Accessibility of digital files

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1 Preface – Digital File Accessibility, why it matters and what you need to know

With the ever-increasing emphasis and reliance on digital technology at work, it can be easy for those of us with certain impairments to fall behind. In Europe, a standard was devised (EN 301 549), with 'design for all' as its core principle. "EN 301 549 applies to all digital technology, including websites, software, electronic devices, and mobile apps. If there are any challenges preventing people with disabilities from accessing ICT, the public entity could be liable for violating EN 301 549 standards." Click this link for the source of the quote.

This guide will follow the guidelines as set out by the World Wide Web Consortium's (W3C) Web Content Accessibility Guidelines 2.1 because this is the standard used by the Web Accessibility Directive (Directive EU 2016/2102) and aims to meet the minimum requirements of digital accessibility.

The goal of this document is to set out guidelines for making digital files accessible for all and how to best achieve this. As you use them, many of these practices will become second nature to you. Not only will this greatly increase the way colleagues and students with impairments can interact with your digital content that they need for their work or studies, but it will also create more options for everyone and create a more accessible digital environment for all.

The following abbreviations or terms will be used throughout the document:

- **Assistive technology (AT):** AT refers to any type of device, equipment or technology that is used by a person with disabilities to improve, mitigate, or maintain functionality. This can be anything from a pencil holder or wheelchair to screen reader software.
- **Original source/document**: the original source is the first file that is created, before any conversions to different filetypes or programs take place. For example, if an initial draft is typed in Word and later converted to .pdf, the Word file would be the original source document.
- **Visual or textual cues:** a cue in a digital file is any type of formatting applied to indicate emphasis to the reader. This can be done by changing the size or style of the font, applying styles, or changing the colour of the text - these examples are visual cues. Textual cues are words or sentences pointing out parts of text that need additional context. For example: 'This link to the following website will open in a new window.'
- **Visual or textual element:** an element refers to a part of a document. These can be visual in nature, like charts or images, or textual like a paragraph or a heading.

2 Language

Most Assistive Technology (AT) can detect the language of the text and will switch to the appropriate language setting. Check that the language of your text is set to the one you intend it to be.

In the ribbon under **Review > Select Language > Set Proofing Language > Mark selected text as:**
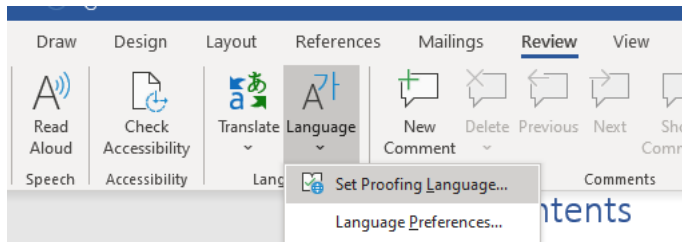
Not only will this make any spelling and grammar checks more accurate for you, but screen readers will also know what language the text is intended to be.

3 Document titles and file names

Have clear file names and titles for your documents. This is important for accessibility for several reasons:

1. AT users can locate the file if it has a comprehensive and descriptive file name.
2. The title of a file is the first thing an AT will read when the file is opened, so it lets the user know which file they have accessed.
3. Users can refer to the file name at any time while the document is open (because it is displayed at the top of most applications).

3.1 Guidelines for accessible filenames and titles

Use clear, descriptive filenames for your document. The filename should be related to the document's title. Do not use underscores in your file name because ATs read them out.

Use: Document Accessibility Guideline 2022.pdf
Instead of: doc1_version1.2_doc_acc_guide_070122.docx

The document's filename and the **Document Title** are different. You can programme the **Document Title** to be displayed in the header or footer of the document, so it is read as one of the first elements of the page. If you set a **Document Title**, screen readers will read the **Document Title** instead of the file name. This allows you a bit more freedom with creating filenames (like adding ongoing revision numbers), while keeping the **Document Title** consistent and clean for AT users.

To add a **Document Title** to your file, go to the ribbon and select **File > Info > Title > Add a title.**
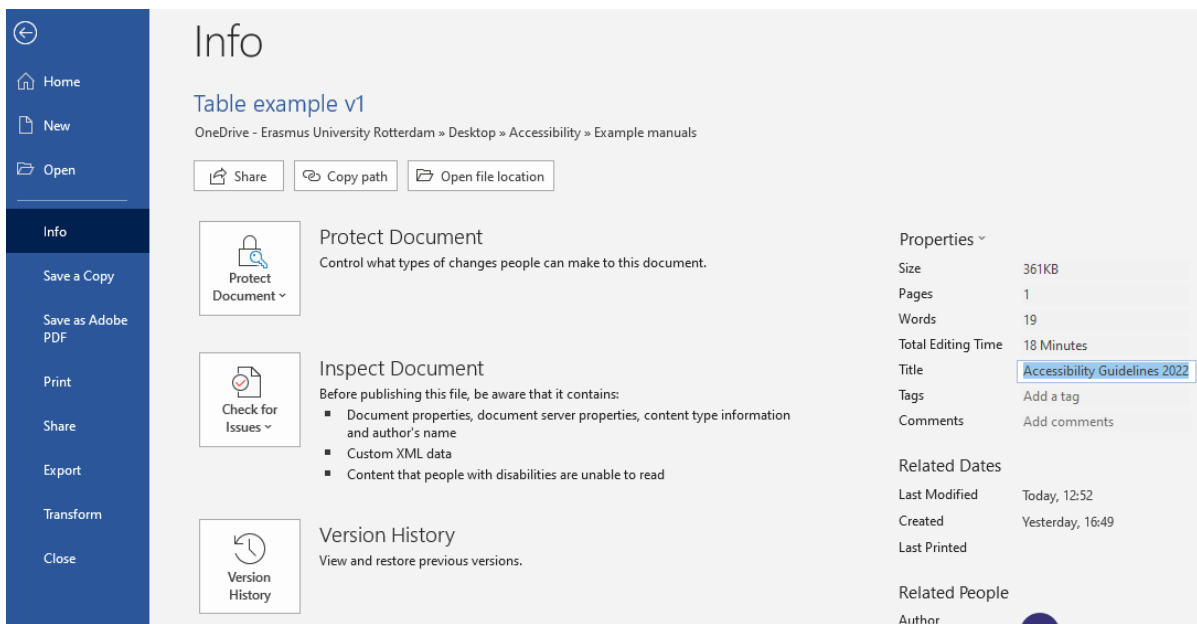
For **Mac users**, go to the ribbon and select **File>Properties> Summary> Add a title**.
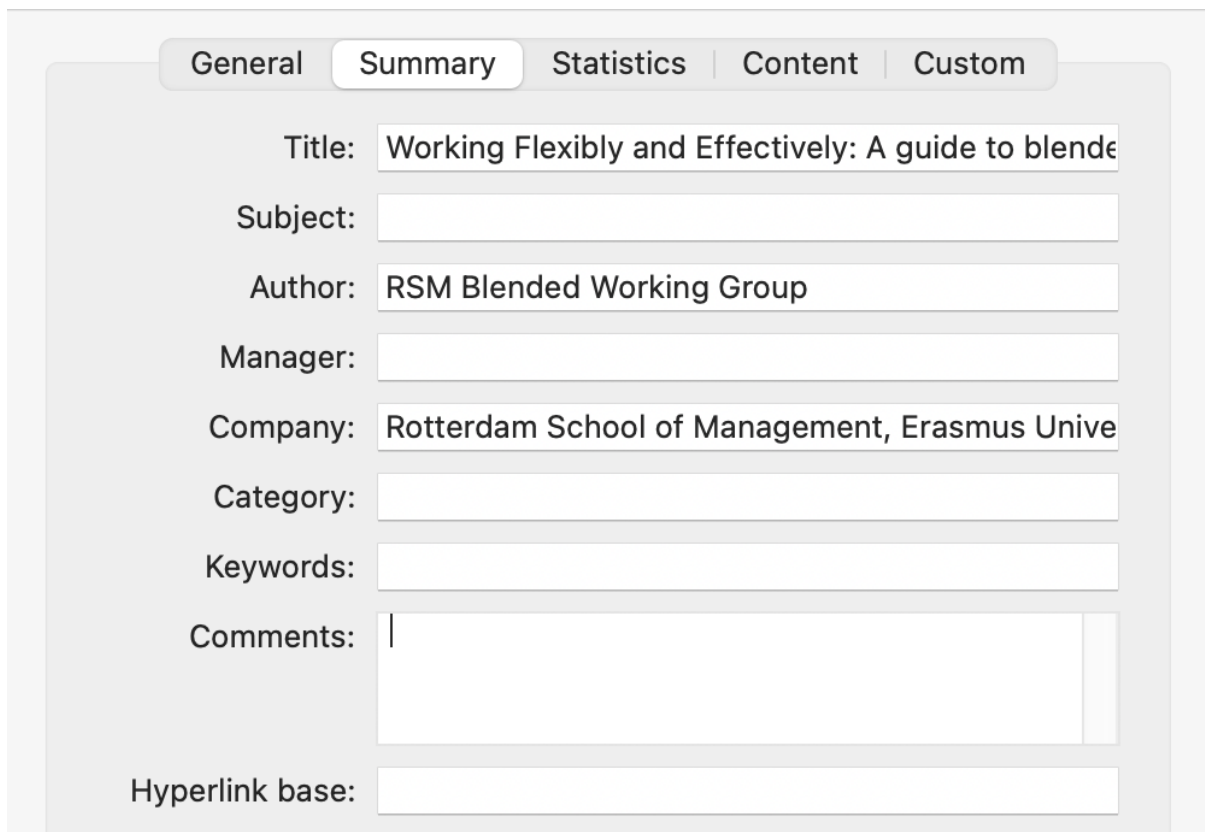
To display the Document Title in the header or footer of the document:

