Accessibility
Matters

Accessible content is:

Usable
Anyone can understand it.

Versatile
Easy to update.

Convertible
Can be adapted to other formats.

Responsible
It's the right thing to do and reduces risk.

Learn more on the MNIT
Office of Accessibility website.

**MINNESOTA
IT SERVICES**
OFFICE OF ACCESSIBILITY

People experience the world in different ways.

As state employees, it's our responsibility to ensure the content we create is usable by every Minnesotan, including those who rely on assistive technology every day. By following best practices for creating accessible documents, websites and apps, we ensure our content is usable, versatile, convertible, and legally compliant.

Accessible content benefits everyone

- It loads better and faster on mobile devices.

- Captioning lets people watch videos without disturbing others.

- Navigating content without a mouse becomes easier.

- High-contrast and black-and-white printing supports colorblind users—and saves money.

Keyboard shortcuts

Try to perform your regular job for 15 minutes using only your keyboard. The shortcuts below will help get you started.

Windows keyboard shortcuts

Keyboard command	Windows action
Tab	Advance to next link or field on a web page
Shift + Tab	Previous link or field
Up and Down Arrow keys	Move through list
Spacebar	Select/unselect check boxes and radio boxes
Alt + Tab	Move between open apps (Hold down Alt key, tap Tab key to cycle through options)
Ctrl + Shift + Arrow keys	Select text
Ctrl + W or Ctrl + F4	Close window
Alt + F4	Close application
Alt	Hotkey mode to view ribbon key commands
Ctrl + S	Save
Ctrl + A	Select all
Ctrl + Z	Undo
Ctrl + C	Copy
Ctrl + X	Cut
Ctrl + V	Paste
Ctrl + P	Print
Windows key	Start menu
Shift + F10 or Menu key	(Between Window and Ctrl key) Activates "right click" menu

Outlook keyboard shortcuts

Keyboard command	Microsoft Outlook action
Ctrl + 1	Mail
Ctrl + 2	Calendar
Ctrl + 3	People
F6	Move between panes
Arrow keys	Move up and down within a pane
Ctrl + N	New email
Alt + S	Send
Ctrl + R	Reply
Ctrl + Shift + R	Reply all
Ctrl + D or Delete key	Delete
Ctrl + Shift + V	Move to a folder
Ctrl + Y	Go to a different folder

What is the No Mouse Challenge?

The challenge is trying to perform your regular job for 15 minutes using only your keyboard—the mouse is off-limits.

What is the takeaway?

If a document, application, or system cannot support mouseless operation, it will not support assistive technology or accessibility tools.

Learn more about the
No Mouse Challenge

Microsoft Outlook

Accessibility Quick Card

Follow these best practices to help make emails accessible in Classic Outlook. For more information and training on Outlook email accessibility, especially signatures, visit the [MNIT Office of Accessibility website](#).

Use HTML format when possible

HTML works with most email programs and supports text formatting. To check your settings, go to File > Options > Mail (Alt, F, O, then tab to Mail).

Choose appropriate fonts and font sizes

Outlook's default font is Aptos, size 11pt. Keep this recommended font or choose another sans serif font of at least 11pt for greater readability.

Check color contrast in fonts and backgrounds

Color contrast must meet standards throughout the email. Normal text to background ratio is 4.5:1. Non-text elements and large text (a minimum of 14pt bold or 18pt) ratios are 3:1. Use the default background. Patterned and colored backgrounds can impact security, readability and contrast, or bandwidth and downloading.

Use email styles

In Outlook's Format Text tab, use heading and paragraph styles with logical hierarchy to structure the email content. Also set up these formatting preferences from this tab for future emails: select "Change Styles" then "Set as Default" (Alt, O, G, D). Extra spaces, tabs, and empty paragraphs cause confusion for assistive technology users.

Use plain language

Put key information up front. Use bulleted lists to segment supporting points. Write in active voice: subject of the sentence performs the action.

Name hyperlinks appropriately

Links should contain meaningful text that describes the link's destination or subject. Do not use generic language, such as "click here."

Add alt text to images and objects

Use informative and concise alt text descriptions for important graphics or embedded objects. For example, "Person in wheelchair on ramp" rather than "Smiling woman sitting in a green wheelchair posing on ramp." Outlook doesn't have the "Mark as decorative" checkbox, rather add "Decorative" as the alt text if appropriate.

