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# Designing accessible resources for people with disabilities and Deaf people

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# Creating Accessible Print Materials

Tip Sheet No. 1  
July 2017

Organizations use a variety of print materials, including brochures and newsletters, to inform the public about their work. These public-awareness materials become a window into the group's identity; what it stands for, and what role it plays in the community. Organizations also create print materials specifically for service users, such as fact sheets, consent forms, and intake forms. These materials offer service users information they need to participate in your programs. Because the goal of print materials is to convey critical information to all potential and actual service recipients, agencies should ensure that they are accessible to everyone, including people with disabilities.

## Plain language: Making information easier for everyone

Writing in plain language means writing clearly. Material in plain language

takes the reader less time to read and understand because it tells them exactly what they need to know without unnecessary words or expressions. The following are tips for writing in plain language.

- > Know the audience. Know the expertise and interest of the average targeted reader and write for that person. Don't write for subject-area experts, lawyers, or your management, unless they are the intended audience.
- > To meet the needs of the reader, keep the messages short and simple. Organize content by putting the most important information first.
- > Use headings. Headings help readers find their way through the material. They should capture the essence of all the material that follows.
- > Pull the reader into the document by using pronouns. Pronouns help make the information more meaningful. Use

“you” for the reader (“I” when writing question headings from the reader’s viewpoint) and “we” for your agency).

- › Use the active voice to clarify who is doing what. Sentences written in the passive voice tend to obscure the point. Active voice is generally shorter, as well as clearer. Active sentences contain the actor first (as the subject), then the verb, then the object of the action.

Examples:

**Active:** “Advocates answer phones 24 hours a day.”

**Passive:** “Phones are answered by advocates 24 hours a day.”

- › Use short sentences, paragraphs, and sections. Readers can get lost in long, dense text with few headings. When you divide material into digestible sections, it is both easier to follow and adds white space, opening your document visually and making it more appealing.
- › Avoid using complex words, confusing jargon, legal terms, and acronyms. Eliminate any excess words and use the simple present tense whenever possible, for example: “We manage a shelter program” instead of “We are responsible for management of a shelter program.”

- › Lists and tables can help you shorten and clarify complex material. They also add white space, which makes the document more appealing to readers.

For additional information on writing in plain language:

**PlainLanguage.gov**

[www.plainlanguage.gov](http://www.plainlanguage.gov)

**Center for Plain Language**

[www.centerforplainlanguage.org](http://www.centerforplainlanguage.org)

**Plain Language Medical Dictionary**

<https://perma.cc/HL7L-G7UZ>

## Visually accessible and welcoming material

A variety of design choices, from the font to the colors and use of white space, affect the visual accessibility of printed materials.

### Font

The font you use can have an impact on the readability of your document. Sans serif fonts, such as Arial, Helvetica, and Verdana are the easiest for people to read. The fonts listed below are more difficult to read, and should be avoided:

- › Serif fonts use a combination of thick and thin strokes. They also have flared

extensions or strokes on the tips of letters. This makes them difficult to read.

- › Cursive fonts are also difficult to read. They look like hand-written pen or brush strokes and letters often are connected to one another.
- › Extra thin, extra black, and italicized fonts tend to be difficult to read in smaller sizes.
- › Avoid capitalizing all letters in a sentence.

A good font size to use for printed publications is 14 points, because it eases eye strain and makes the text easier to read.

### **Text alignment**

How you align text on the paper determines how easy the flow is for readers. Text that is centered on the page has uneven left and right margins. Each line of text will start in a different spot, causing disruption in the text flow. Text that is aligned to the right margin (right-justified) creates an uneven left margin, making it difficult to find the next line of text. Justified alignment creates perfectly aligned margins on both sides. To line up the margins, variable spaces are inserted between words, making it difficult to read. The easiest alignment to read is

left-justified; the left margin is fixed and the right margin is ragged, making the beginning of each line consistent and easy to find.

### **Leading**

The space between lines of text is called leading. As readers move their eyes across text, ensuring that the lines of text are spaced at one-and-a-half or two times helps readers move their eyes onto the next line.

### **Hyphenation**

Avoid hyphenating words. Hyphenation disrupts the reading flow.

### **White space**

People with low vision and those with cognitive disabilities benefit from the use of white space. White space is the area of the document without text, images, tables, etc. It is useful in separating chunks of content and unrelated elements in a design and helps to improve the visual layout. Margins are elements of white space.

### **Colors**

When you are picking the colors to use in your written material you will want to think about making the information accessible to people in a variety of contexts and with various types of disabilities, for example:

## Design elements for visually accessible materials

Sans serif fonts

Left alignment

### Features of an accessible website

While it is essential to select a developer who knows how to build accessibility features into your website, it is also important for you to know what those features should be. Accessibility features allow all users, with and without disabilities, to experience the website fully. To make this possible, the site should provide a variety of ways for users to interact with the content—including visuals and audible/video files. The site should also provide ways for users to move through the pages, and understand the information, including:

#### Interaction

- › Add alternative text (Alt text) to all images on your website. Alt text is a description of the image or object that allows people using screen readers to understand the content of the graphic.
- › Ensure that you caption videos on your website. Captioning is the process of converting the audio content of a video into text and displaying the text on a screen.
- › Any audible and video files on your site should have transcripts available (printed version of the audio content).