- Select your header or footer
- Navigate to the **Header & Footer tab on the ribbon > Document Info > Document Title**
- You will be prompted to fill out a **Document Title** in your header or footer. AT will recognise this element as the **Document Title.**

For Mac users

- Select your header or footer
- Navigate to the **Insert tab on the ribbon > select Header or Footer**
- Select a header or footer style that includes **"Document Title "as a header or footer option**. AT will recognise this element as the Document Title.
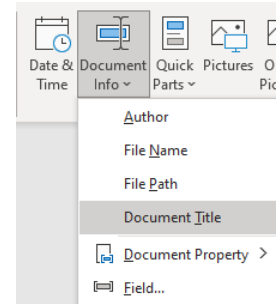
4   Structure

A good structure in your document helps AT to properly read and present your text. Think about using headings and subheadings, page numbering, paragraphs, lists, and tables. If you use consistent formatting throughout your document then AT will present the text the way the author intended it to be read.

Note: most screen readers can navigate by page number, heading, paragraph, line of text, sentence, word and even by character. If you choose to not use one of these text-navigating elements, please make sure you do use others so the AT can still function.

A **table of contents** (ToC) is a good way to ensure proper structure, especially in larger documents. Most text processors like Word, Google Docs, OpenOffice and Apple's Pages will automatically generate a ToC if you have used headings to structure your document. Refer to Section 5 for how to apply headings to your document. Click this link to go to Section 5 of the guidelines. A TOC is based on headers and page numbering. Some word processors allow users to have a quick overview of the document as well as navigate it.

In Microsoft Word (PC and Mac) this option can be located by selecting the **References** tab in the ribbon **> Table of Contents > Select ToC of choice.**

5   Headings

Headings are used by AT and human readers to navigate the general structure of a text. Most screen readers will allow users to navigate quickly through a text by skipping from heading to heading.

5.1 Guidelines for using headings

Use clear headings in the order in which they apply. Never skip a heading. Make sure your headings are descriptive to help users identify the content of that part of the text.

- Heading 1 – used for large content headings (e.g., chapters).
- Heading 2 – used for sub-sections within chapters.
- Heading 3 – used as sub-section headings within heading 3 text elements.

Avoid the Microsoft Office style called 'Title'. This cannot be recognised by AT as a navigational heading type. Headings in 'Title' style will be read out by AT as regular text.
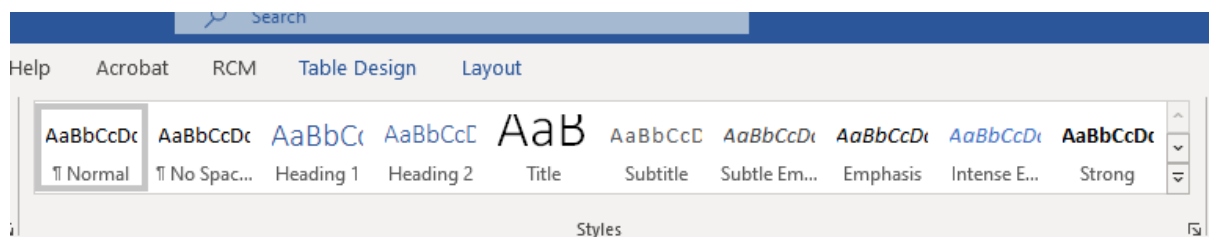
6 Guidelines for Accessible Tables

Tables are great way to show data. Screen readers can read tables that are created according to the method outlined below.

Important note: AT will read tables properly only if they are used to convey related data. Tables used to make text appear in a certain layout on the page will not be read properly and should be avoided if possible.

6.1 Guidelines for accessible tables

- Use header rows and label them as such. Select **Table > Table Tools > Design Tab > Header Row** and tick that option. For Mac users, Select **Insert tab on the ribbon> Table Design> Select Header row** option.
- Don't alter the cells. Screen readers are not capable of reading **merged** or **split cells.**
- When formatting your tables, try to use accessible colours. For more information about contrast and colour use, see Section 9. Click this link to go to Section 9 of the guidelines.
- **Avoid blank cells.** If data is zero or absent, fill the cell with '0' or 'n/a' (not applicable). A screen reader could interpret an empty cell in the middle of a table as the end of the table. Don't leave empty cells in the upper left corner; a screen reader will consider the table to be completely empty.
- Always **add an Alt Text** (alternative text) to the table. **Right click > Table properties > Alt Text.** Your Alt Text should have both a title and a comprehensive description to convey why you are showing the image. Reading out a whole table takes time. Alt Text can help AT users decide if they want to read the whole table.
- Keep the table **as simple as possible**, with data related to each other. Merged or split cells, nested tables, and tables with blank cells make it impossible for AT to make sense of the presented data.

An example of an accessible table with a header row, an accessible colour scheme and no empty cells

Subject type	Block	Re-sit available?
Core	1	Yes
Core	2	Yes
Elective	2	Yes
Elective	3	No
Core	4	Yes

7   Lists

The use of bullet points and numbered lists is general good practice because it enhances readers' comprehension. The same applies to ensuring a document's accessibility because screen readers will recognise lists and present them appropriately.

Most text processors have tools for automatically creating lists. Use these tools rather than formatting your own bullet points so that screen readers can recognise them.

8   Hyperlinks

Embedding URLs into text is very common. It invites readers to go to your documents in the cloud or to a website for more information. Hyperlinks can link to email addresses, videos, webpages, documents, and file locations. Screen readers will recognise hyperlinks and notify the AT user.

Important note: AT will read out all the characters in a hyperlink as it appears in the text.

8.1   Adding or editing a link text

When adding a link to a text you can:

- highlight or select the relevant piece of text and **right click > Link**
- Alternatively, go to the **Insert** tab on the ribbon **> Link.** Either will open the **Insert Hyperlink** window.
- Select either the desired file or enter an address. Click OK.
  If you prefer using hotkeys, use 'CTRL + K' to open the Insert Hyperlink window. For Mac users, use "COMMAND + K" to open the Insert Hyperlink window.
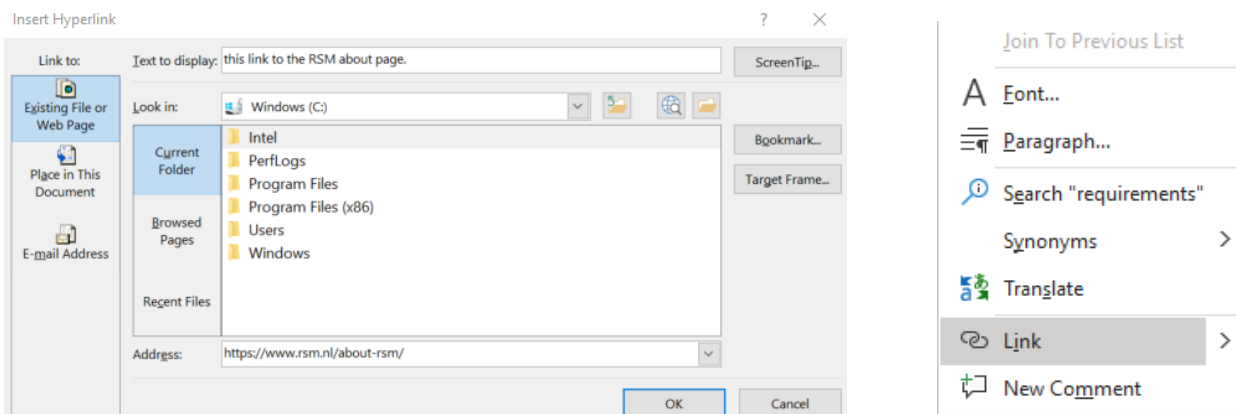
8.2   Guidelines for creating accessible hyperlinks

1. In webpages: embed the link as descriptive text, instead of the URL. Screen readers will read out the URL character by character, but URLs are often not descriptive and don't tell the reader what's being linked to.