Create accessible signatures

Contact information should be in text, not a graphic. Logos must have alt text. Do not use tables to format signatures.

Use "Attach File" to add attachments

For emails, use "Attach File" in the ribbon (Alt, H, AF). For appointments, send a separate email with attachments. Note: The action to drag a file and drop it into the body of an email or appointment invitation using assistive technology is not available in all versions of Outlook.

Use the Accessibility Checker tool

This built-in tool found under the Review tab gives details on potential issues and suggestions to correct them. However, it can't find everything. Perform manual checks in addition to the automated accessibility checker.

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MNIT Office of Accessibility training web page

Microsoft Word

Accessibility Quick Card

Follow these best practices to help make documents accessible. For more information on Word document accessibility and training, visit the MNIT Office of Accessibility website.

Use document styles

Use heading and paragraph styles with logical hierarchy to structure the document. Start with an accessible template.

Use short headings

Keep headings short so readers can quickly navigate the document.

Name hyperlinks appropriately

Links should contain meaningful text that describes the link's destination or subject. Do not use generic language, such as "click here."

Use simple table structure

Avoid using nested tables, merged or split cells, or blank cells for formatting. Table header rows are essential to provide context to table data. Do not put the table title inside the table. If a complex layout is necessary, contact an accessibility expert.

Add alt text to images and objects

Use informative and concise alt text descriptions for important graphics or embedded objects. For example, "Person in wheelchair on ramp" rather than "Smiling woman sitting in a green wheelchair posing on ramp." Use the "Mark as decorative" checkbox as appropriate.

Align images with text

When inserting an image with text wrap, the anchor icon indicates when assistive technology will read the alt text for the image. Do not place it in the middle of a sentence or paragraph.

Check color contrast

Color contrast must meet standards throughout the document. Normal text to background ratio is 4.5:1. Non-text elements and large text (a minimum of 14pt bold or 18pt) ratios are 3:1.

Avoid using repeated blank characters

Extra spaces, tabs and empty paragraphs add confusion to content for assistive technology users. Use built-in formatting tools to adjust the layout. This simplifies design and enhances user experience. This also applies to columns and hard returns for page breaks.

Fill in Document Properties

Enter title, subject, and author in the document's properties.

Use the Accessibility Checker tool

This built-in tool provides details on potential issues and gives suggestions to correct them. However, it can't find everything. Perform manual checks in addition to the automated accessibility checker.

Use Acrobat's Create PDF tool

If the Word document will be converted to a PDF, start with a fully accessible Word document. If Adobe Acrobat Pro is installed, use the Acrobat Tab > Create PDF tool. Never use "Print to PDF." If Acrobat Pro isn't available to use, work with someone who has it.

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Microsoft PowerPoint

Accessibility Quick Card

Follow these best practices to help make presentations accessible. For more information on PowerPoint accessibility and training, visit the [MNIT Office of Accessibility website](#).

Use content placeholders

Start with an accessible template. Use View > Slide Master View to insert, edit and manage content placeholders. To check if this is done correctly, open View > Outline View. All text (except tables and objects with alt text) should display in this pane. This ensures all users have easier access to the text in the slides.

Check slide reading order

Open Review > Accessibility Check > Reading Order tool to verify the order of each slide's content. The reading order must follow the intended presentation order for the slide content. Note: Reading order may affect object layering.

Give each slide a unique title

Slide titles create structure and aid navigation, both essential accessibility components to meet state requirements. Keep titles short (use 5-10 words and keep to one line).

Add alt text to images and objects

Use informative and concise alt text descriptions for important graphics or non-text elements. For example, "Person in wheelchair on ramp" rather than "Smiling woman sitting in a green wheelchair posing on ramp." Use the "Mark as Decorative" checkbox as appropriate.

Name hyperlinks appropriately

Links should contain meaningful text that describes the link's destination or subject. Do not use generic language, such as "click here."

Use simple table structure

Avoid using nested tables, merged or split cells, or blank cells for formatting. Table header rows are essential to provide context to table data. Simple tables are easier to read and understand. If a complex layout is needed for data, contact an accessibility expert.