Creating Accessible Websites

- › Avoid using CAPTCHAs to block spam. CAPTCHA stands for Completely Automated Public Turing Test to Tell Computers and Humans Apart. These are often used to weed out spambot comments from human comments. CAPTCHAs are typically images of distorted characters that are not accessible to screen readers; even if there is an audio option, the distorted audio prevents people with some types of disabilities from posting comments.

#### Operation

- › Define the purpose behind each link on your website to help visitors decide whether they want to follow the link. Hyperlink text should provide a clear description of the link destination, rather than only providing the URL or "click here."
- › Use headings correctly to provide content and structure to your website and to communicate the content's organization on the page. Assistive technologies use them to provide in-page navigation. The most important heading has the rank 1 (<h1>), the least important heading rank 6 (<h6>). Headings with an equal or higher rank start a new section; headings with a lower rank start new subsections that are part of the higher ranked section.

Color contrast

Use of white space

- › people with low vision;
- › people with age-related vision issues such as macular degeneration; and
- › people who experience color blindness (deuteranope is insensitivity to green; protanopia is insensitivity to red; and tritanopia, very rare, is insensitivity to blue).

There should be sufficient contrast between the color elements you choose. Select opposing colors on the color wheel. Avoid using color as the sole means of conveying information. For example, on forms you may see something like, "All fields in red are required." A better way to make these distinctions would be to say,

"Required fields are red and marked with an asterisk." The color makes the fields easy to identify for users who access color, and the asterisk allows all users to recognize it.

### Paper

Choosing the best paper for the document also increases readability. People who have low vision may use a magnifying glass, a video magnifier, digital reading aids, or reading pens. Common white paper often produces a significant glare, which can make reading more difficult. An off-white paper with a matte finish is the most readable. Glossy paper, typically used in magazines, creates a glare and can make text and

images difficult to recognize. When you are printing on both sides of a sheet, you will want to use at least 24-lb. paper— heavy enough so that the print does not show through on the other side.

### **Graphics and images**

Graphics and images are a great way to break up blocks of text, enliven materials, and support your messages. Avoid putting images or graphics behind text because it makes the text difficult to read.

Your printed material can promote and publicize the accessibility of your agency, programs, and services. Most people are familiar with the universal symbol of accessibility to follow, which indicates access for people with limited mobility including wheelchair users.



This symbol and others connoting disability access are available free of charge from the **Graphic Artists Guild-Downloadable Disability Access Symbols** at <https://perma.cc/TFZ7-BKFV>.

Below are additional resources for creating visually accessible materials:

### **Clear Print Accessibility Guidelines**

<https://perma.cc/HS6Q-LUM7>

### **Accessibility Guidelines for Print Materials**

<https://perma.cc/JN75-2WDQ>

### **General Guidelines on Printed Material**

<https://perma.cc/EHH7-XZFR>

### **The Accessibility Color Wheel**

<https://perma.cc/59WQ-VPY6>

is an online tool to check the accessibility of color combinations and to see how those color combinations look from the perspective of people with color blindness.

## **Accommodating individual needs: Creating alternate formats**

While you will be creating materials that meet the needs of the widest array of users, you should also be prepared to create alternate versions of your print materials if you receive requests for them. Examples of alternate formats include:

- › large print (at least an 18-point font) for people who have low vision;
- › braille, a tactile writing system for people who are blind or have low vision; and
- › an audio version of print materials, which people with low vision and

those who are blind often use to gather information. Audio can also be beneficial for people with learning disabilities who have difficulty with written text.

For additional information on creating alternate formats, see:

**A Guide to Making Documents Accessible to People who are Blind or Visually Impaired**

<https://perma.cc/9W4Y-SAFK>

**Best Practices and Guidelines for Large Print Documents**

<https://perma.cc/MQ2K-5UAQ>

**Braille Transcription Services**

<https://perma.cc/DPU9-944D>

Agencies can make their printed materials both visually appealing and disability-friendly by following the tips presented in this document. These tips benefit not only readers with a range of disabilities but also older people, those in trauma, and those for whom English is a second language.

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**For more information**

The Center on Victimization and Safety (CVS) at the Vera Institute of Justice works with communities around the country to fashion services that reach, appeal to, and benefit all victims. CVS’s work focuses on communities of people who are at elevated risk of harm but often marginalized from victim services and the criminal justice system. We combine research, technical assistance, and the training to equip policymakers and practitioners with the information, skills, and resources needed to effectively serve

all victims. To learn more about CVS, contact [cvs@vera.org](mailto:cvs@vera.org).

