Involving Users in Web Projects for Better, Easier Accessibility

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**Introduction**

Involving users early in projects helps you understand real-world accessibility issues, such as how people with disabilities and older people use the web with [adaptive strategies](https://w3c.github.io/wai-InvolveUsersAll/plan/involving-users/#strategies) and [assistive technologies](https://w3c.github.io/wai-InvolveUsersAll/plan/involving-users/#at).

Involving users early helps you implement more effective accessibility solutions. It also broadens your perspective and can lead you to discover new ways of thinking about your product that makes it work better for more people in more situations.

This applies when designing and developing:

* Websites and web applications
* Browsers, media players, and assistive technologies
* Authoring tools such as content management systems (CMS), blog software, and WYSIWYG editors
* Accessibility standards and policies
* Web technologies and technical specifications, such as HTML

This page gets you started reaping the benefits of **involving users — specifically people with disabilities and older people with accessibility needs due to aging — early and throughout different types of projects**. A separate page focuses on [including users in evaluation](http://www.w3.org/WAI/eval/users.html) for web development projects.

**How Involving Users Early Helps**

Involving users early in web projects results in better products for users, more efficient development, and other benefits to project stakeholders.

**Better Accessibility and Better Usability for All Users**

When developers understand accessibility issues, they can implement **more effective** accessibility solutions. For example, their website will work better and be more usable for people with disabilities, older users, and [other target groups](http://www.w3.org/WAI/bcase/soc#groups). Making websites and web tools more usable for people with a range of disabilities improves general usability for everybody, including people *without* disabilities. (You could say that involving users with disabilities in your development project gives you **improved usability** for free.)

This benefits users, and also stakeholders. For example, when websites get [increased use](http://www.w3.org/WAI/bcase/fin.html#increase-use) and other [business benefits](http://www.w3.org/WAI/bcase/) from increased accessibility.

**More Efficient Development**

Including users in the development process helps you **more efficiently develop** accessible products that work well for real users in real situations. This can help [maximize your return on investment (ROI)](http://www.w3.org/WAI/bcase/) in accessibility.

When you understand how people use the web and your particular product, you can:

* plan accessibility into appropriate project phases from the beginning
* more quickly develop accessibility solutions
* make informed decisions between different options, and avoid wasting time guessing
* limit having to go back and fix problems
* avoid having to make compromises later because you waited too long to address accessibility
* have a better perspective on accessibility standards, guidelines, and other requirements (which you might need to meet now or later, for example, if you sell to the government)

All these benefit developers, project managers, and other stakeholders.

**Motivation**

When designers and developers see people with disabilities use products like theirs, most are highly motivated by a new understanding of accessibility. They understand the human interaction aspects of accessibility and go beyond approaching accessibility as only a checklist item. Designers and developers can see the opportunity for their work to impact lives. When managers and stakeholders share such experiences of people with disabilities using their products, it often helps get resources budgeted and scheduled to address accessibility well.

**How to Involve Users throughout Your Project**

This section focuses on including real people in the process. Address accessibility from the earliest stage of the project. For example, consider accessibility during planning, budgeting, scheduling and such. Include accessibility in your [user-centered design processes (UCD)](http://www.w3.org/WAI/redesign/ucd) or other design methodologies and techniques. For example, ensure that people with disabilities and older users are included in use cases, user analysis, personas, scenarios, workflows, design walkthroughs, etc.

Below are the basics that you can do yourself to include users in your projects. If you have the resources, consider getting assistance from accessibility, disability, and user-centered design specialists.

**Including Users to Understand the Issues**

As early as possible in your project:

1. Learn the basics of [how people with disabilities use the web](http://www.w3.org/WAI/intro/people-use-web.php) by reading online resources and watching videos.
2. Find people with disabilities, with a range of characteristics. See [Getting a Range of Users](https://w3c.github.io/wai-InvolveUsersAll/plan/involving-users/#diverse) and [Working with Users](https://w3c.github.io/wai-InvolveUsersAll/plan/involving-users/#with) below.
3. Learn about general issues related to the type of product you are developing (website, web application, authoring tool, standard, etc.). Ask people to show you related products that work well for them. Then, ask them to show you problems in products that do not work well. Ask lots of questions to help you understand the accessibility issues.

**Including Users in Implementation**

For example, for websites, web applications, and web tools:

1. When you are considering a specific design aspect, such as expanding/collapsing navigation, find other products that are already doing it. Ask users to explore with you what works well and what does not.
2. Throughout your design and development, ask users to review prototypes. Give them specific tasks to complete and see how the different aspects of the design and coding could be improved. Ask lots of questions.

For more in this, see [Involving Users in Evaluating Web Accessibility](http://www.w3.org/WAI/eval/users), especially the sections on [Analyzing Accessibility Issues](http://www.w3.org/WAI/eval/users#analyz) and [Drawing Conclusions and Reporting](http://www.w3.org/WAI/eval/users#drawing).

**Carefully Consider Input**

**Caution:** Carefully consider all input. **Avoid assuming that input from one person with a disability applies to all people with disabilities.**

A person with a disability does not necessarily know how other people with the same disability interact with the web. They might not know enough about other disabilities to provide valid guidance on other accessibility issues. Getting input from a range of users is best.

