Accessibility PowerPoint:
Extended checklist according to EN 301 549

SHUFFLE – Hochschulinitiative digitale Barrierefreiheit für Alle

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# Introduction

We want to make PowerPoint documents as accessible as possible for a wide range of users. This checklist contains aspects to be considered that a PowerPoint document should fulfil according to the requirements of BITV 2.0 (based on EN 301 549). If all EN requirements are met, the document is accessible in accordance with the legal requirements for public bodies in Germany. You can find explanations on the implementation of the individual aspects in the “Implementation guide for an accessible PowerPoint”

When creating a new PowerPoint document, it is recommended that the integrated accessibility check in PowerPoint is activated from the start date and runs parallel to the creation process. This allows some barriers to be recognised and removed immediately. The "Check accessibility" option is helpful, but does not guarantee complete accessibility, which is why a manual check should always be carried out.

# Notes on the extended checklist

In principle, each EN requirement must be fulfilled in both of the following views:

1. Edit view ("Normal") - Standard view (without having to make changes to the document)
2. Presentation

The reading view can be useful, but is not relevant for accessibility fulfilment.

The requirements listed here refer to the programme provided by Microsoft for editing and presenting (PowerPoint application). We use the latest PowerPoint version as a basis (Office 365 as of February 2023). There may be deviations for older versions.

This list is not suitable if at least one of the following cases applies. In these cases, all requirements of EN 301 549 in section 10 should be applied.

* Scripts are used (e.g. VBScript)
* There are explicit form fields

# Authorship and licence

Authoring staff, people: Christin Stormer, Gottfried Zimmermann and Jule Günter. With thanks for the contribution of: Johannes Fischer, Judith Kuhlmann, Sabine Krüger, Dustin Matzel, Uwe Pfeifer, Alexander Pfingstl. The project [SHUFFLE - Hochschulinitiative digitale Barrierfreiheit für Alle](https://www.shuffle-projekt.de/%22%20%5Co%20%22http%3A//www.shuffle-projekt.de) is financially supported by the foundation [Innovation in der Hochschullehre](https://stiftung-hochschullehre.de/%22%20%5Co%20%22https%3A//stiftung-hochschullehre.de/). This document is released under the [CC-BY 4.0 licence](https://creativecommons.org/licenses/by/4.0/%22%20%5Co%20%22https%3A//creativecommons.org/licenses/by/4.0/).

This document has been developed with great care. Nevertheless, we cannot guarantee that it is complete and free of errors. You are welcome to send us any information on errors found or other feedback by email to the Digital Accessibility Competence Centre.