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# Planning and Hosting Accessible Webinars

Tip Sheet No. 2  
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Webinars are a great option for sharing information and providing training for those working to address domestic and sexual violence against people with disabilities. These types of virtual sessions are cost-effective, allowing you to host multiple trainings, thus reaching more people, and participants can join in without having to travel. Webinars are also an accessible means of reaching people with disabilities and Deaf people because they can attend from anywhere. However, to ensure that people with disabilities and Deaf people can fully engage and benefit from the content, you should consider several best practices for developing accessible webinars. This tip sheet addresses the key considerations for hosting accessible webinars, such as selecting your webinar platform, creating accessible webinar materials, working with your presenters to inform them about accessibility issues, and connecting with your participants to ensure that you meet their access needs.

## Selecting a webinar platform

The accessibility of your webinars will always begin and end with the webinar platform you are using. If the program is not accessible or does not include certain integrated features, your ability to provide access will be limited. Before committing to a webinar platform, there are a few things that you should check to ensure that you will be able to provide access during your virtual events:

- › Is the platform compliant with Section 508 of the Rehabilitation Act? You don't need to be a legal expert to determine if something is 508 compliant. Often, an Internet search can help you determine if the platform you are considering is accessible. Even if the provider's website says it is accessible, it is also recommended that you ask the provider directly. Most service representatives know what this is or should be able to find this information. If the company



## Federal legal requirements

Section 508 of the Rehabilitation Act requires federal agencies and private entities receiving federal funds to make electronic and information technology

accessible to people with disabilities. This includes webinars and other virtual trainings.

can't answer your question or doesn't know about Section 508 compliance, this may point to an overarching lack of knowledge about accessibility, suggesting that they may not be able to provide the support you need.

- › Does the platform have an option to provide live, integrated captioning? A platform that has an option for live, integrated captioning is essential to providing access during your webinars. If the captioning is integrated, it places the written transcription in the same screen as the other webinar features, and in the direct line of sight for your participants. Some webinar platforms place the captioning on a separate screen, which requires toggling between two screens to know what is being said—a potential barrier to fully participating in the webinar.
- › Does the platform display its Voluntary Product Accessibility Template (VPAT)? The Voluntary Product Accessibility Template (VPAT) helps federal

contractors to assess commercial electronic and information technology products for accessibility. The template lists features and functions of a product that will identify if it is accessible. You can learn more about VPAT at <https://perma.cc/P7YK-U6QA>.

- › Other features of the platform that could help you to identify if it is Section 508 compliant include:
  - accessibility of all features of the program through keyboard short-cuts without the use of a mouse;
  - keyboard commands that allow the user to move between multiple windows on the computer;
  - the capacity to resize the captions, change the color of the text and the font, and the flexibility to move the captioning to different locations on the screen. Your participants may have individual access needs, and this allows them to adjust the captioning to meet their needs;

- nonauditory alerts to communicate with participants. Examples of these alerts could be an icon of a raised hand; a chat box to communicate with the webinar host; or white boards to write notes to all participants;
- the ability to record or save any materials, including captioning, for later review. This allows anyone to access the materials in the same format that it was delivered and at their own pace; and
- the option for screen-reader users to interact with all the program functions similarly to those who do not use screen readers. Examples include using polling or chat features, features specific for

presenters, and the ability to read across lines in the registration and other materials.

## Registration

While it's important to design all aspects of your webinar for maximum access, you should also give participants an opportunity to request accommodations specific to their needs. Registration is a great opportunity to collect this information. In addition to asking for basic information—name, title, agency, contact information—be sure to ask about their access needs. Instead of providing an e-mail address for registrants to alert you to an accommodation request, ask about their accommodation needs during

### Screen readers

A screen reader converts web content into speech so users can listen to the content appearing on the screen. While there are a number of different types of screen-reader programs, they are similar in their capabilities and the way they interact with web content. By reviewing a webinar platform for 508 compliance (using VPAT) you

can determine if the platform you are using is compatible with screen-reader programs. You can also learn more about how screen readers interact with web content through websites such as WebAIM (<https://webaim.org/techniques/screenreader>) and format your webinar content to interact with a screen reader.

registration. Below are some basic accommodations that participants may request for webinars:

- > **Closed captioning.** Even though you have prepared to offer captioning, it's always good to know which of your participants will be using it during the webinar. It will allow you to reach out to these people prior to the webinar and provide them with information about how captioning will work. Gathering this information at registration can often mitigate any confusion or need for troubleshooting during the webinar.
- > **Electronic copies of materials in advance.** Make sure that you finalize all webinar materials so that you can provide them to participants at least a week in advance. This allows those who have a support person to go over the materials in advance so they can clarify any confusing ideas or words. For example, people who are blind will have an opportunity to transfer the materials into braille so they can follow along, or use a screen reader to review the power point before the webinar so they don't have to rely on the presenter.
- > **Video relay services (VRS).** People who are Deaf or hard of hearing have various language needs. For many,

English is not their primary language. VRS enables people who are Deaf or hard of hearing who use American Sign Language to communicate with voice telephone users through video equipment.

