

# Website Navigation

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METHODS, USER EXPERIENCE, AND DESIGN

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Horizontal Bar Navigation

Item 1	Item 2	Item 3	Item 4	Item 5
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Dropdown Menu

Item 1	Active item	Item 3	Item 4	Item 5
	Child item 1			
	Child item 2			
	Child item 3			
	Child item 4			

Mega Menu

Item 1	Active item	Item 3	Item 4	Item 5
Heading	Heading	Heading		
Child item 1	Child item 1	Child item 1		
Child item 2	Child item 2	Child item 2		
Child item 3	Child item 3	Child item 3		
Child item 4	Child item 4	Child item 4		

Tabs Navigation

Item 1	Current Item	Item 3	Item 4	Item 5
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Side Bar Navigation

Item 1
Item 2
Item 3
Item 4
Item 5

Breadcrumbs

Item 1	Item 2	Item 3	Item 4	Item 5
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[Level 1](#) > [Level 2](#) > [Level 3](#) > [Level 4...](#)

Footer

Page body		
Heading	Heading	Heading
Child item 1	Child item 1	Child item 1
Child item 2	Child item 2	Child item 2
Child item 3	Child item 3	Child item 3
Child item 4	Child item 4	Child item 4

The positive user experience of a website heavily centers around the functionality and design of the navigation. Clutch, a marketing firm that analyzes “in-depth client reviews, data-driven content, and vetted market leaders” for web and app services, found that 94% of users say easy navigation is the “most important website feature”. A website that is easy to navigate has a simple, responsive, and clear menu structure that makes it easy to maneuver between pages and provides users with fast, efficient ways to find what they are looking for (McKeon). Designing the navigation features of a website is a highly user-centered process and very content dependent. Because of this, knowledge of human centered design and current website navigation trends is extremely important.

## Navigation Types

In web design, there are many common navigation patterns that users interact with. A website’s primary navigation “represents the core categories for the interface” (Schall and Romano Bergstrom ch 6). The primary navigation often has the same design and information from page to page. A website can have more than one primary navigation, as well as secondary navigation systems. More complex websites often have sub-navigation that is accessed by interacting with the primary navigation (Schall and Romano Bergstrom ch 6). The first step in building an effective navigation system is understanding the pros and cons of the various navigation patterns (Craig).

### Horizontal Bar Navigation

The most common type of navigation is the horizontal bar. The horizontal navigation bar is a collection of five to twelve links, usually fixed at the top all website pages. Because of the simplicity and popularity, it is often the primary, potentially the only, source of navigation of a website. It is also the only functional option for single-column website (aside from footer navigation, a secondary navigation pattern). The biggest disadvantage to this type of navigation is the limited number of links it can have. This usually isn’t a problem for smaller websites; but

the larger a website gets, the more difficult a website is to categorize. This problem can be solved by using a secondary navigation or sub-navigation system (Craig).

## **Dropdown Menu**

Dropdown menus are a sub-navigation system for horizontal navigation bars. These menus are activated by hovering or clicking a navigation link; when a user activates the dropdown menu, a single column of related links appears. This list allows for more links to be included without the navigation becoming too cluttered. This type of sub-navigation also enables deeper webpage layers to be more accessible because they can now be included in the navigation. It is incredibly important for dropdown menus to be obvious before they are activated, or users can become frustrated and confused. They can also be difficult to navigation without a mouse or on a mobile device (Craig). Even under ideal conditions, singular column dropdown menus can create visual usability problems. Because of the way people “sweep” their eyes across a page, they have already dedicated to clicking a link before the dropdown menu is activated so the increased number of options after the user has made a decision can cause temporary confusion (Schall and Romano Bergstrom ch 6).

## **Mega Menu**

Mega menus are a more extreme form of dropdown menus. Like dropdown menus, they are a method of sub-navigation for horizontal navigation bars, but instead of taking up a single column, they take up the entire page with (usually) three or four categorized lists per primary navigation link. This design allows users to rely on short term memory to compare their choices and utilizes grouping to visually emphasize relationships between items. They are great for large websites with lots of content to show off their website organization. Because of the amount of information, if mega menus aren’t grouped well, they can cause confusion and accessibility problems, especially for users with vision problems. Adding headings to groups is a great way to solve this problem. The headings and groupings, as well as the amount of space enabling icons

and images to be placed within a mega menu, can help solve some of the confusion caused by singular column dropdown menus (Nielsen and Li).

## **Tabs Navigation**

Similar to the horizontal bar, the tabs are usually a primary navigation system with five to 12 text links spread out in a row across the top of the page. The key distinction is that each individual text link is boxed inside a designed tab. The tab can be style in any way from a realistic tab-filing folder design to simple rounded edges to modern, square-edge tabs. The tabs often have a psychological effect on users because they associate the virtual tabs with a real-life filing system, so this navigation is fairly intuitive. However, the tabs navigation takes more work to design so it doesn't look awkward or clunky. Keeping the number of links limited is essential to design this navigation pattern well (Craig).