# Extended checklist according to EN requirements (PowerPoint)

| **No./ Check** | **Type** | **EN requirement** | **Aspect**  | In digital education, **particularly** helpful for individuals who... |
| --- | --- | --- | --- | --- |
| D1 | Document (title) | 10.2.4.2 (A) Document with title | The title on the first slide is stored in the metadata, meaningful and easy to understand. | ... use a voice output or a screen reader.... want to find a document using a search engine. |
| D2 | Document (language) | 10.3.1.1 (A) Language of the document | The main language of the document corresponds to the language for the spell check. | ... use a voice output or a screen reader. |
| D3 | Document | 10.1.3.3 (A) Sensory properties | A reference to internal or external textual or graphic objects is made by explicit naming, not solely by means of a description via visual or auditory features. | ... would like to orientate themselves in the document.... that primarily utilise a sensory channel. |
| D4 | Document (colours) | 10.1.4.1 (A) Use of colour | If colours are used to convey information (e.g. in diagrams or to mark text), labels, symbols or patterns also convey the same information. | ... do not perceive all colours clearly.... be distracted by colours. ... perceive stimuli strongly. ... work independently of colour display. |
| F1 | Slide (title) | 10.1.3.1 (A) Info and relationships | Slide titles are created using placeholders for slide titles. | ... use a voice output or a screen reader. |
| F2 | Slide (sections, titles) | 10.2.4.6 (AA) Headings and labels | The titles for sections and slides are meaningful.  | ... use a voice output or a screen reader.... navigate through the slides using the slide titles. |
| F3 | Slide | 10.1.3.2 (A) Meaningful order / 10.2.4.3 (A) Focus order | The reading order for the elements of a slide is logical (exception for decorative elements).  | ... use a voice output or a screen reader. |
| F4 | Slide | 10.1.3.1 (A) Info and relationships | The templates (slide masters) provided in PowerPoint are used, with changes if necessary. The placeholders are filled according to their meaning. | ... use a voice output or a screen reader. |
| F5 | Slide | 10.1.1.1 (A) Non-text content / 10.1.3.1 (A) Info and relationships | The slide master only contains decorative or redundant images and text content. | ... use a voice output or a screen reader. |
| F6 | Slide (animation) | 10.2.2.2 (A) Pause, stop, fade out | Animations for objects and slide transitions are used sparingly (for a maximum of 5 seconds). | ... are easily distracted.... need structure.... react with auditory sensitivity. |
| K1 | Header and footer, slide number | 10.1.3.2 (A) Meaningful sequence | The header, footer and slide number are created with appropriate placeholders, marked as decorative and free of relevant information. | ... use a voice output or a screen reader and do not want to be interrupted in the flow of reading. |
| S1 | Columns | 10.1.3.2 (A) Meaningful sequence | Columns are not organised using tabs, but using the "Add or remove columns" function. | ... use a voice output or a screen reader. |
| T1 | Text (language) | 10.3.1.2 (AA) Language of parts | The text passages that differ from the main language are marked with the appropriate language (language change). | ... use a voice output or a screen reader. |
| T2 | Text | 10.1.4.12 (AA) Text spacing | Paragraphs are not created with a tab or soft line break, but with a paragraph break.  | ... use a voice output or a screen reader. |
| T3 | Text (colour) | 10.1.4.3 (AA) Contrast (minimum) | Texts have a sufficient contrast ratio to the background. For large texts from 18 pt. or bold texts from 14 pt. at least 3:1. For all other texts at least 4.5:1. | ... do not perceive all colours clearly. ... see badly.... read the document in poor lighting conditions (or via a projector). |
| L1 | List, enumeration | 10.1.3.1 (A) Info and relationships | Lists and enumerations are created with list and enumeration formats. | ... use a voice output or a screen reader. |
| L2 | List, enumeration | 10.1.3.1 (A) Info and relationships | Only content that is actually a list/enumeration is output as a list/enumeration.  | ... use a voice output or a screen reader. |
| N1 | Link | 10.2.4.4 (A) Link purpose (in context) | Link texts are meaningful in connection with the text context. | ... use a voice output or a screen reader....can easily be interrupted in the flow of reading.  |
| G1 | Graphics, video, audio | 10.1.1.1 (A) Non-text content | Content-bearing graphics, diagrams, groupings of graphics, videos and audio clips have a short, concise alternative text. | ... use a voice output or a screen reader. |
| G2 | Graphic | 10.1.1.1 (A) Non-text content | Content-heavy photos, graphics, SmartArts, diagrams and groupings of graphic elements are also described or interpreted in detail in the document (as text on the slide, notes on the slide, separate slide or link to a website). | ... use a voice output or a screen reader. |
| G3 | Graphic | 10.1.1.1 (A) Non-text content | Graphics with no substantive meaning are marked as decorative. | ... use a voice output or a screen reader. |
| G4 | Graphic | 10.2.5.3 (A) Labelling in the name | A linked graphic that displays text also has this text in the alternative text. | ... use a voice output or a screen reader. |
| G5 | Graphic | 10.1.4.5 (AA) Images of text | No images or WordArt are used to display text ("font graphics"). Exception: Essential font graphics have a meaningful alternative text. Redundant font graphics are labelled as decorative. | ... use a voice output or a screen reader.... enlarge texts.... want to view texts in high contrast mode. |
| G6 | Graphic | 10.2.2.2 (A) Pause, stop, hide | No animated graphics (GIFs) are used.  | ... which react sensitively to light stimuli.... who are easily distracted. |
| G7 | Graphic (colour) | 10.1.4.11 (AA) Non-text contrast | Graphic information-bearing elements (e.g. lines, neighbouring areas) have a minimum contrast of 3:1 to the background. | ... do not perceive all colours clearly. ... see badly.... read the document in poor lighting conditions (or via a projector). |
| R1 | Formula | 10.1.1.1 (A) Non-text content | The integrated formula editor is used for mathematical formulae. | ... use a voice output or a screen reader. |
| B1 | Table | 10.1.3.1 (A) Info and relationships  | Tables are created via "Insert table". | ... use a voice output or a screen reader. |
| B2 | Table | 10.1.3.1 (A) Info and relationships  | All column headings are marked as "Header", all row headings (if available) are marked as "First column". | ... use a voice output or a screen reader. |
| B3 | Table | 10.1.3.1 (A) Info and relationships  | Cells are not connected to each other. | ... use a voice output or a screen reader....enlarge the table. |
| B4 | Table | 10.1.3.1 (A) Info and relationships  | Complex tables are divided into several simple tables.  | ... use a voice output or a screen reader.... need/want structures ... find it difficult to understand the content of complex tables. |
| V1 | Video | 10.1.2.1 (A) Pure audio and pure video (recorded) / 10.1.2.2 (A) Subtitles (recorded) | Embedded online videos with relevant audio content contain a subtitle (on their video platform). | ... record videographic content primarily visually... at the time of reception.... have no audio output.... whose mother tongue is not German.... copy or search the contents of the audio track |
| V2 | Video | 10.2.3.1 (A) Flashing, three times or below limit value | Embedded online videos and GIFs do not flicker (maximum 3 times per second). | ... which react sensitively to light stimuli. |
| V3 | Video | 10.1.2.3 (A) Audio description or media alternative (recorded) / 10.1.2.5 (AA) Audio description (recorded) | Embedded online videos with relevant visual content have an audio description as a second audio track or an alternative video with audio description is offered in the audio track (e.g. as a link). | ... record videographic content primarily auditory.... at the time of reception.... do not have a monitor available. |
| V4 | Video | 10.6 Timing for audio description (should) | The audio description does not cover any relevant auditory information from embedded videos. | ... record videographic content primarily auditory. |
| V5 | Video, Audio | 10.1.4.2 (A) Audio control element | Longer audio clips and videos (> 3 seconds) are not played automatically. | ... use a voice output or a screen reader.... are easily distracted. |
| A1 | Audio | 10.1.2.1 (A) Alternatives for audio files and silent videos | Embedded audio clips have a transcript (as text in the slide, notes, separate slide, or link to external website). | ... prefer to absorb auditory content visually.... at the time of reception.... have no audio output.... whose mother tongue is not German.... copy or search the content of the audio clip |
| O1 | Embedded objects | 10.1.1.1 (A) Non-text content | Embedded objects are themselves accessible.  | ... navigate in the document using the keyboard |
| O2 | Embedded objects | 10.1.1.1 (A) Non-text content | Embedded objects are labelled (preferably with text on the slide, if necessary as alternative text).  | ... use a voice output or a screen reader. |