    Example: to learn more about RSM's mission, [follow this link to the RSM.nl website](#).

    Instead of: follow this link: [https://www.rsm.nl/faculty-research/faculty-directory/?tx_erimmisaffiliates%5Bfilters%5D%5BfacultyPosition%5D=professor&cHash=3a0e0febf75a44bd39eecddc8c888fbd](#)

2. Keep the link text **short but descriptive**. This will allow AT users to scan a hyperlink quickly and know where the link leads to.
3. When embedding an **email address**, be sure to type the **full address**. Otherwise AT users will not know that the link refers to an email address.
4. If clicking on the hyperlink starts a **download**, indicate this in the text of the link.
5. If the hyperlink **opens a new tab or new window**, indicate this in the text of the link.
6. To increase the readability of formatted a hyperlink, underline the linked text and give it a contrasting colour.

# 9   Images and alternative text (Alt Text)

Screen readers cannot recognise images and other non-text elements like icons, videos, or forms so these become inaccessible to AT users unless you provide an alternative text (Alt Text) description. If there's no Alt Text, AT users will only be given the file name of the image, or perhaps its title.

An Alt Text and caption for every non-text element is also useful if the element fails to load. The Alt Text will be presented in place of the missing element.

9.1   Guidelines for adding Alt Text

1. You don't have to include *'image showing …', 'a picture of…'* or *'a graphic of …'* in your Alt Text. Screen readers will automatically tell AT users this before reading out the Alt Text.
2. Ensure your Alt Text describes the **context** and **meaning** of the image in the document as well as a description of the image itself.
3. Try not to include information that's already in the text surrounding the image.
4. If an image is purely for decoration, say so in your Alt Text.
5. Non-text elements such as graphs, flowcharts and charts will all require Alt Text. A concise summary is sufficient for graphs and charts. You do not need to include every feature of the graph in your Alt Text.

Example:
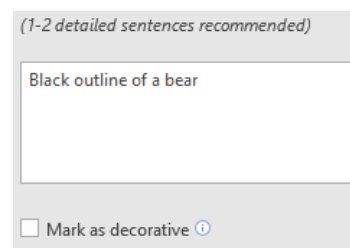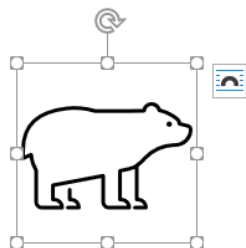
10 Colour and contrast

It's important to use colours that contrast when highlighting areas of text in a file or on a webpage. Contrast is essential for people with low vision because it may be difficult for them to read text that has a background colour with low contrast.

When using colours in your document, keep in mind that screen readers **will not** pick up colour differences. The highlighting effect will not be apparent to AT users.

10.1 Guidelines for using colours and contrast in documents

- Use text colours with high contrast so the text stands out against its background.
For example: This piece of text reflects the use of high contrasted colours and will still be readable when seen in greyscale.

  Instead of: This text is difficult to discern in colour and in greyscale for readers with decreased vision.

You can use this link to the website contrastchecker.com to make sure your use of colours is accessible to all readers.

- Colour should not be the only way you convey information or draw attention to text. You can also add visual cues (like bullet points, italics, or bold lettering), formatting or additional text cues.
- Please note that visual cues will not help users of screen readers, however it may help people with colour blindness or decreased vision. It's helpful to use anything other than a different colour to visually emphasise specific text.

10.2 Guidelines for formatting text to be accessible

There are a few essential concepts to remember for formatting the design and look of your text for accessibility.

- Use actual text instead of an image of text (e.g.: don't use a scan or screenshot of a page of text).
- Most screen readers will not recognise *italicised* or **bolded** text. These are useful only for sighted readers. Instead, use the **strong** and *emphasis* styles provided by Word because these can be recognised by screen readers and have the same effect.
You can find the **strong** and *emphasis* styles in **Home > Styles** in the ribbon.
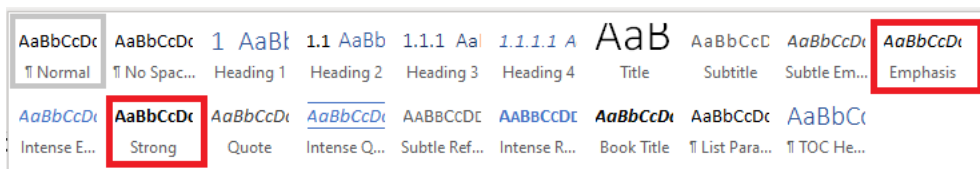

- Use heading styles instead of increasing font size or using capitals to indicate chapter or paragraph titles. To learn more about applying headings, click this link to go to Section 5 of the guidelines.
- Use strong colour contrasts if required.
- Be consistent in your fonts and font sizes. Try not to use small font sizes.

Note: General best practice is to remember that if you find you need to change the appearance of your text to convey emphasis or meaning, first try to write it differently to convey that emphasis.

10.3 Using the Accessibility Checker

MS Office comes with a built-in Accessibility Checker in the Review tab of the ribbon. In Word, Excel, and PowerPoint, **select Review > Check Accessibility**.
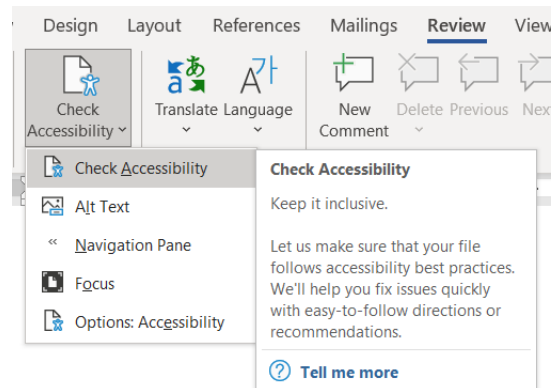
For MAC users the accessibility option can be found in the top-level menu in the Tools tab of the ribbon for Word, Excel and PowerPoint. **Select Tools > Check Accessibility**.
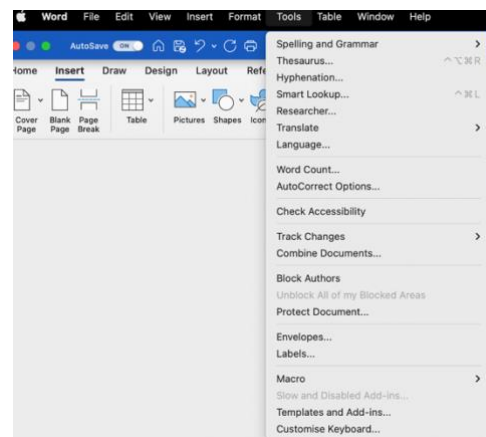
11 Checklist

If you have followed the methods and guidelines in this guide, you should have created a fully accessible document. Doing this will eventually become a habit – one that we should all try to adopt.

To help reinforce the habit of accessibility in all your digital files, take time to read this checklist for creating accessible documents. You can copy so you can use it when you create your next file.

Have you:

- ☐ Set a language?
- ☐ Added a document title?
- ☐ Added a concise file name?
- ☐ Applied headings and a ToC?
- ☐ Applied the right formatting styles?
- ☐ Formatted your tables?
- ☐ Formatted your hyperlinks?
- ☐ Used any lists (bullet points, numbering etc.)?
- ☐ Filled out Alt Text for non-text elements?
- ☐ Checked your colour and contract use?
- ☐ Run the Accessibility Checker (if available)?