**Getting a Range of Users**

People with disabilities are as diverse as any people. They have diverse experiences, expectations, and preferences. They use diverse interaction techniques, [adaptive strategies](https://w3c.github.io/wai-InvolveUsersAll/plan/involving-users/#strategies), and [assistive technology](https://w3c.github.io/wai-InvolveUsersAll/plan/involving-users/#at) configurations. People have different disabilities: auditory, cognitive, neurological, physical, speech, and visual. Some people have multiple disabilities. Even within one category, there is extreme variation. For example, “visual disability” includes people who have been totally blind since birth, people who have distortion in their central vision from age-related degeneration, and people who temporarily have blurry vision from an injury or disease. Include users with a variety of disabilities and [user characteristics](https://w3c.github.io/wai-InvolveUsersAll/plan/involving-users/#userchars){.termref}. Most projects have limited time and budget and cannot include many different users. Selecting the optimum number of users with the best suited characteristics can be difficult. There are resources on the web that provide guidance on selecting participants with disabilities. For example, [determining participant characteristics](http://www.uiaccess.com/accessucd/ut_plan.html#characteristics) and [finding participants with disabilities](http://www.uiaccess.com/accessucd/ut_plan.html#recruiting).

**Users’ Experience Interacting with the Web**

A primary consideration in selecting users is their experience interacting with the web. For example, some [assistive technologies](https://w3c.github.io/wai-InvolveUsersAll/plan/involving-users/#at){.termref} (AT) are complicated and difficult to learn. A user with insufficient experience may not know how to use the AT effectively. And a very advanced user might know uncommon work-arounds to overcome problems in a website that the “average” user would not be able to handle.

In the early stages when you are first learning how people with disabilities interact with the web, it is usually best to get people with a fairly high experience level. ([Involving Users in Evaluating Web Accessibility](https://w3c.github.io/wai-InvolveUsersAll/plan/eval/users) says more about different experience levels in later evaluation phases.)

**Working with Users**

Follow common practices for working with people informally and formally, for example:

* Develop appropriate relationships with your users. For example, spending time talking informally over lunch may help you work together more comfortably.
* Ensure informed consent and other research ethics. For example, tell participants in studies that they are free to stop at any time.
* Treat people with disabilities and older users with the respect you would any other users. For example, respect their time and provide appropriate compensation.

There are resources on the web that provide detailed guidance on working with users; for example, [Interacting with People with Disabilities](http://uiaccess.com/accessucd/interact.html), [Assistive Technology and Location](http://www.uiaccess.com/accessucd/involve.html#atloc), and [The RESPECT Code of Practice](http://www.respectproject.org/code/charm.php?id=).

**Combine User Involvement with Standards**

Including users with disabilities and older users with accessibility needs is key to making your accessibility efforts more effective and more efficient. Yet that alone cannot address all issues. Even large projects cannot cover the [diversity](https://w3c.github.io/wai-InvolveUsersAll/plan/involving-users/#diverse) of disabilities, adaptive strategies, and assistive technologies. That is **the role of accessibility standards**.

* For websites and web applications, using comprehensive standards such as [Web Content Accessibility Guidelines (WCAG) 2.0](https://w3c.github.io/WAI/intro/wcag) helps ensure that you address all issues. Combine user involvement with [evaluating conformance to WCAG](https://w3c.github.io/test-eval/conformance-eval/) to ensure that accessibility is provided to users with a range of disabilities and situations.
* For authoring tools such as content management systems (CMS), blog software, and WYSIWYG editors, follow [Authoring Tool Accessibility Guidelines (ATAG)](https://w3c.github.io/standards/atag/).
* For browsers, media players, and other ‘user agents’, follow [User Agent Accessibility Guidelines (UAAG)](https://w3c.github.io/standards/uaag/).

**More Information and Guidance**

This document briefly addresses a few points of a very complex topic. Many resources on other aspects of involving users throughout projects are available on the web, such as:

* [Involving Users in Evaluating Web Accessibility](http://www.w3.org/WAI/eval/users.html) provides more details on specifically on evaluation with users.
* [Recommendations - User Empowerment in Standardisation](http://www.usem-net.eu/index.php?Itemid=77&option=com_content) links to recommendations for end users, user organizations, and others in the standardization process.
* [Just Ask: Integrating Accessibility Throughout Design](http://www.uiaccess.com/accessucd/overview.html) provides detailed guidance on incorporating accessibility throughout projects. For example, see [Incorporating Accessibility Early and Throughout](http://uiaccess.com/accessucd/early.html).

**Terminology**

**adaptive strategies{#strategies}**

Adaptive strategies are techniques that people with disabilities use to improve interaction with the web. For example, increasing the font size in a common browser. Adaptive strategies include techniques with mainstream browsers or with [assistive technologies](https://w3c.github.io/wai-InvolveUsersAll/plan/involving-users/#at){.termref}.

**assistive technologies**

Assistive technologies are software or equipment that people with disabilities use to improve interaction with the web. For example, [**screen readers**]{#screenreader} that read aloud web pages for people who cannot read text, **screen magnifiers** for people with some types of low vision, and **voice recognition software** and **selection switches** for people who cannot use a keyboard or mouse.

**user characteristics**

User characteristics typically include things like age, job responsibilities, software, hardware, environment (for example, home, shared office, private office, shared public terminal), computer experience, and web experience. User characteristics can also include type of disability, [adaptive strategies](https://w3c.github.io/wai-InvolveUsersAll/plan/involving-users/#strategies){.termref} used, and experience with specific [assistive technologies](https://w3c.github.io/wai-InvolveUsersAll/plan/involving-users/#at){.termref}.

**web content**

Web “content” generally refers to the information in a web page or web application, including text, images, forms, sounds, and such. More specific definitions are available in the WCAG documents, which are linked from the [Web Content Accessibility Guidelines (WCAG) Overview](http://www.w3.org/WAI/intro/wcag).