# Recommendations

The following checkpoints are recommendations to make the PowerPoint presentation even more accessible. However, they are not prescribed by EN 301 549.

| **Check** | **Type** | **Aspect**  | **Particularly helpful in digital teaching for staff, people who...**  |
| --- | --- | --- | --- |
| E-D2 | Document (table of contents) | Comprehensive presentations that are passed on have a table of contents at the start date. | ... would like to orientate themselves... need/want structure |
| E-D3 | Document (title, section) | Each slide has a slide title. This only appears once in the document.Section titles only appear once in the document. | ... use a voice output or a screen reader....navigate through the slides using the slide titles. |
| E-D4 | Document (colour) | The use of colours is generally sparing. | ... do not perceive all colours clearly. ... be distracted by colours. ... perceive stimuli strongly.... work independently of colour display. |
| E-F1 | Slide | The design is simple, e.g. no excessive use of transitions, sounds and graphics. | ... are easily distracted.... need/want structure.... react with auditory sensitivity. |
| E-F2 | Slide, text | There are no blank lines and no empty placeholders or text fields in the document. | ... use a voice output or a screen reader. |
| E-T2 | Text | The font is sans serif (e.g. Arial, Helvetica) and not too thick or too thin. | ... have difficulty following the flow of the text.... have difficulties recognising/reading the text.... need/want structure. |
| E-T3 | Text  | Highlighting using CAPITAL LETTERS, *italics*, underlining (except for links) and text effects (colour gradient as colour fill, glow effects, text outline) occur at most in individual words.Exception: "Glow" for text superimposed on photos to increase contrast. | ... have difficulty following the reading flow.... have difficulties recognising/reading the text.... need/want structure. |
| E-T4 | Text | The text is left-aligned. | ... have difficulty following the reading flow. |
| E-T5 | Text | The line spacing is at least 120%.  | ... have difficulty concentrating on the flow of the text.... recognise/read the text. ... need/want structure. |
| E-T6 | Text | Hyphens are not used to create hyphenation at the end of a line.Note: Hyphens may, however, be used to break up complex compound words into their constituent parts to make them easier to read. Example: Method case. | ... use a voice output or a screen reader.... have difficulties recognising/reading the text. |
| E-N1 | Link | URL does not appear as plain text in the body text (exception for footer, bibliography). Instead, text is marked as a hyperlink that describes the jump destination in an easily understandable way and is clearly differentiated from the other link texts. | ... use a voice output or a screen reader.... can be easily interrupted in the flow of reading.  |
| E-N2 | Link | If a link opens another programme (e.g. browser, email programme), this is indicated in the link text. Example: "Contact address" (opens email programme)". | ... use a voice output or a screen reader.... can be easily interrupted in the flow of reading.  |
| E-N3 | Link | Tooltips are not used. Instead, important information should be given as part of the link text. Note: Tooltips are displayed when you hover over a link with the mouse pointer. However, they are not displayed directly for keyboard and screen reader users. | ... use a voice output or a screen reader.... operate the presentation via keyboard only (without mouse) |