Making accessible PowerPoint presentations and converting them to .pdf

You can make your PowerPoint presentations accessible and convertible to .pdf. This manual will explain several helpful options, like reusing slides from the RSM template that's already formatted for accessibility, viewing the outline of the presentation, and converting PowerPoint presentations into .pdf files.

Creating accessible PowerPoint presentations follows the same general accessibility guidelines we have described in Sections 1–10, but there are additional steps, which are outlined below.

## 12 Creating a new presentation and new slides

Before starting to create a new presentation, please note:

- Screen readers cannot read text boxes.
- However, screen readers can recognise the default built-in templates provided by Microsoft PowerPoint. We used these templates to make our RSM PowerPoint template so you can use it to create accessible presentations and safely convert them to .pdf. The RSM PowerPoint template is in the RSM Brand Toolbox (opens webpage).
- You must assign a reading order for every slide so that screen readers properly read your slides. If done correctly, this reading order will transfer when you convert your presentation to a .pdf file.
- Like most Microsoft Office applications, PowerPoint has an Accessibility Checker. Instructions for applying it can be found in Section 15. Click this link to go to Section 15 of the guidelines.

There are several ways of creating new presentations and adding slides using the RSM template. We will show you two of them.

12.1 Option 1 for PC users– Reuse slides

- Download the latest RSM PowerPoint template from the RSM Brand Toolbox and save it in: **[This PC] > Documents > Custom Office Templates**
- Open PowerPoint in your preferred manner and start a blank presentation.
- Navigate to: **Insert > Reuse Slides.**
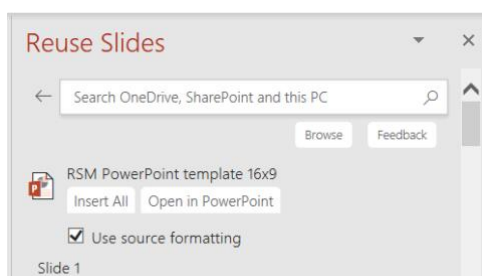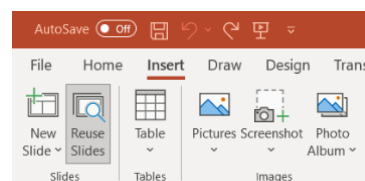
- A new pane will open on the right. Click **Browse** to locate and open the RSM template.
- Make sure **'Use source formatting'** is checked.
- You can now browse through the template and select the slide you want to use. Slides inserted this way will have the right theme and images. You won't lose formatting or need to copy and paste images.

12.2 Option 2 for PC users– Saving custom template

This option gives more freedom when creating your presentation, while ensuring the RSM branded formatting will be used.

It has predefined text boxes that can be read by screen readers. **Remember: text boxes created outside of the pre-formatted templates will not be accessible!**

- If you haven't already done so, download the RSM PowerPoint template from the Brand Toolbox and save it in: **[This PC] > Documents > Custom Office Templates**
- Navigate to: **Design > Themes > More**
- Click 'Browse for Themes'. Select the RSM PowerPoint template you and saved in the 'Custom Office Templates' folder.
- Return to: **Design > Themes > More** and click **'Save Current Theme'**. Give it a file name and save the theme in the already opened location.

- You have now made the RSM template into a Custom template. Next time you start a new presentation in PowerPoint, you will find your saved template in the Design tab in the PowerPoint ribbon.
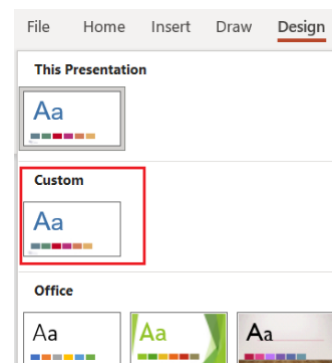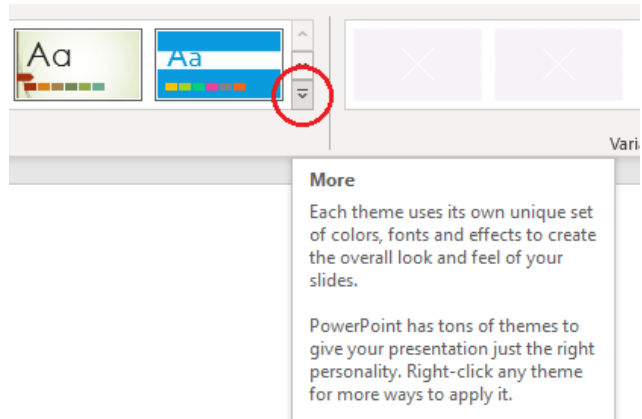
Any presentation created this way will automatically load the RSM template theme. It will NOT load any of the pictures or images inserted in the pre-made presentation. From here you can use the **Home > New Slide** option to add slides using the RSM template.

Note: depending on the version you downloaded from the RSM Brand Toolbox, some of the slides in the RSM template have an additional side pane of explanation next to the slide. These will not show up in the final presentation or converted .pdf files.

12.3 Option for Mac users – Reuse slides

- Open PowerPoint in your preferred manner and start a blank presentation.
- To ensure the source formatting is used for reused slides, copy the slide(s) you wish to have tin the presentation from the source presentation and paste them directly into the new presentation.
- If you wish to add all the slides from a presentation into a new one, you can also navigate to **Insert>** on the ribbon and click on the drop-down button next and select **>Slides from** and

choose **> Other presentation**. A window will open to your file system and where you can then choose the presentation you wish to insert. Click on the presentation and select **>OK**.
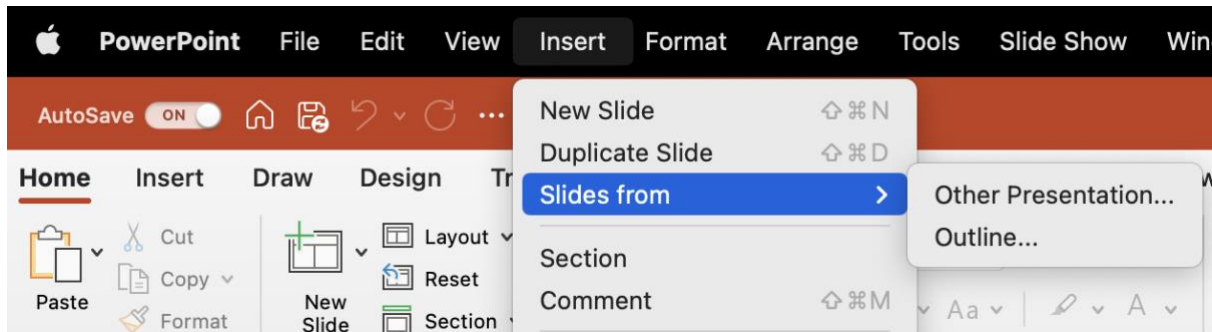
12.4 Saving custom template for MAC users

- For Mac users download the latest RSM PowerPoint template from the RSM Brand Toolbox and save by selecting File tab in the top-level menu and then select **> Save as Template. Name your file and select >Save**. It will save your templates in the templates folder in your Library folder. You can then access the template later by selecting > New from Template from the File tab in the top-level menu.
  .
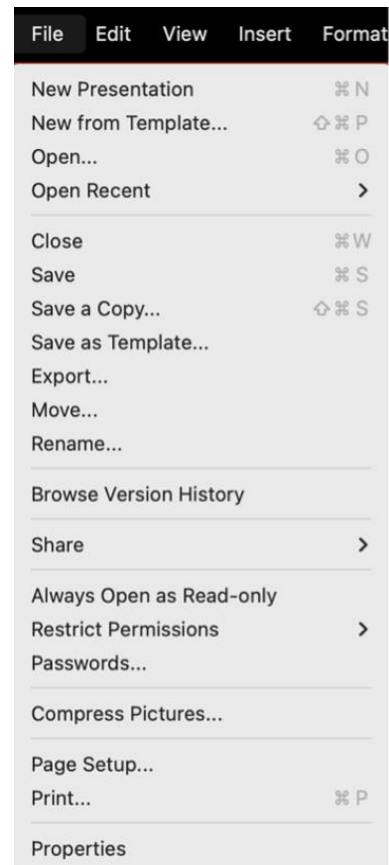
13 Checkpoint: does your slide contain written text?

After creating a new presentation, inserting slides, and filling them with content, it is important to take a moment to check whether your text elements are being recognised by PowerPoint. If PowerPoint can identify them, screen readers can, too.