Include captions and audio descriptions

If using embedded audio or video components, caption the audio and describe the visuals.

Use high-contrast colors

Color contrast must meet standards throughout the presentation. High-contrast color schemes and texture variations in graphs improve readability. Normal text to background ratio is 4.5:1. Non-text elements and large text (a minimum of 14pt bold or 18pt) ratios are 3:1. Preview slide designs in black & white or grayscale.

Fill in Document Properties

Open File > Info > Properties and enter title, subject, and author in the document's properties.

Use the Accessibility Checker tool

This built-in tool in Review > Check Accessibility provides details on potential issues and gives suggestions to correct them. Perform manual checks in addition to the automated accessibility checker.

Consider alternate formats when sharing presentations

Consider the audience and the details to share. For example, exporting to Word can include presentation notes. A PDF can provide a simple copy of the slide deck. Make sure the alternate format is accessible.

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Microsoft Excel

Accessibility Quick Card

Follow these best practices to help make workbooks accessible. For more information on Excel accessibility, visit the [MNIT Office of Accessibility website](#).

Give all sheet tabs unique names

Sheet names should provide information about what is found on the worksheet, making it easier to navigate through a workbook. Remove blank sheets.

Enter title and important information in first row and column

Enter title and important details, like company name, in cell A1. This is the first data cell to provide structure and navigation for assistive technology. It's ok to merge cells to center the title.

Structure content for better readability. Hide blank rows and columns.

Add structure by defining the title region (creating names for defined data ranges) and hiding unused rows and columns.

Avoid blank data cells in data ranges

When possible, mark any empty table data cell as "Cell intentionally left blank" or "No data."

Use alignment tools for layout and to create white space

Don't use blank rows/columns for spacing. Manage the layout by resizing rows and columns, and using the alignment tools to move content (top, bottom, left, right) as needed.

Specify table row and column headings

Check Table Design > Table Style Options to ensure proper header row and column elements are marked. Use Table Design > Properties to add/edit the table's name. It should be descriptive.

Add alt text to images and objects

Excel's alt text is not read by screen readers. Add informative and concise descriptions for important graphics or non-text elements directly in a cell near the image, not in the image's alt text section. Consider adding "Image description:" to the beginning of the alt text, to identify the use of an image to screen reader users. Use "Mark as decorative" checkbox as appropriate.

Include descriptions directly in data cells for any data visuals

When displaying a chart or graph within Excel, its complete description should be provided directly in a data cell near the visual, not in the visual's alt text.

Name hyperlinks appropriately

Links should contain meaningful text that describes the link's destination or subject. Do not use generic language, such as "click here." **Note**: Excel applies links to the entire cell, not just the link's text.

Use color carefully

Color contrast must meet standards throughout the workbook. High-contrast color schemes and texture variations in graphs improve readability. Normal text to background ratio is 4.5:1. Non-text elements and large text (a minimum of 14pt bold or 18pt) ratios are 3:1. Preview content in black & white or grayscale.

Fill in Document Properties

Enter title, subject, and author in the document's properties.

Use the Accessibility Checker tool

This built-in tool provides details on potential issues and gives suggestions to correct them. You must perform manual checks in addition to the automated accessibility checker.

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Accessibility Quick Card

Follow these best practices to help make social media content accessible. For more information on social media accessibility, visit the MNIT Office of Accessibility website.

Profile tips

Social media pages often use preset colors and formatting. Account for these in design campaigns. Also, testing contrast may only be possible after publishing.

Don't use text in banner art images

Assistive technologies do not recognize text in the profile banner photo. Only use text in text fields.

Use high resolution images

Use the highest resolution the platform supports, so viewers can easily expand images.

Use high-contrast text in images

Normal text to background ratio is 4.5:1. Non-text elements and large text (a minimum of 14pt bold or 18pt) ratios are 3:1. Validate design colors with contrast checkers such as WebAIM's Contrast Checker tool.

Add a point of contact

List a point of contact for business profiles to address user questions.

Posting tips

Add alt text to images and objects

The alt text language must be the same as any text included in the image. This includes pictures, clip art, tables, graphs, and charts. If adding alt text in the image is not possible, describe the image in clear, concise text as part of the post.