- > **The “other” box.** Make sure you provide space for participants to provide information about access needs that are not included among the standard options in registration materials.



### Tip!

Close registration no later than one week before the date of your webinar. This will help to ensure that you have enough time to fulfill any accommodation request you have not planned for and to work with your participants to meet their access needs. Also, set one registration deadline. A separate deadline for those who need accommodations is not in the spirit of creating an equal and inclusive experience for people with disabilities and Deaf people.

Once you have closed registration, reach out to people who have requested an accommodation. This is an opportunity for you to let them know that you have received their request and to provide additional information about logistics for the day of the webinar.

## Selecting and preparing your captioner

Captioning is the process of transcribing the audio of a webinar into text so that participants can view it at the same time as words are being spoken. It offers an alternative to audio for people who are Deaf or hard of hearing and it may also be used by people with learning disabilities or other types of cognitive disabilities to enhance their engagement and understanding of the information provided. For these reasons, it is important that you provide accurate live, integrated captioning for every webinar.

While webinar platforms include features for live captioning, few provide captioning services. Thus, you will need to find a vendor to supply captioning services during your webinars.

## Working with your captioner

Most industry standards state that you should be able to expect at least 98 percent accuracy in captioning. ([https://perma.cc/H9PQ-4PHE.](https://perma.cc/H9PQ-4PHE))

While you can expect the highest quality from your captioner, you can also support the captioner in delivering the highest quality services. In advance, send the captioner the webinar presentation, handouts, scripts, and a glossary of industry-specific terms that may be used during the webinar. This will increase the accuracy of the captioning.

## Creating accessible webinar materials

Any of the materials you create to promote or distribute during your webinar should follow basic accessible design principles. Participants may print out these materials or read them on their computer. In developing your materials, you should use best practices for creating both electronic and print materials. Use sans serif fonts that are 14 points or larger. If any of your materials include graphics or photos, use Alt-text so that a screen reader can read them. There are

several additional considerations when you use presentation software such as PowerPoint. Using the established slide layouts will ensure that the reading order is correct for those using screen readers. If your presentation is going to be projected onto a large screen, consider increasing the font size. Use simple language and avoid putting large amounts of text on the slides. For more information on how to create accessible electronic and print materials, see our tip sheets on these topics in the resource list.



### Tip!

Build in time. It is the best tool you have when planning for and providing access. When you are planning a webinar, build in extra time to meet accommodation requests, ensure that all your materials are accessible, and to prepare your presenters and others involved in hosting your event (captioners included!) to provide access.

## Preparing your presenter for access

Now that you have prepared to provide access during your webinar, don't forget to prepare the presenting experts to do the same. Here are a few tips for your presenters:

- > Speak slowly and clearly. Make sure that your presenters know ahead of time that there will be someone captioning the webinar. They should speak at a moderate pace to support the captioner in providing high quality and accurate captions.
- > Provide descriptions. If there are images or graphics on the presentation slides, ask them to describe the content or image.
- > Use language everyone understands. If your presenters will be using any acronyms, abbreviations, or descriptive phrases, make sure that they explain what they mean. Because not everyone in the audience will know industry insider language, giving an explanation will prevent anyone from getting lost in the presentation.

## Maintain access

Make sure that you maintain that accessibility throughout your webinar. Give your participants a way to communicate with you throughout the presentation, either through the use of a chat box or e-mail. If the webinar becomes inaccessible for someone

during the webinar, you won't know unless the person can alert you. If the issue persists, you may need to stop the webinar to fix the issue, or consider rescheduling until you can make the webinar accessible.

## Archiving your webinars

Many of you may record your webinars and make them available after the live event. If you archive your webinars, you have to ensure that the recording is captioned. This is not only best practice, it is legally required. Many of the companies that do live real-time captioning also offer post-production services such as captioning. Additionally, you should ensure that any accompanying materials available during the live webinar also accompany the recording and are fully accessible.

## Conclusion

Webinars are a great training tool for any organization. They are cost-effective and can reach a broad audience. By taking steps to make your webinars accessible, you open a door to sharing information and training with everyone, including people with disabilities.

## Additional resources

### **U.S. Department of Justice, Americans with Disabilities Act (ADA) homepage**

[www.ada.gov](http://www.ada.gov)

The ADA website provides information and technical assistance on the ADA.

### **ADA National Network**

<http://adata.org>

The ADA National Network provides information, guidance, and training on the ADA available through 10 regional centers.

### **General Services Administration (GSA) Section508.gov**

<https://perma.cc/RAT8-EUXB>

This website provides information about accessibility for all government agencies and contractors. Section 508 discusses VPAT and its uses.