## **Side Bar Navigation**

Sidebar navigation, another common primary navigation system, is when navigation links are stacked on top of each other and arranged in a single column. They are usually seen on the left side of the screen and usability studies have backed up this location as they often find that left-to-right readers understand this type of navigation better when it is located on the left rather than the right. Because this navigation pattern can accommodate a longer list than horizontal navigation, it is one of the most versatile designs and often doesn't need sub-navigation. With too many links however, the sidebar can become overwhelming and users can spend too much time categorizing the links or give up quickly if they decide reading a long list is not worth their time. Dividing links into categories or using an expanding sidebar can help avoid long lists (Craig).

## **Breadcrumbs**

Breadcrumbs are a responsive list of horizontal links showing the user where they are relative to an entire website. They should only be used on large websites that have a multiple levels of webpage hierarchy and they should only be used as a secondary navigation system (Craig). A research study done by researchers at Florida International University investigated the usability of breadcrumbs. They found that the time the participants spent looking for what they wanted decreased by 14%, hierarchical location errors decreased by 28%, and there was a small increase in satisfaction when breadcrumbs were used (Maldonado and Pesnick). In order for a website to benefit from breadcrumbs, the links should be compartmentalized and categorized with distinct sections, or else they will become more confusing than helpful (Craig).

## **Search Navigation**

With the familiarity of search engines like Google and Bing, using a search bar to navigate a website is becoming more popular. Search bars are usually located in the header, the top of a sidebar, or in the middle of the homepage. They often have a magnifying glass icon near them to indicate the function of the search bar. They work well for websites with lots of content that may make it confusing or time consuming for users to navigate by clicking. While a website should still have another system of primary navigation with good information architecture, a search bar can be a useful tool for quick and efficient navigation (Craig).

## **Footer Navigation**

Footer navigation is used as a form of secondary navigation; this is because most users will only scroll to the bottom of the page if they couldn't find what they were looking for. Footer navigation usually contains lists that don't fit within the main categorizations of navigation, links to pages that aren't as high of a priority to the purpose of the website (like social media links), or repeated links. Repeated links are especially helpful for longer pages, so users won't have to scroll all the way back to the top of a page to get back to the navigation (Craig).

## Responsive Design

Most user on the internet are browsing via smart phone. Because of the screen size, the navigation that would be helpful for desktop may not work for mobile. Horizontal and vertical bar menus are still common for mobile websites, but the way they are accessed are different on smaller screens. Vertical navigation bars are often hidden behind a hamburger menu and open up when clicked on. This navigation type still has the advantage of more links when compared to horizontal bar navigation (Adams and Clay).

The horizontal bar for mobile is very different from the horizontal bar used for desktop. This is because of the screen size and the reach of the thumb. The way most users hold their phone effects the distance they can comfortably reach, which effects the location of the navigation. The thumb reachability can be seen

in the figure to the right. Because of this the horizontal navigation bar is more commonly found at the bottom of the screen. To save space, it is a good practice to use icons over text (Adams and Clay).

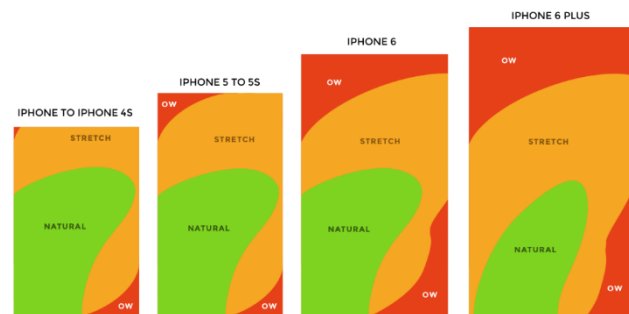


Figure 1: Thumb Zone templates by Scott Hurff

## User Experience and Website Navigation

### Navigation Purposes

Depending on the device a person is using or the purpose they are on a website will be a deciding factor in the type of navigation they use. The two main types of navigation purposes are searching and browsing. When people browse by clicking links, it is usually because they are trying to explore related content to what they are looking for or they don't know exactly what they want. When people use the search feature to navigate a website, it is usually because they have all the information they need and know exactly what they want. About 50% of people on any given website, use a search feature as their primary way to navigate a website. Search

features are also used as a 'last ditch-effort' when a user couldn't find what they were looking for while clicking. Searching is used almost exclusively on mobile because many browsing navigation systems don't have a good mobile functionality. With mobile becoming a more popular way to browse, the importance of having a good search navigation system will become more prevalent; but for now because of how common both searching and browsing are, it is important to include both in the navigation function of a website, especially on larger websites with a variety of audiences (Search Vs. Navigate).

### **Limited Attention**

On the web, people have become increasingly more task oriented. This leads to inattention blindness: "When we focus on one thing, we ignore other things around us" (Lanoue). Inattention blindness becomes problematic in navigation design when there are too many sources of navigation within a page. Users will focus on one area of the screen and ignore the rest. Most often people will ignore the right side of the screen. Not only is the left side of the screen the first half to be seen in western cultures because people read from left to right, but users have also been trained to associate the right side of the screen with ad space. To work around inattention blindness, designers should understand what the users want to accomplish and how they want to accomplish it (Lanoue).