To check whether your text element is recognised as written text:

- For PCs navigate to **View > Presentation Views > Outline View.** For Macs navigate to **View>Outline View.**
- This will open a new pane on the left. Every slide will be listed with its text elements displayed, including the reading order.

- If your text element is fully displayed in the **Outline View** pane, that means it is recognised as written text and can be translated by screen readers.
- If you have manually added a text box, your written text will not be displayed here. This is not considered accessible. Instead, use a pre-formatted text box from the template for your slide as described above.

14 Assigning a reading order

There are usually multiple elements in a slide and it's essential to define the reading order so that a screen reader knows in which order to read them. Here's how to check the reading order of your slide and make adjustments:

For PC:

- Navigate to **Home > Editing > Select > Selection Pane.**
- A new pane will open on the right.
- All elements on that slide will be shown in the pane. Selecting an element on the slide will highlight the corresponding element in the **Selection Pane** and vice versa.
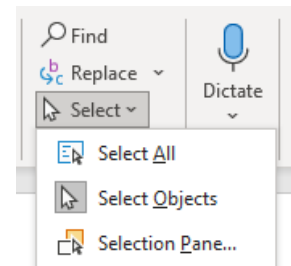
- Note: **The first element placed** on the slide, **will be read first** so the reading order in the pane must be read from bottom to top, as if you are creating a stack of papers. (E.g.: in most cases, the slide title will be on the bottom of the list, because this will be the first element read out.)
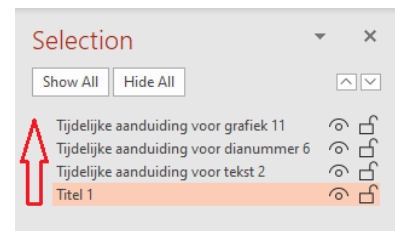
For Mac:

- Navigate to >Review> Check Accessibility and then on the drop-down menu select >Selection Pane.
- A new pane will open on the right.
- All elements on that slide will be shown in the pane.

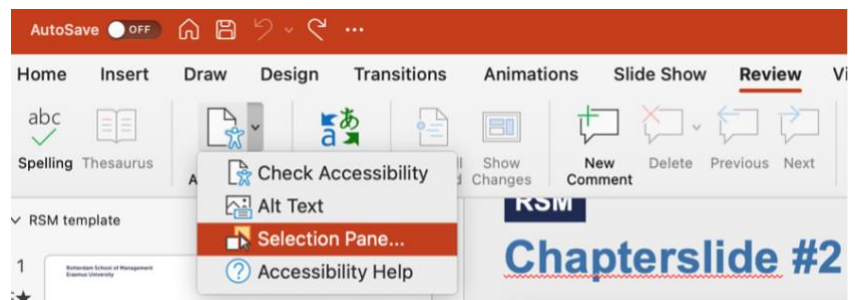- Selecting an element on the slide will highlight the corresponding element in the Selection Pane and vice versa.

15 Additional tips

Small changes and additions can go a long way to enhance accessibility in a presentation. Please consider these options:

- Alt Text – Adding Alt Text to non-text elements will ensure AT can still communicate to users the context of the non-text element in relation to surrounding text. Keep your Alt Text succinct and relevant. We suggest it should be no more than 140 characters, including the spaces.
- For PC: You can add Alt Text by **right-clicking the object > Edit Alt Text.** This will open the **Alt Text pane.** If the image is purely decorative, select the checkmark to indicate this. Alternatively, open the Alt Text pane via **Review > Check Accessibility > Alt Text.**
- For Mac: Navigate to **>Review> Check Accessibility** and then on the drop-down menu select **>Alt Text. If** the image is purely decorative state so in the text box.
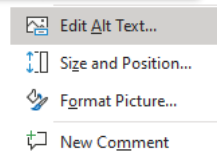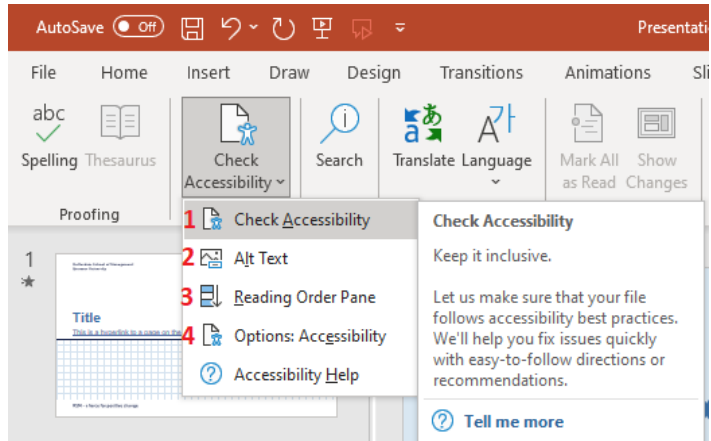
16 Checkpoint: run the Accessibility checker

When you have finished preparing your presentation, run the Accessibility Checker. This built-in system will scan your presentation for anything you may have missed and will suggest improvements to accessibility.

- Navigate to **Review > Check Accessibility > Check Accessibility**. This will open a new pane on the right with four options:

1. **Check Accessibility** runs the tool. Results of the scan appear in the pane on the right. (There's more about the Accessibility Checker in our guide in Section 15.)
2. **For both PC and Mac Alt Text** opens the Alt Text pane on the right. You can select non-text elements and add Alt Text on the slide.
3. For PC users the **Reading Order pane** opens the Reading Order pane on the right. For Mac users the selection pane does the same. See Section 13 for instructions on assigning the reading order. Click here for a link to Section 13.
4. **Options: Accessibility** opens the PowerPoint Options panel for assigning options to your preferences. For Mac users the Accessibility help gives you additional options for improving the accessibility of your document.

17 Accessibility options during your presentation

You can create accessible presentations when you're making a new slide deck, but there are also several options to consider before you present it.

- Lots of people benefit from reading along with a presentation or would like to have the opportunity to read it later. **Providing your audience with a copy of the slides in advance,** either as a .ppt or .pdf file, can be very helpful.

- For people with visual impairments, it can be strenuous to keep up with a solely visual presentation. Consider **recording your presentation** and providing your audience with the audio or video file. (Note: this is especially useful with presentations which are recorded for a livestream. Provide a link to the recording afterwards.)

- Does the audio in your presentation play an important part in comprehending your points? If possible, **provide a transcript of the spoken audio.**

- PowerPoint can **automatically generate subtitles** while you are presenting. The easiest way to present is via the Presenter View. To access this option, open your presentation in PowerPoint and navigate to **Slide Show > select Use Presenter View.** Check the **Subtitle Settings**. Select the language for your presentation (both spoken and for subtitles).

- For Mac the **Subtitle Settings** option can be selected directly from the slide show task bar.
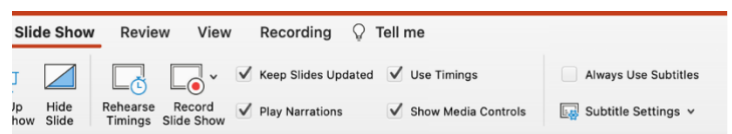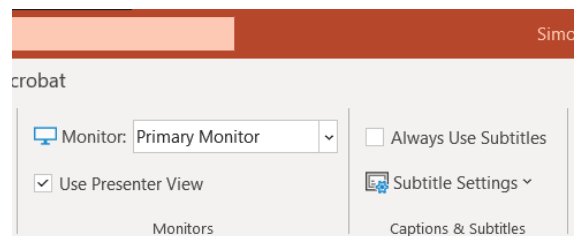
From here, you can start your presentation any way you want. Most laptops have an integrated microphone that will pick up speech and transcribe it directly into subtitles. Otherwise, you can use any external microphone you have available.

18 Converting to .pdf files

PowerPoint presentations are often converted into .pdf files and there are several ways to do this. We recommend this reliable method that preserves the accessibility features you have put into your presentation.

Before you start, make sure you have **Adobe Acrobat DC Pro** installed on your computer. All EUR employees can download it from the Client Center on the home screen of your RSM laptop or desktop computer. A license is required. BV employees should check with BV IT to inquire about access.