### **Designing Accessible Events for People with Disabilities and Deaf Individuals**

<https://perma.cc/ZSF3-YTJE>

### **Accessible webinar checklist**

If you can answer yes to most of these statements, you are well on your way to hosting accessible webinars:

- › We use a webinar platform that includes an option to provide live integrated captioning during our webinar.
- › We use a webinar platform that users can control via keyboard commands with a mouse to allow them to interact with all features of the program.
- › We use a webinar platform that has alerts such as chat boxes and “raise your hand” features to communicate with participants.
- › We ask about accommodation needs and provide a list of common accommodations for participants to select from in our webinar registration process.
- › We close registration at least one week prior to our webinars so we can fulfill access requests.

## Accessible webinar checklist (continued)

- › We review all of our PowerPoint presentations and other webinar materials to ensure that they are accessible and implement best practices for both print and electronic documents (for example, ensuring photos have Alt-text and that font sizes and color contrast are adequate).
- › We work with a captioning company that provides captions with at least a 98 percent accuracy rate and monitor captioning for accuracy.
- › We work with our presenters on accessibility, share best practices for accessibility with them, and help them ensure access during the webinar (for example, reminding them to speak slowly and describe visuals).
- › Our webinar recordings include real-time captioning and/or provide a transcript of the audio with the archived recording.

### For more information

The Center on Victimization and Safety (CVS) at the Vera Institute of Justice works with communities around the country to fashion services that reach, appeal to, and benefit all victims. CVS's work focuses on communities of people who are at elevated risk of harm but often marginalized from victim services and the criminal justice system. We combine research, technical assistance, and the training to equip policymakers and practitioners with the information, skills, and resources needed to effectively serve

all victims. To learn more about CVS, contact [cvs@vera.org](mailto:cvs@vera.org).

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# Creating Accessible E-Documents

Tip Sheet No. 3  
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It is estimated that up to 4 percent of the U.S. population (12.5 million people) relies on some sort of assistive technology to access electronic documents and web pages.

Assistive technology includes:

- > screen-reading or text-to-speech software;
- > refreshable braille displays; and
- > screen magnifiers.

The effectiveness of these assistive technologies depends on the accessibility of electronic documents. People view electronic documents (e-documents) on websites, through e-mail, or on a CD/USB drive. Unless you make e-documents accessible to people with disabilities, they will find them difficult, if not impossible to access, read, and navigate.

Accessible e-documents work in partnership with assistive technology to ensure people with disabilities have easy, effective, and equal access to

## Assistive technology

**Screen readers** are software programs that allow blind or visually impaired users to read the text that is displayed on the computer screen with a speech synthesizer or braille display.

A **refreshable braille display** or braille terminal is an electro-mechanical device for displaying braille characters, usually by means of round-tipped pins raised through holes in a flat surface. Blind computer users who cannot use a monitor can use a braille terminal to read text output.

A **screen magnifier** is software that interfaces with a computer's graphical output to present enlarged screen content. By enlarging part (or all) of a screen, people with visual impairments can better see words and images.

information. When you make your documents accessible, you also make them more portable. This means that they work better across all web browsers, computer systems, and types of devices (cellphones and handheld computers, printers, braille devices, etc.).

## Elements of an accessible e-document

### **Styles, structure, and tags**

Screen readers rely on a document's organization/hierarchy created when using styles to navigate the document. A style is a set of formatting characteristics applied to paragraphs, tables, characters, or lists. For example, in Microsoft Word if the style ribbon is not visible on your top toolbar, you can make the style ribbon visible by going to the File menu, choosing Options and then selecting Customize Ribbon in the popup box. There will be two columns of commands: the left side contains the options available, the right side shows those commands that are currently displayed on the top ribbon of Microsoft Office. Make sure that the style command is checked and moved to the right side.

The use of bold/underline/font size for headings and titles does not create structure; they are merely visual

techniques used by, and for the benefit of, seeing readers. Using styles, on the other hand, actually creates a relational structure (hierarchy) on a document by assigning outline levels. For example, applying "title" style to a heading will ensure that it is read before a heading marked as subtitle. Use heading levels in descending order of importance to help users navigate the document and find information.

Heading and paragraph styles, as well as a table of contents, make it easier for all readers to follow your document. These elements are especially important for people who rely on visual cues (such as section headings) to navigate and follow along in the document. They also allow people using screen readers to navigate the e-document in the intended order.

### **Layout and reading order**

Screen readers present content to the user one item at a time. The progression through the document from beginning to end is like an automated telephone menu system that does not reveal all of the options at once. Users progress through it in a step-wise manner.

Reading order refers to how a screen reader goes through the document.

Document tag structures should adhere to a logical order that is the same

as the order of the document implied from the visual layout. When the reading order is correct, people who are blind, low-vision, or who have learning disabilities will be able to read the document in the same order as those without disabilities.

### **Set the language**

Most word processing software offers the option to choose the language of the document you are creating. Setting the language of the document is imperative to ensure that assistive technology knows what language to speak. Depending on the software you are using, the option to set the language could be in various places. For example, in Microsoft Word, go to File, choose Options, and then select Language in the pop-up box to set the document's language. Note: this process may vary depending on your operating system, as well as the version of Office and the software you are using.

