DE GRUYTER

Accessible manuscript preparation: A guide to alt text

Contents

1 About alt texts

1.1 What are alt texts?

“Alt text” stands for “alternative text” and refers to textual descriptions of images that people with visual impairment or reading disability might not be able to perceive (well) otherwise. Alt texts are read aloud by screen readers; they are also displayed when images fail to load (for example when the user has a poor internet connection). Alt texts are only required for images – not for tables, which can be read as regular text by screen-reading devices.

1.2 Are alt texts legally required?

Alt texts are a fundamental tool to ensure the accessibility of online publications. The “European Accessibility Act” (and, in Germany, the “Barrierefreiheitsstärkungsgesetz”) make them mandatory for all online publications (except periodicals), as of June 2025.

1.3 Why are alt texts important, beyond legal compliance?

Alt texts enable more people to read a book and interact with its content in a meaningful way. They allow researchers with different access needs – whether permanently or temporarily – to participate in the academic conversation, consume content without any loss of information, and possibly use and build on that content in their own academic work.

1.4 Why is the author required to provide alt texts? Can’t the publisher take care of it?

Authors know best why images are included in their publication and what information they are meant to convey. An alt text should not describe a given image in every detail, but rather sum up its key aspects – those that are relevant to the argument and not yet included in the main text or caption. In this sense, alt texts should be understood as another important content element of academic publications – just like abstracts, keywords, headings, or subheadings.

2 Alt texts and beyond: Preparing an accessible manuscript

You will find below a catalog of examples for a variety of subject areas as well as links to further online resources.

First, a few general Dos and Don’ts about accessible manuscript preparation:

Dos

- Make sure to submit tables and simple text diagrams as text and not as images.
- **Describe figures in the surrounding text** and formulate explicitly any conclusion that sighted readers would be expected to draw from it. The more information in the surrounding text, the less alt text required.
- Take the specific context of your subject area/book/article into account: **there is no "one-size-fits-all" alt text** and the same picture can have very distinct meanings and functions in two different books.
- Briefly describe what the image shows, **focusing on what is directly relevant** to understanding the argument.
- Keep it short (**100–150 characters with spaces**). The reason for this is that readers who rely on screen-reading devices must often listen to the entire alt text before they can continue reading: including irrelevant details or repeating information already mentioned in the surrounding text or in the caption can worsen their reading experience significantly.
- In the case of very complex visual content (e.g., diagrams, charts, etc.), it may be useful to provide readers with a **long description**, in addition to the mandatory alt text. Provide long descriptions **only if necessary**.
- Tables may be used to render complex data sets, but keep in mind that tables are only accessible to a certain degree and require a lot of effort from visually impaired readers to navigate. If possible, present your data as a simple list.
- Always use **Unicode characters**. This might be worth double-checking if your alt text includes special characters or symbols.
- Ensure **spelling and punctuation** are correct. Alt text is part of your manuscript and should match its overall quality.

Don'ts

- **Never rely exclusively on figures to convey key information**! Important data should always be included in the surrounding text.
- Do not repeat the caption in the alt text. **Information that is not displayed in the figure itself** (such as author, date, source, bibliographical reference) **doesn't belong in alt text**.
- Avoid repeating sentences that are already part of the surrounding text. If the figure is so precisely described in the main text and/or caption that any alt text would be repetitive, please use **"See caption" or "See main text"** in place of it. Attention: this does not mean that the alt text can be omitted entirely (see examples 4.2.3 and 4.2.4 below)!
- Do not include additional information or interpretation in alt text that a sighted person would not see on the figure.
- Do not start the text with "an image of" or "a picture of", as it is repetitive.

3 How do I submit alt texts for my publication?

Please use our “Alt-text_Submission_Form” to submit both regular image captions and corresponding alt texts together with your manuscript. As explained above, long descriptions are only required in certain complex cases: feel free to leave column E blank.

4 Alt text examples

In the following examples, each image is followed by its caption (translated into English, if required, by the editors of these guidelines) and a suggested alt text. As you will notice, the alt text always depends on the information already provided in the caption.

In some cases, long descriptions are included, too. Keep in mind, however, that those are only required in specific cases.

4.1 Science, technology, and medicine

4.1.1 X-ray, MRI, CT, or sonographic imaging

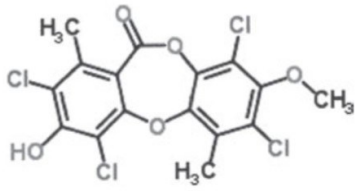
From: Katrin Heilmann/Christian Gingert/Franc Hetzer (2019). Chronische Obstipation. In: Alexander Herold/Thomas Schiedeck (eds.). *Manual der Koloproktologie*, vol. 2. Berlin/Boston: De Gruyter, 40. CC BY-NC-ND.