- With your presentation opened in PowerPoint, in the top ribbon navigate to **Acrobat > Create .PDF and Run Action.**
- Select **Make Accessible.** Selecting this will open **Adobe Acrobat DC Pro,** if it wasn't already running.
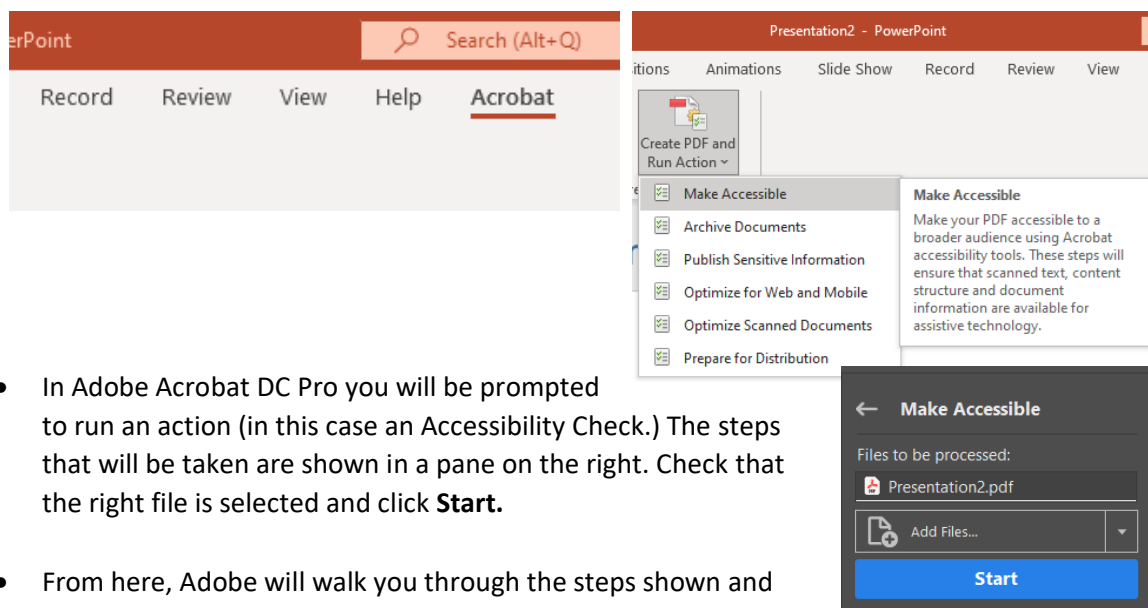
- In Adobe Acrobat DC Pro you will be prompted to run an action (in this case an Accessibility Check.) The steps that will be taken are shown in a pane on the right. Check that the right file is selected and click **Start.**

- From here, Adobe will walk you through the steps shown and ask for your input at each point.

- You will see a menu displaying **Accessibility Check Options.** Walk through all the options and select the ones you want Acrobat to check for accessibility. Click **Start Checking.**

- For Mac users select file from the top-level menu and select >Export. Name your file and choose PDF as the File Format. Then click on the Export button to save the file as a pdf.
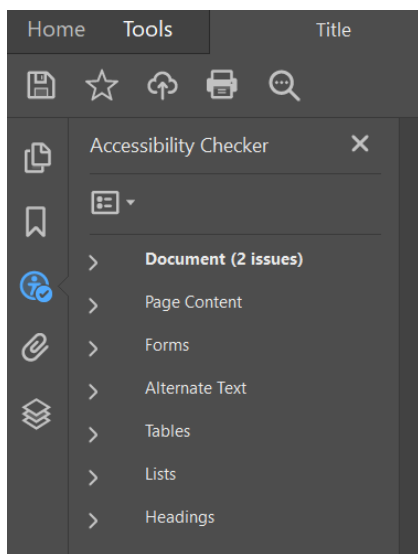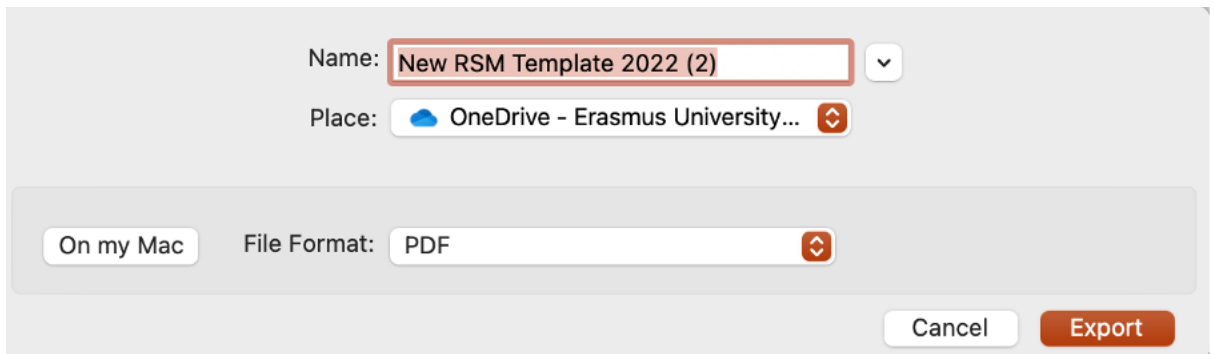
A new pane will open on the left, the **Accessibility Checker.** Any issues discovered during the check will be displayed here. Anything requiring a manual check will be marked.

After this, you can close the **Make Accessible pane** on the right.

Your .ppt file has now been converted into an accessible .pdf file.

19 Checklist

If you have followed this guide, you should have created a fully accessible presentation. With time, these steps will become a habit for everyone at RSM.

We've made a checklist that you can use every time you create new texts or presentations until you get used to the steps to make it accessible. This way you will quickly establish a new habit of accessibility in all your digital files.

To check:

- ☐ Have you used a template from the RSM brand toolbox?
- ☐ Do your slides contain written text?
- ☐ Have you checked the reading order of the slides?
- ☐ Do all your non-text elements have Alt Text?
- ☐ Have you applied all general accessibility guidelines? (E.g.: language, colour, fonts etc.)
- ☐ Has your presentation been recorded, or does it contain audio?
- ☐ Can you provide your presentation beforehand in any form?
- ☐ If you have converted your presentation to .pdf, did you run the Accessibility Check?

Making accessible .pdf documents

It's not always possible to create accessible .pdf files from the original document. Even if you're working with an existing .pdf file, there are still several ways you can verify and edit its accessibility.

In this chapter we will discuss:

- Programs and features for creating accessible .pdfs
- Check and verify the accessibility of a .pdf file
- Edit a .pdf file to be accessible

20 Adobe Acrobat DC Pro

To be able to verify and edit .pdf files for accessibility, you will need to use **Adobe Acrobat DC Pro**. All EUR employees can download Acrobat DC Pro from the Client Center (find it on the home screen of your RSM laptop or desktop computer). BV employees should check with BV IT to inquire about access.

Consider making this programme the default for opening all .pdfs on your work computer.
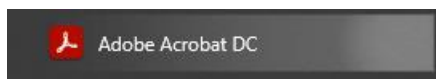
Note: You cannot verify and edit .pdfs for accessibility using Adobe Acrobat Reader because it does not have the right tools. You must use Adobe Acrobat DC.

20.1 Recommended settings and tools

Adobe Acrobat DC has tools for making your files accessible. In this section we will describe where to find them and the recommended settings for creating accessible .pdf files easily.

20.1.1 Tags

Adobe uses 'tags' so that .pdf files can tell screen readers how a file should be read.

Adobe identifies pieces (or elements) of the documents and assigns a tag to them. This is unlike other text processors like Word, which identify written text by individual characters that can be formatted together. Adobe's tagged elements are communicated to screen readers so they can be read.
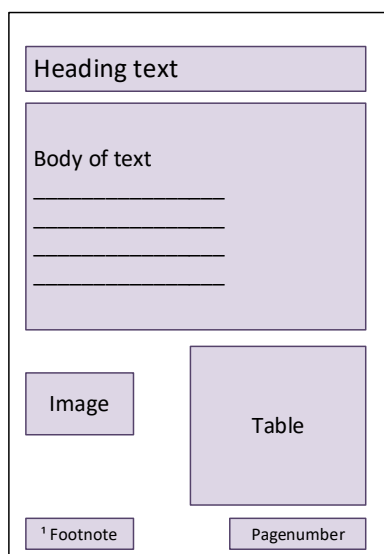
The example on the left shows a simple diagram of a page divided up into its components – heading, body text, image, table and so on. Adobe will use these components to:

- identify and tag elements
- assign a reading order
- communicate these tags to AT if requested.