### **Graphics and images**

Screen Reader software converts text to speech, but it cannot convert graphics/images to text. You can add text to a graphic in the form of "Alternate text" or "Alt-text." Alt-text is a description of the image or object that allows people using screen readers to understand the content of the graphic. Add Alt-text to

any graphics, images, charts, or tables in your document.

Alt-text should succinctly convey in words the same information that the graphic communicates. For example, in Microsoft Office programs, to add Alt-text, right click on the graphic and select Format, click on Layout and Properties, and pick the Alt-text option. There are two boxes, one marked "Title" and the other marked "Description." Type your Alt-text into the description box. Note: This process may vary depending on your operating system, as well as the version of Office and the word-processing program you are using.

### **Tables**

When using tables, create clear column headings that provide context and assist with navigation. For example in Microsoft Word, you can do this by selecting the row in the table that contains the column headings and opening Table Properties (you can do this by right-clicking on the table or under your Table tab). Go to the Row tab in the pop-up box and put a check mark in the box that says "Repeat as header row at the top of each page."

**Note:** This process may vary depending on your operating system, as well as the version of Office and the word-processing program you are using.

Avoid using nested tables and merged or split cells inside of tables, because they make it difficult for a screen reader to navigate.

**To test and simplify the table structure:**

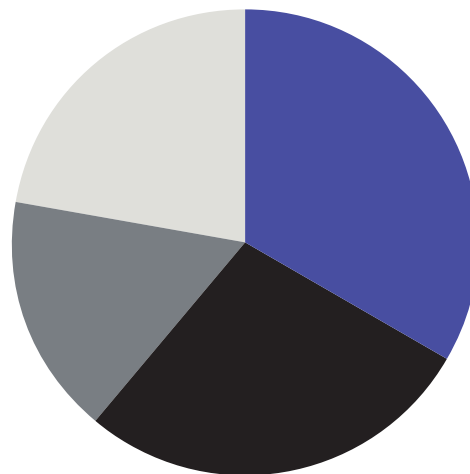
1. Select the first cell of the table.
2. Press the tab key repeatedly to make sure that the focus moves across the row and then down to the first cell of the next row.

**Charts and graphs**

Charts and graphs are not accessible to screen readers. You can make them accessible by adding a short caption that describes their content and also adding an alternative presentation of the findings. For example, if you have a chart on high school students with disabilities in your document, caption the chart with something like:

*“Pie chart students with disabilities 1.”*

**Pie chart students with disabilities 1**



- Freshmen
- Sophomores
- Juniors
- Seniors

Then add an alternate presentation of the findings. You can do this by including a table of the data:

<b>Class</b>	<b>Percentage of students with disabilities</b>
Freshmen	30%
Sophomores	25%
Juniors	15%
Seniors	20%

Another way to provide the information for screen-reader users is to add Alt-text to the pie chart. That Alt-text should say

something like: “This pie chart shows that 30% of freshman students have disabilities, 25% of sophomore students have disabilities, 15% of junior students have disabilities, and 20% of senior students have disabilities.”

### **Lists**

Instead of manually inserting bullets, numbers, or asterisks, use the List tool. As with headers, this tool enables screen readers to process list items more efficiently. Numbered lists with multiple levels should use a different numbering scheme on each level.

### **Hyperlink text**

Hyperlink text should provide a clear description of the link destination, rather than only providing the URL or saying “Click here.”

ScreenTip text (which appears when your cursor hovers over a hyperlink) can be used in a way similar to Alt-text by providing additional detail about the hyperlink.

### **Forms**

Organize forms in a logical manner. To make it easier for the user, provide them with instructions for completing the form and which items are required. Using the Form Controls listed under the Developer tab will ensure that they have the correct

labels and that they are readable by assistive technology.

## **Beyond word processing**

### **Spreadsheet software**

- › Include labels for the x- and y-axis on charts and graphs.
- › Label columns and rows to provide context and assist navigation of the table’s contents.
- › Use descriptions in addition to color and highlighting to ensure that people who cannot perceive color are still able to understand the information provided.
- › Avoid using blank cells, rows, or columns for formatting; these can mislead someone using a screen reader into thinking that there is nothing more in the table.
- › Give all sheet tabs unique names.

### **Presentation software**

- › The correct use of slide layouts is key to ensuring that your content is accessible because the layout contains the structures a screen reader requires.
- › Presentation-development software offers a variety of templates. Within

each template, you can choose a slide layout that meets your needs. Each layout will have a placeholder in which you can type text or insert visuals. Typing or adding items to these placeholders ensures that readers see the items in the order you intend. Screen readers recognize and read only items added correctly to a slide placeholder.

### Types of email formatting

HTML (HyperText Markup Language) e-mail is formatted like a web page, using colors, graphics, table columns, and links.

Plain text e-mail is an e-mail that only includes text.