# Automatically fulfilled or excluded EN requirements

The following requirements from EN 301 549 chapter 10 are automatically fulfilled, not applicable or not part of the extended checklist for other reasons.

| **EN criterion** | **Aspect** |
| --- | --- |
| 10.1.2.4 (AA) Subtitles (live) | Is not possible in PowerPoint. |
| 10.1.3.4 (AA) Alignment | Automatically fulfilled by PowerPoint. |
| 10.1.3.5 (AA) Determine input purpose | There are no form fields. |
| 10.1.4.4 (AA) Change text size | Automatically fulfilled in PowerPoint. |
| 10.1.4.10 (AA) Automatic pagination (reflow) | Exception for slides (two-dimensional content). |
| 10.1.4.13 (AA) Faded-in content on hover or focus | Automatically fulfilled in PowerPoint. |
| 10.2.1.1 (A) Keyboard | Automatically fulfilled in PowerPoint. |
| 10.2.1.2 (A) No keyboard trap | Automatically fulfilled in PowerPoint. |
| 10.2.1.4 (A) Keyboard shortcuts | Automatically fulfilled in PowerPoint. |
| 10.2.2.1 (A) Customisable timings | Automatically fulfilled in PowerPoint. |
| 10.2.4.1 (A) Areas can be skipped | Empty in EN 301 549, as not applicable to documents. |
| 10.2.4.5 (AA) Alternative access routes | Empty in EN 301 549, as not applicable to documents. |
| 10.2.4.7 (AA) Focus visible | Cannot be influenced by authors in the PowerPoint application. |
| 10.2.5.1 (A) Pointer gestures | Automatically fulfilled in PowerPoint. |
| 10.2.5.2 (A) Cancelling the pointer action | Automatically fulfilled in PowerPoint. |
| 10.2.5.4 (A) Actuation by movement | Automatically fulfilled in PowerPoint. |
| 10.3.2.1 (A) With focus | Automatically fulfilled in PowerPoint. |
| 10.3.2.2 (A) On entry | Automatically fulfilled in PowerPoint. |
| 10.3.2.3 (AA) Consistent navigation | Empty in EN 301 549, as not applicable to documents. |
| 10.3.2.4 (AA) Consistent designation | Empty in EN 301 549, as not applicable to documents. |
| 10.3.3.1 (A) Error labelling | There are no form fields. |
| 10.3.3.2 (A) Labels or instructions | There are no form fields. |
| 10.3.3.3 (AA) Suggestion in case of error | There are no form fields. |
| 10.3.3.4 (AA) Error prevention (legal, financial, data) | There are no form fields. |
| 10.4.1.1 (A) Syntax analysis | Automatically fulfilled in PowerPoint. |
| 10.4.1.2 (A) Name, role, value  | Automatically fulfilled in PowerPoint. |
| 10.4.1.3 (AA) Status messages  | Automatically fulfilled in PowerPoint. |
| 10.5 Positioning of subtitles (should) | The positioning of subtitles depends on the player of the video source and cannot be influenced by the authors. |

# Sources

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