These tags define the structure of the document, much like formatting and templates do for Word and PowerPoint. You can keep an overview of your tags by opening the Tags pane. The tags you assign to components on your page can always be re-assigned or changed.

- Navigate to **View > Show/Hide > Navigation Panes > Tags.** You can then pin the Tags icon to the pane on the left of your screen by right clicking it.
- Once selected, a new pane will open, displaying all assigned tags in the document.
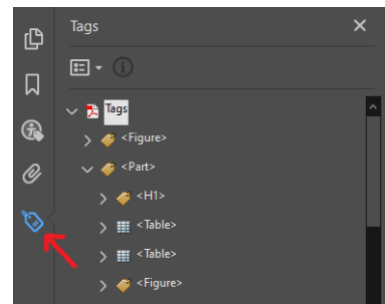
If tags are already present:

- When in the Tags pane, selecting a tag will highlight the element in your document.
- If you wish to change a tag, right click the tag in the pane. This brings up all available options to you. Navigate to **Properties > Tag > Type.** In this dropdown menu, select the type of tag you wish to assign.

If tags are NOT yet present:

- This will not happen often; most converted files will be automatically tagged by Adobe Acrobat Pro DC. However, sometimes automatic tags are incorrect so you will need to manually adjust them.
- To change a tag, right click the tag in the pane to bring up the options. Navigate to **Properties > Tag > Type.** In this dropdown menu, select the type of tag you want to assign.
- To create a new tag, locate the element you want to tag and highlight it (either by highlighting a piece of text, or clicking and dragging a selection box anywhere in the document).
- With the element highlighted, navigate to **the Options symbol in the Tags pane > click Create Tag from Selection.**
- Your highlighted element will now be a newly assigned tag.
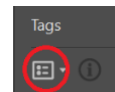
Note: when creating a new tag, you will be prompted to select a *tag type* from a dropdown menu. Choose from the large and detailed selection. In general, these are the most important ones to use:

Tag type	Use for
Paragraph/Text	Bodies of text
Heading (1 to 6)	Headings
Figure	Images, charts, flowcharts, general non-text elements
Table (Data cell/row/header etc.)	Table, or specified parts of a table if desired
Table of Contents (and ToC Item)	Table of Contents, or specified parts if desired
Form field	Any field that is meant to filled out by readers
Link	Hyperlinks

All additional tag types such as Formula, Background/Artifact, Index, Label, Note/Reference, can be used to your own desired level of detail.

20.1.2 Bookmarks

Bookmarks are a feature of .pdfs that link elements from the document to a bookmark. This makes it easier to navigate a file or link to a specific page. It also makes the .pdf file more accessible for users of screen readers.

Like tags, bookmarks have their own pane in Adobe Acrobat. It's on **the left pane of your screen – click the Bookmarks symbol.** A new pane will open on the left.

If bookmarks are already present:

- In most cases a converted .pdf file will already have bookmarks, especially if the original file has been optimised for accessibility. You can still adjust or add bookmarks.
- In the Bookmarks pane, selecting a bookmark will jump to that element of the text.
- Right click the desired bookmark. In this menu you can rename, reset, and delete present bookmarks.

If bookmarks are NOT present:

- There is no option to automatically assign bookmarks by Adobe Acrobat *after a file conversion* (just as with tags). Fortunately, creating bookmarks is very simple.
- Locate the desired text in the document and highlight it. **Right click the highlighted text > Add Bookmark.**
- The entire highlighted text will now appear as a bookmark in the Bookmark pane on the left. You can rename the new bookmark (optional).
- Alternatively, in the Bookmark pane, click the **New Bookmark** symbol. A new untitled bookmark will be created at the current location in the document. Rename and reset the new bookmark (optional).

20.1.3 Accessibility

Adobe Acrobat Pro DC's built-in **Accessibility feature** is the most important tool for creating accessible .pdf files. Consider pinning this tool to your ribbon so it is easy to find and use. Here's how:

- Navigate to **Tools > Protect & Standardize > scroll down to Accessibility.**
- Optionally, you can add a shortcut to the tools sidebar.
- You will know you have selected the right tool when an additional ribbon is displayed above your file saying 'Accessibility'.
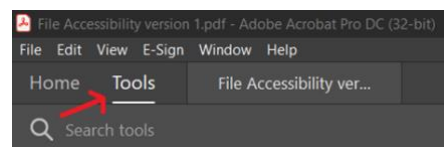
When you select the Accessibility tool, a secondary menu opens on the right showing the features you can use to verify and edit your .pdf file and make it as accessible as possible.

21 Verifying the accessibility of your .pdf file

21.1 Accessibility Tool in-depth

Once you have received or created a new .pdf file, it's a good idea to always check the accessibility of the file. The outcome of this short process will determine your next steps.

Open your file in Adobe Acrobat Pro DC and click the Accessibility tool. You will see these options:

1. **Autotag Document** – lets the program automatically tag your .pdf for you. See Section 19.1.1 on how tags work. Click here for a link to Section 19.1.1 in the guidelines.
2. **Autotag from Field** – most probably this will be greyed out and unavailable. If you are creating a form that requires input into fillable fields, these fields can be detected and tagged automatically with this function.
3. **Reading Options** – allows you to adjust the reading order of the document.
4. **Accessibility Check** – gives you the option to start the Accessibility checker and if you want, generate a report on the findings.
5. **Accessibility Report** – opens an accessibility check report that was previously generated and saved.
6. **Identify Form Fields** – if you are creating a form with fillable fields, this option allows you to automatically identify and edit form fields. It opens the Form Tool.
7. **Set Alternate Text** – the program will detect elements in the document that may require Alt Text. You will be prompted to add text if any is missing.
8. **Setup Assistant** – runs through a series of preference options for assistive technology.
9. **Reading Order** – opens a window that allows you to view and reassign the reading order of your document.
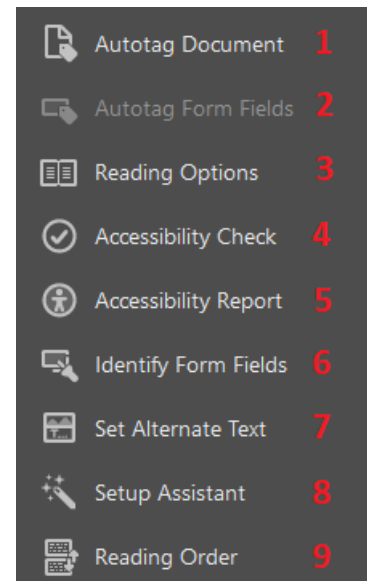
If it is your first time using the Accessibility tools in Adobe Acrobat Pro DC, we recommend you take some time to click through all of them and explore. Allowing the **Setup Assistant (8)** to set your preferences for accessibility is also very helpful.

21.2 Running the Accessibility Check

When you have set up the tools and opened your file, click and run the **Accessibility Check (4)** in the **Accessibility menu** shown in section 20.1.

- This opens a window with options. We recommend you check the whole document for all possible options. If you want to generate a report, click **Report Options.**
- Click **Start Checking.**
- Processing time depends on the size of your document. Sometimes you will be asked to provide feedback during the checking process.
- When the check is complete, a new pane showing the results opens on the left. Click through the results for an overview of the problems you might need to address.
- Right-click on any of the results. You may be prompted to **Fix** the issue, but you can also choose to skip a suggested fix or manually pass a result.
- See Section 21 for ways to create increased accessibility for your file. Click here for a link to Section 21.
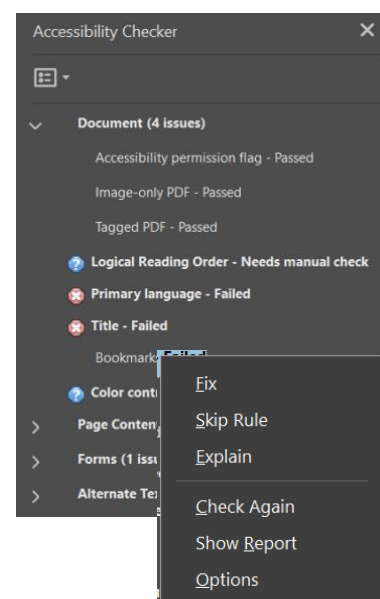
22 Creating or converting files to accessible .pdfs

22.1 Tagging and reading order

Proper tags in your .pdf are the most important part of creating an accessible file because screen readers will use them to navigate and identify a reading order.