Rich text (RT) e-mails support text formatting, such as **bold**, *italics*, and underlining, as well as different fonts, font sizes, and colored text.

### E-mail

- › Write e-mails in plain text, rich text, or HTML.
- › Plain text is the recommended format for people using screen readers and other assistive technology. The font, font size, color, and contrast are set as preferences in the e-mail client. Users then get e-mails displayed the way they want.

- › Choose a brief, engaging subject line.
- › Use clear, descriptive attachment file names (capitalize each letter of a filename to prevent a screen reader from reading the file name as a single word).
- › Include text in the e-mail that indicates that a file is attached or that there are voting buttons.
- › Avoid elements such as blinking text or animated images.
- › Keep the design or look of your e-mail simple and easy to scan.

### Portable Document Format (PDF)

- › Tag a PDF to make it accessible. Tags provide the structured, textual representation of the PDF content that screen readers can access. A few examples of tags include:
  - Heading level 1 <H1>
  - Table of contents <TOC>
  - Paragraph <P>
- › Tagging adds a layer of information called “semantics” to a PDF document. “Semantics” in the PDF context refers to the purpose of each block of text as established by its tag. For example, headings (<H1>, <H2>, etc.) are used for text that organizes other text contained in paragraph (<P>) tags.

- › When you save, for example, a Word document as a PDF, the Office application you are using identifies and labels the semantics you are using and adds them to the file. You have the option to include those structured tags in your PDF. A pop-up box will appear when you click on Save, and you should click the box next to the text “Document structure tags for accessibility.”

### **Viewers**

When you offer e-documents, provide links to the available free viewers (such as PDF viewers). Users can then view the document without having the program on their computers. Free viewers are available for word processing, spreadsheet, and presentation software.

## **Conclusion**

This document offers ways to make electronic documents both visually appealing and disability-friendly. These tips not only benefit readers with a range of disabilities but also older people, those in trauma, and those for whom English is a second language.

## Additional resources

### **Disability Access Services, CA Department of Rehabilitation, “Seven Steps to Creating an Accessible PowerPoint Slideshow”**

<https://perma.cc/C5HY-GSNN>

### **Create Accessible Electronic Documents**

<https://perma.cc/WHY4-TW3M>

### **Section 508: Making Electronic Documents Accessible: PDF**

<https://perma.cc/B8CA-5ZXN>

### **Section 508: Making Electronic Documents Accessible: Microsoft Excel**

<https://perma.cc/6A5M-VC9C>

### **Section 508: Making Electronic Documents Accessible: Microsoft Word**

<https://perma.cc/9HXK-8HMF>

### **Web Accessibility in Mind, “Designing for Screen Reader Compatibility”**

<https://perma.cc/37KQ-8L4E>

### **How to Make Your PowerPoint 2010 Presentations 508-Compliant**

<https://perma.cc/JJY4-V4JX>

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### **For more information**

The Center on Victimization and Safety (CVS) at the Vera Institute of Justice works with communities around the country to fashion services that reach, appeal to, and benefit all victims. CVS’s work focuses on communities of people who are at elevated risk of harm but often marginalized from victim services and the criminal justice system. We combine research, technical assistance, and the training to equip policymakers and practitioners with the information, skills, and resources needed

to effectively serve all victims. To learn more about CVS, contact [cvs@vera.org](mailto:cvs@vera.org).

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# Creating Accessible Websites

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Organizations use their websites to communicate vital information to their constituencies, from news about upcoming trainings to newly released publications and resources to frequently asked questions about the organization. Ensuring that your website is accessible to people with disabilities can greatly increase your reach and provide access to your resources to a population that needs them. Moreover, federal laws such as Section 508 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA) legally obligate you to ensure that your websites are accessible. Regardless of what motivates you to create an accessible website, the result will be the same: More people with disabilities will be able to engage with your organization.

## Planning an accessible website

It is easy to implement many accessibility features if you build them into your website development or redesign.

Fixing an inaccessible website can be significantly more complex, requiring more time and resources. As such, the most important decision you can make to ensure that you will have an accessible website is to select a developer who understands how to build in accessibility from the very beginning. Key areas to explore when choosing a developer include:

- > Is the developer familiar with web content accessibility guidelines (WCAG)?
- > Do the websites the developer has created conform to WCAG?
- > What measures does the developer take to ensure websites are accessible?
- > Do these measures include usability testing by real people?
- > Based on your community and website goals, are there any additional accessibility or usability features the developer would recommend?

## Features of an accessible website

While it is essential to select a developer who knows how to build accessibility features into your website, it is also important for you to know what those features should be. Accessibility features allow all users, with and without disabilities, to experience the website fully. To make this possible, the site should provide a variety of ways for users to interact with the content—including visuals and audible/video files. The site should also provide ways for users to move through the pages, and understand the information, including:

### Interaction

- › Add alternative text (Alt text) to all images on your website. Alt text is a description of the image or object that allows people using screen readers to understand the content of the graphic.
- › Ensure that you caption videos on your website. Captioning is the process of converting the audio content of a video into text and displaying the text on a screen.
- › Any audible and video files on your site should have transcripts available (printed version of the audio content).