Use emojis with care

Use emojis sparingly. Place them at the end of sentences and avoid substituting them for words. Test with assistive technologies, like screen readers or magnifiers, to confirm clarity and usability.

Place hyperlinks after the post

This allows people to read messages before clicking the link and leaving the post. Consider adding [PIC], [VIDEO], [AUDIO], or [PDF] at the end of links to help the reader know where they are going.

Put extra hashtags after hyperlinks

Hashtags can be complicated for those using assistive technologies. One or two is ok in the main body; otherwise, post them at the end.

Use CamelCase for hashtags

Capitalizing the first letter in each word helps people decipher the hashtag.

Emphasize the multi in multimedia

Post transcripts for podcasts. When writing a script, describe key visuals. Any video created or linked to must have captions. Embed captions directly into video files when the platform does not support closed caption files.

Use plain language

Clear, concise content will engage more readers. Avoid acronyms.

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Adobe Acrobat

Accessibility Quick Card

Follow these best practices to help make PDFs accessible. It's always best to start with an accessible source document (e.g., Word). Then use the Acrobat tab to create the PDF. For more information on PDF accessibility and training, visit the [MNIT Office of Accessibility website](#).

Use the Accessibility Checker tool

This built-in tool provides details on potential issues and gives suggestions to correct them. Perform manual checks in addition to the automated accessibility checker.

Convert scanned text

Make sure the document contains real text (scanned documents often render text as unreadable). If it does not, recreate the PDF file using the source document or convert it to include true text.

Check Document Properties

Confirm title, subject, and author are entered and correct. Verify the language setting matches the document's language.

Review alt text

Make sure informative and concise alt text descriptions exist for important non-text elements.

Check color contrast

Color contrast must meet standards throughout the document. Normal text to background ratio is 4.5:1. Non-text elements and large text (a minimum of 14pt bold or 18pt) ratios are 3:1. Fix source document, if needed.

Artifact decorative images

Artifacts are elements that are ignored by a screen reader, such as a background texture that does not contain important text. The element can be changed to or from an artifact using the Accessibility tags panel or the Reading Order tool.

Check for tags

Check the Accessibility tags panel to ensure there are tags, and if not, add them. Tags contain the contents of the document and make it possible for assistive technologies to read and interact with PDF content. Headings <H1>, paragraphs <P>, and images or charts <Figure> are examples of tag types.

Check logical reading order

"Walk the tag tree." Review the order of the tags in the Accessibility tags panel to confirm logical reading order.

Check tag structure

While walking the tag tree, check whether tagged elements are properly structured. This includes headings, tables, lists, and links.

Check form fields and buttons

If the PDF is intended to be an interactive document, add tooltips to the fillable form fields and buttons. Set the tab order for the form fields and ensure proper keyboard focus.

Check tab order and hyperlinks

Use the Tab key to check the tab order of all interactive elements. These include form fields, buttons, and links.

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Adobe InDesign

Accessibility Quick Card

It's always best to use accessibility best practices as you build your document in InDesign, then use Acrobat Pro for any remaining work. For more information on InDesign accessibility and training, visit the [MNIT Office of Accessibility website](#).

Use Paragraph Styles

Paragraph Styles create the tag structure for the text of your PDF.

Use Character Styles

Use Character Styles for each unique set of font attributes within a document. Changing attributes with the font panel can create unwanted span tags in your document.

Create layers

Using a minimum of 3 layers (background, images, text) helps organize your content and makes it easier to artifact decorative images.

Reading order: Use Layers & Articles panels

Both the Articles panel and the Layers panel affect reading order. Items in each Layers panel layer read from the bottom up. Items in the Articles panel read from the top down. Add both text and images to your Articles panel for proper reading order.

Check alt text

Make sure informative and concise alt text descriptions exist for all non-text elements that are not purely decorative. Decorative images should be artifacted.

Flatten images

This enables only one alt text for the entire image, and keeps all elements of your image together as you define your document's reading order.

Check Role Map in Acrobat Pro

InDesign enables designers to create meaningful style names, but Acrobat may assign different roles. Check Role Map to confirm heading structure is correct.

Use the Accessibility Checker in Acrobat Pro

This built-in tool will tell you about possible issues in your document and give suggestions on how to correct them. Be sure to walk the tag tree as well.