Before you start to tag, think about the current state of your .pdf file:

1. Your file was converted to .pdf and during the conversion, tags were assigned properly.
2. Your file was converted to .pdf, some tagging structure was assigned, but singular tags may need to be applied manually.
3. Your .pdf file has few or no tags.

If your .pdf is in state 1, then you don't need to do anything.
If your .pdf is in state 2 or 3 then you still have some work to do to fully tag it. Here's how:

To fully tag your .pdf file, follow these steps:

- Navigate to the **Accessibility Tool.** How to access the Accessibility Tool, see Section 19.1.3. Click here for a link to Section 19.1.3.
- In the Accessibility pane on the right, select **Autotag Document.** You may get a prompt telling you the document is already tagged, click **Yes.**
- Navigate to the **Tags pane** on the left. Your document should now have a tagging structure assigned. If you wish to make manual adjustments, follow the steps in Section 19.1.1. Click here for a link to Section 19.1.1.

A **reading order** is usually automatically assigned by Adobe Acrobat Pro DC during conversion from the original file. Sometimes, the results of an Accessibility Check will reveal that the reading order may need manual adjustment.

Here's how to **manually adjust the reading order:**

- Navigate to the **Accessibility tool.**
- In **the Accessibility pane** on the right, select **Reader Order.** A new window opens.
- Click **Show Order Panel**. A new pane opens on the left showing a list of pages and their elements. Clicking an element in the list will highlight the respective element in the document.
- In the **Show Order pane,** drag and drop elements in the order they need to be read by screen readers.
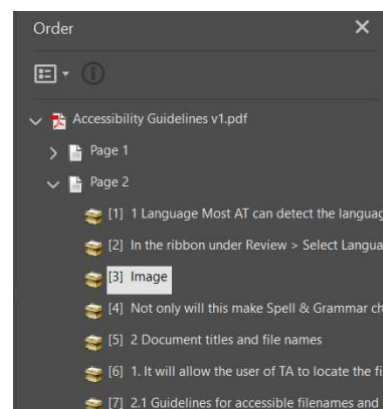
22.2 Searchable text and Optical Character Recognition (OCR)

A .pdf document may contain an image of text (e.g.: a scanned page of a book) but elements like this are inaccessible to AT because they are considered as images rather than text. What's more, the text can't be edited either so they are impractical in general.

If the scanned text image is important to your document then you might have **to convert the scanned text into written (or 'searchable') text.** You can do this by hand (input the text using your keyboard) or you can use optical character recognition (OCR).

Adobe Acrobat DC has an additional tool to assist with this, the Scan & OCR tool. For detailed explanation on how convert scanned text into searchable text, follow this link to the adobe support website (opens a website).

23 Alt-text

As explained in the General Accessibility Guidelines in section 8, having alternative text for non-text elements is important for users of AT. They may require an alternative to a pure visual element.

To add **Alternative Text to your .pdf file:**

- Navigate to the **Accessibility Tool.**
- In the **Accessibility pane** on the right, select **Set Alternate Text.** Acrobat will locate all figures in the document and walk you by them one-by-one.
- For every figure, either fill out a missing alt-text, or mark as **Decorative figure.**
- When you have clicked through all the figures with the arrows, click **Save & Close.**

24 Bookmarks

As stated in section 19.1.2, bookmarks can greatly increase the accessibility of a .pdf document. Not just for people using AT, but it will also make larger files easier to navigate for all users. The Accessibility Check does not check for the presence of bookmarks, so adding these are fully up to your own discretion.

Please follow the instructions in 19.1.2 to set up or adjust a present Bookmark list in your .pdf document.

25 Additional accessibility features

Some additional things to check for with regards to the accessibility of your .pdf file, that can easily be overlooked are **Language Settings, Security Settings** and **Hyperlinks.**

1. **Language settings** – assign a language to your .pdf. It will allow screen readers to recognize the text in the intended language.
   - To do so, navigate to **File > Properties > Advanced > Reading Options.**
   - In the drop-down menu, select the language of the document.
2. **Security Settings** – sometimes, .pdf files will need to be set up with certain security options. (For example: to restrict printing, copying, editing etc.) These restrictions may interfere with assistive technology. If your .pdf requires restrictions, always make sure it can still be accessed by screen readers.
3. **Hyperlinks** – many .pdf files will have hyperlinks as interactive features. Besides following the General Guidelines on how to write a good, accessible hyperlink, consider using hyperlinks referring to other pages of your .pdf file. These navigational aids can greatly add to the accessibility of your document.

26 Checklist and flowchart
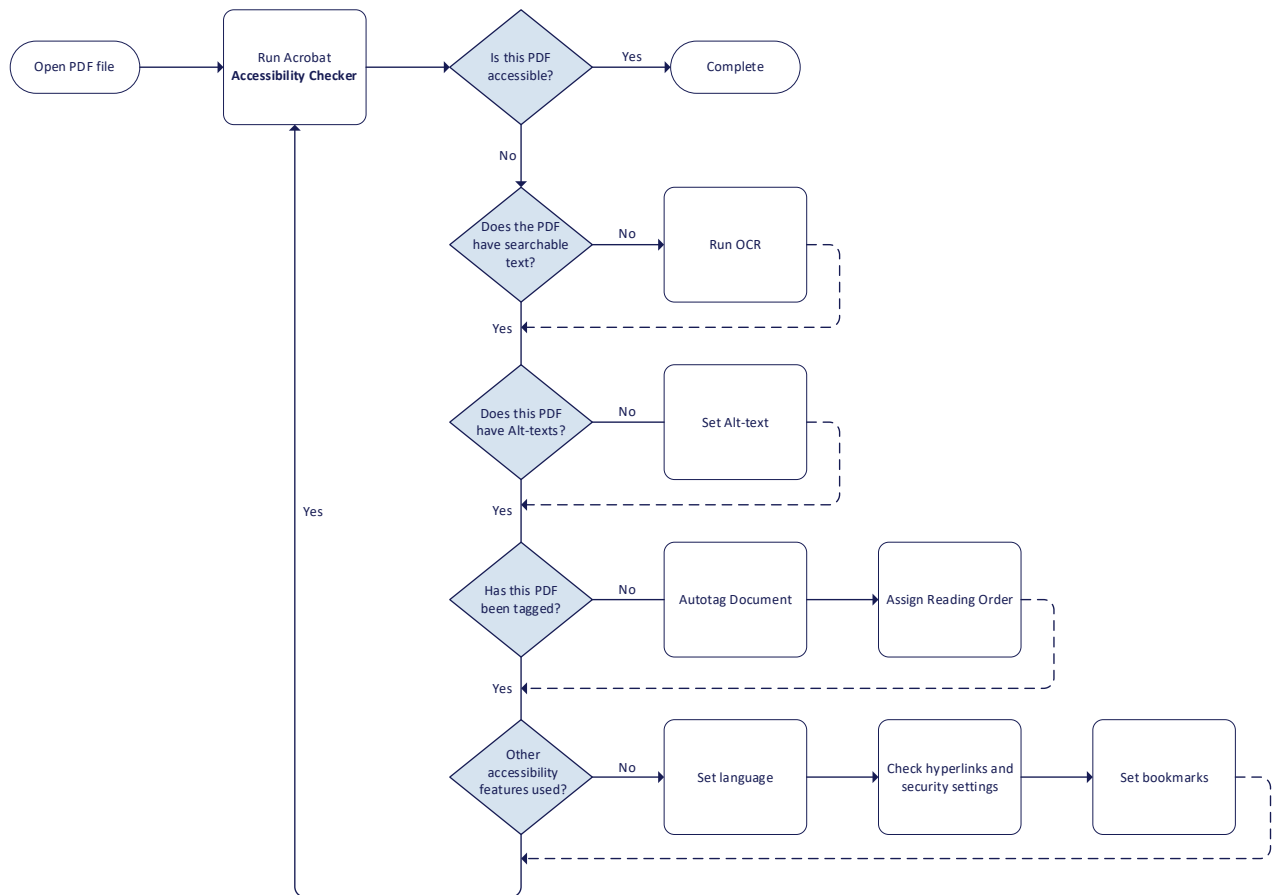
To check:

- ☐ Accessibility Check run?
- ☐ Document tagged?
- ☐ Reading order correct?
- ☐ Bookmarks available?
- ☐ Is all text searchable?
- ☐ Alt Text available?
- ☐ Checked all hyperlinks?
- ☐ Reading language set?
- ☐ Security settings allow for AT?