work on identifying true customer needs and tailoring the website to provide the best possible user experience. But how did ao.com go about doing this?

The first step was research. Complex research was carried out by WhatUsersDo.com, an expert in UX testing. Users were asked to purchase white goods online from either ao.com, a

competitor, or via Google search. Users were observed via their screens and asked to speak their thoughts as they proceeded.

Those who bought directly from ao.com were monitored to observe friction points in the buying process. Those who bought from competitors were monitored to identify the strengths and weaknesses of competitors. And lastly, those using Google were watched to see how users would naturally search to buy white goods.

Next, the videos, over 250 hours of footage, were assessed and shown to senior managers who could now clearly see where customers were having problems with the site. Senior managers now started to look at their business from the customer's point of view and the roadmap was re-prioritised to focus on customer needs.

The results showed that the product pages needed the most improvement. There needed to be clearer product descriptions, more compelling videos and much stronger calls to action. The sizes of images and buttons placement were also adjusted according to the feedback.

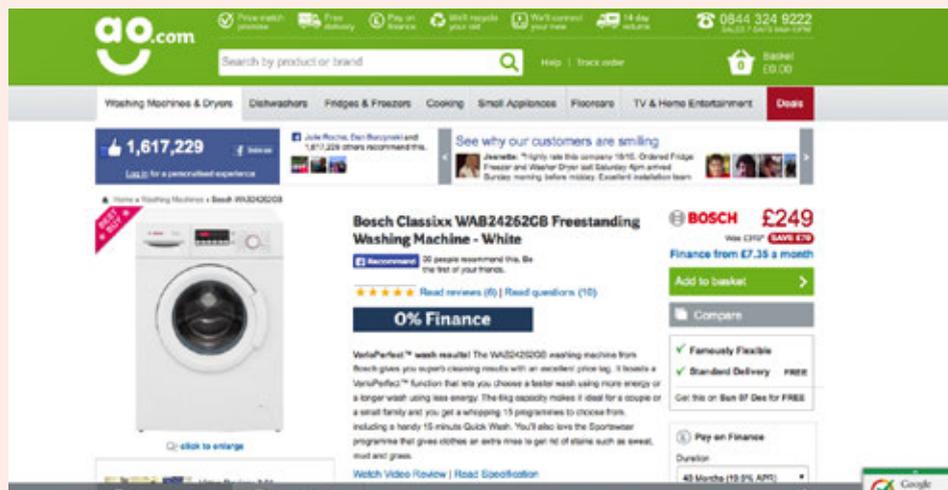


Figure 21. A product page for ao.com.

5.9.4 The results

Improved user experience definitely yielded great results for ao.com:

- Online sales increased by 9.5%
- The number of calls to the customer support team was reduced by 33%
- Customer reviews increased by 110%, demonstrating increased customer engagement.

The changes made may have seemed obvious, but were not recognised by senior managers. Exposure to real clients and their needs is essential in determining a good user experience. To ensure ao.com maintains their customer-centred approach, they run weekly sessions where employees watch how users use their website. Any changes can be made as required in order to continue providing customers with the best user experience possible.

5.10 The bigger picture

UX touches on so many aspects of digital marketing that it's hard to list them all. It's involved right up front at the strategy and research phase and then touches on all the create disciplines, such as web development, design, copywriting and SEO.

For example, when it comes to SEO, Google's algorithm assesses the UX design on a website as part of the overall decision on where to rank it.

Social media, email marketing, display advertising, video marketing and other fields can also benefit from solid UX thinking, such as, "What do users want, need and expect from you on these channels?" Finally, UX goes hand-in-hand with web analytics data, as both disciplines aim to understand users and create real, actionable insights from the data gathered about them.

5.11 Summary

Users come first when creating any web-based marketing channels. Core UX principles, such as user-centric design, web conventions, simplicity and credibility, are essential for creating web experiences that are seamless, memorable and valuable to users.

Mobile UX is a special subset of the discipline that takes the unique context and characteristics of mobile users into account – whether for designing a mobi site, an app or a responsive website. When it comes to implementing a UX process, the following steps should be followed:

1. **Identify business requirements** – What does the business need to get out of the site?
2. **Conduct user research** – Who are you building the site for and why? What information do they need? How will they move through the site? Does the user need this?
3. **Create the basic structure** – What goes into solid information architecture?
4. **Analyse and plan content** – How should content be put together here?
5. **Design the sitemap** – How will the overall website be structured?
6. **Build and develop the navigation** – How will users get to where they need to go?
7. **Create the layout** – What will each page look like, from top to bottom? Does the layout support the functional purpose of the website? What content is needed for this page to achieve its business goals?
8. **Add other useful elements** – How will CTAs, search tools and forms behave? Where will they be best placed to achieve the business goals?
9. **Conceptualise the visual design** – How will the visual layer add to the overall UX impact?
10. **Conduct user testing** – Are there any errors on the site? Is it easy to use? Testing should be done at each step in the UX process. The earlier errors or difficulties in the UX are picked up the more cost effective it is to correct and change.

5.12 Case study questions

1. What do you think about the methods ao.com used to test their UX? What other methods could they have used?
2. What elements would you have included in the new improved UX design of ao.com?
3. Why do you think UX research helped increase sales and improve customer engagement for ao.com?

5.13 Chapter questions

1. What are the six qualities that make up a good user experience?
2. Are there any mobile-specific issues that UX designers should keep in mind? What growing trend should UX designers keep in mind when designing any user experience?
3. Explain why testing is so important with UX?

5.14 Further reading

www.smashingmagazine.com – *Smashing Magazine* posts regular, in-depth articles and research focused on UX, technology and web design.

www.lukew.com - The blog of Luke Wroblewski, one of the world's foremost UX experts. It's filled with research and practical advice for working UX practitioners. [Accessed 30 October 2017]

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