- › Avoid using CAPTCHAs to block spam. CAPTCHA stands for Completely Automated Public Turing Test to Tell Computers and Humans Apart. These are often used to weed out spambot comments from human comments. CAPTCHAs are typically images of distorted characters that are not accessible to screen readers; even if there is an audio option, the distorted audio prevents people with some types of disabilities from posting comments.

### Operation

- › Define the purpose behind each link on your website to help visitors decide whether they want to follow the link. Hyperlink text should provide a clear description of the link destination, rather than only providing the URL or “click here.”
- › Use headings correctly to provide content and structure to your website and to communicate the content’s organization on the page. Assistive technologies use them to provide in-page navigation. The most important heading has the rank 1 (<h1>), the least important heading rank 6 (<h6>). Headings with an equal or higher rank start a new section; headings with a lower rank start new subsections that are part of the higher ranked section.

- › Include a mechanism for those using your website to pause, stop, or hide moving, blinking or scrolling information.
- › Avoid time limits for completing tasks so that keyboard-only users are not timed out.
- › Include a system for bypassing a long list of links, such as a “skip navigation” feature, reducing clutter that is difficult for screen readers or people with motor disabilities to navigate.

## Understanding

- › Use the most readable font such as a sans serif (i.e., Arial or Verdana) and avoid using cursive or fantasy fonts.
- › Ensure that the foreground text sufficiently contrasts with the background colors. This includes text on images, background gradients, buttons, and other elements.
- › Summarize long articles.
- › Identify your site’s language preferences in code to help with screen readers.

## Maintaining the accessibility of your website

While building accessibility into your website is an important first step, ongoing maintenance of the site’s accessibility features is also critical. If you have the staff capacity, you can handle this task internally. If not, you can often contract with the web developer to update and support the site. Whichever direction you take, make sure that the support personnel have training and resource guides outlining the key access features. There are also online tools for monitoring the site’s accessibility, such as:

- › **WAVE** (<https://perma.cc/MZ8T-Q7XL>)—a suite of tools for facilitating web accessibility evaluation, providing a visual representation of accessibility issues within the page;
- › **Cynthia Says** (<https://perma.cc/5Y9E-PGSN>)—which helps users identify errors in site content related to Section 508 standards and/or the WCAG guidelines for web accessibility;
- › **SortSite** (<https://perma.cc/YY6D-77MN>)—a one-click website testing tool used by federal agencies; it checks websites against WCAG and Section 508 guidelines.

- › **Accessibility Color Wheel** (<https://perma.cc/59WQ-VPY6>)—which helps to improve site accessibility by analyzing the contrast of a color pair and showing how color-blind people will see it. It simulates three kinds of vision deficiencies: deuteranopia, protanopia, and tritanopia. If the contrast between the colors is good, a checkmark will appear.

Some of the tools can be used online; other tools require a download or plug-in. For a list of all available tools, see the **Web Accessibility Evaluation Tools List** (<https://perma.cc/MZ8T-Q7XL>) from the Web Accessibility Initiative (WAI).

## Involving users in evaluating website accessibility

Users with disabilities and older users can provide valuable feedback as you create your website. Not only can they help to identify accessibility problems, they can spot usability problems that could affect all site visitors. When choosing people to assess the website as you build it, it would be helpful to hear from:

- › people who use screen readers;
- › people with cognitive disabilities;
- › people who use different means of interacting with the computer (keyboards, voice controls, mouth sticks, etc.)
- › older adults
- › Deaf people

Give your reviewers an accessibility check list. Some examples of tasks you may have them do include but are not limited to:

- › looking for a specific page or topic on the website;
- › moving from page to page;
- › filling in online forms;
- › using built-in accessibility features such as a skip content button;
- › opening and reading files on your website; and
- › viewing or listening to online audio and video files.

If your evaluators seem confused or are having difficulty with the tasks you've assigned them, offer assistance. Get individual or group feedback about their experiences interacting with your website.

## Conclusion

Removing barriers that prevent interaction with or access to your website by people with disabilities is essential for reaching all audiences. Correctly designed, developed, and edited sites allow every user to have equal access to information and functionality.

## Additional resources

For additional information on creating accessible websites:

### **Web Accessibility Initiative (WAI)**

<https://perma.cc/4PFG-2ANB>

### **Web Accessibility Basics for Nonprofit Leaders**

<https://perma.cc/WFH7-NMBF>

### **Improving Website Accessibility**

<https://perma.cc/NT9G-B9XN>

### **Accessibility Basics**

<https://perma.cc/3BWM-ZYN2>

### **Website Accessibility for Persons with Disabilities: The Why & How**

<https://perma.cc/QTQ2-UKQ6>

### **Involving Users in Web Projects for Better, Easier Accessibility**

<https://perma.cc/4MZN-JRVZ>

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### **For more information**

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