### **Memory**

Psychology studies have found that short term memory only holds about seven chunks of information at a time and these chunks usually are forgotten within 20 seconds. While seven text links in a menu is a good rule of thumb, this psychology theory causes a common misconception that menus should be limited to seven links. Navigation menus are meant for users to recognize patterns and locations of information rather than recall the information. It is far more important to list all of the categories a user could need than to limit the amount of information they have direct access to. A list of five to nine links is helpful because it is short



enough that it is quickly scanned, but long enough that the “choices won’t become overly abstract and obscure” (Nielsen). Understanding human memory isn’t just helpful for navigation list length. The principles of cognitive offloading also apply to the design of the navigation. Cognitive offloading is when users use their environment to reduce cognitive demand. This can be done by changing the link color of webpages users have already visited, increasing page load time so users don’t forget what they are doing, and grouping similar navigation links to make it easier to compare information (Nielsen).

## Scanning

When people use websites, they scan the page as opposed to reading all of the words from left to right. Because people scan text, instead of reading it, they usually click the first link that grabs their attention or resembles what they want. Web designers can use this knowledge of human behavior to help the audience navigation the website (Lanoue). “To improve visual search efficiency, user interface designers can take advantage of this behavior. Important navigation items within the menu should be placed at the very top of the list, and items of least relative importance should be placed toward the middle” (Schall and Romano Bergstrom ch 6). Putting thought into word order of the navigation and placing the most important links first and last help make the website purpose more obvious and create a visual hierarchy that guides users around a website (Lanoue).

## Navigation Design

After choosing the most effective form of navigation for a website’s purpose and audience, the visual aspects of navigation can be discussed. Founder and SEO Director of Omni

Marketing Interactive, Shari Thurow came up with 'Five Basic Rules of Web Design' to aid in universal web design:

- easy to read
- easy to navigate
- easy to find
- consistent in layout and design
- quick to load

While Thurow came up with these principals with the entirety of a website in mind, they also apply more narrowly to just the navigation. If the navigation links aren't easy to read or find, they won't be clicked. If the navigation across several pages is inconsistent in the layout or design, content won't be easy to find. If the navigation loads too slowly, people will quickly leave the website (Insights In Universal Web Design).

## **Images and Icons**

“Nearly everyone (91%) believes both descriptions and images are useful when browsing a website” (McKeon). Symbols and icons near the navigation link they represent have been found to be more favorable and useful compared to only relying on text and improve the personality and recognition of abstract language or in the words of Thurow, they can improve the readability, findability, and navigation. Designing icons to represent an entire category on a website can be a daunting task. Websites like [lconfinder.net](http://lconfinder.net) can be a helpful inspiration in finding a starting point for icon designs. Using popular image representation of words can help ensure that users will understand which word an icon is associated with (Silfver).

The logo of a company should also be an image in the navigation bar. Of the 50% of users that use the navigation bar as their primary way to navigate a website, 36% of the use the logo to get back to the homepage (Huff, Edmond and Gillette). Functionally using the logo as a navigation link increases website ethos and brand authority and decrease the amount of time users will spend trying to get back to the home page (Silfver). The logo should go on the left of horizontal navigation and the top of vertical navigation (Craig).

## Contrast

An important part of creating a functional website navigation system is to have lots of contrast within the design. Color, size, and formatting can greatly affect the contrast, therefore the readability and findability, of navigation systems. Links need contrast between the navigation background for the navigation to be usable. Font size is an important factor of high contrast navigation. There is no one-size fits all best design practice for font size. It comes down to knowing your audience. Screen size and age of the user will effect the amount of contrast needed from font size. Color also plays a roll in contrast. As seen in figure 2, different screen sizes need different color contrast ratios (Adams and Clay).



Figure 2: Text needs contrast against the background for readability on a phone. (Per Google)

Contrast between the primary navigation and secondary forms of navigation and between the secondary form of navigation and body of the page is also very important. While a secondary form of navigation should contain less important information than the primary navigation, it should still be findable. An eye tracking study found that when users didn't notice the secondary form of navigation, it causes users to fail information-seeking tasks. In this study the secondary navigation had low contrast in comparison to the body of the webpage so users often glanced over it (Schall and Romano Bergstrom ch 6). Creating high contrast navigation systems increases the usability, find ability, and readability of websites.

## Conclusion

Website navigation should not be an afterthought. The findability of information on websites is an extremely important function of successful websites. Knowing options for navigation and understanding human behavior and design is an important part of constructing the navigation. Users are intuitive and will know if the navigation of a website is poorly thought out. The credibility of a website and a company will suffer if they do not take the time to understand good navigation practices.

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## Images

### Navigation Methods Aides

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### Figure 1

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### Figure 2

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