Caption: CTT = 22 x 2,4 = 53 hours, normal colon transit time, some markers on the pelvic floor, therefore suspected outlet obstipation.

Alt text: X-ray of the pelvis and lumbar spine region.

4.1.2 Chemical formula

From: Manfred Kraft (2023). *Struktur und Spektroskopie Industrieller Produkte. Arzneimittel, Giftstoffe, Kunststoffe, Farbstoffe, Pestizide*. Berlin/Boston: De Gruyter, 57. CC BY-NC-ND.

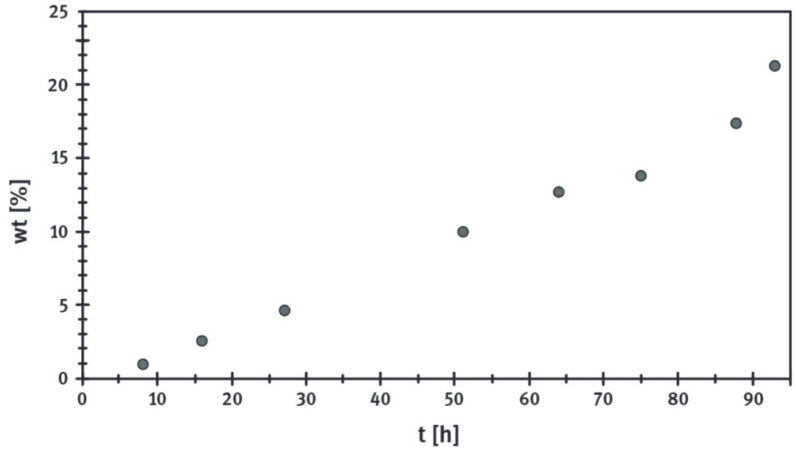


Caption: *Diploicin*, occurrence in the lichen *Buellia canescens*, ν(C−Cl): 1100 cm^{-1}.

Alt text: Structural formula $C_{16}H_{10}Cl_4O_5$.

4.1.3 Dot diagram

From: Anja Drews/Reinhard Schomäcker (2022). Phase Systems Characterization and Process Development. In: Matthias Kraume et al. (eds.). *Integrated Chemical Processes in Liquid Multiphase Systems. From Chemical Reaction to Process Design and Operation.* Berlin/Boston: De Gruyter, 228. CC BY.



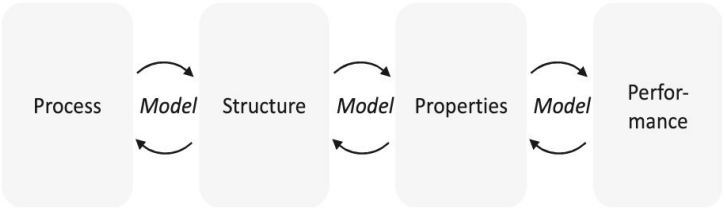
Caption: Weight fraction of water in the catalyst recycle stream during the hydroaminomethylation of 1-decene with diethylamine in a continuous miniplant. Adapted from [39].

Alt text: Diagram with 8 dots showing the steady increase of measured weight fractions (in percent) in relation to the process duration (in hours).

Long description: Dot diagram showing the steady increase of measured weight fractions (expressed in percent, ranging from zero to 25 on the y-axis) in relation to the process duration (expressed in hours, ranging from zero to 90 on the x-axis). While the weight fraction is barely 1% after 8 hours, it reaches 21% after 90 hours.

4.1.4 Flowchart

From: Jasna Jankovic/Jürgen Stumper (2023). Introduction. In: Jasna Jankovic/Jürgen Stumper (eds.). *PEM Fuel Cells. Characterization and Modeling*. Berlin/Boston: De Gruyter, 2. Courtesy of the authors.

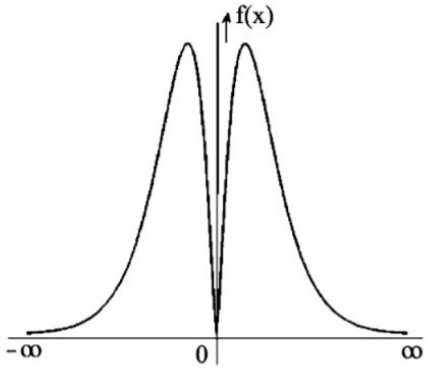


Caption: Schematic illustration of a Process-Structure-Property-Performance (PSPP) approach for fuel cell component design. Using models/correlations (i) performance can be predicted based on stack component physico-chemical properties or (ii) performance targets can be cascaded down into requirements for physico-chemical properties and further to parameters for the structure and manufacturing process.

Alt text: From left to right, 4 boxes reading “Process”, “Structure”, “Properties”, and “Performance”; between each of them, two arrows (bidirectional) and the term “Model”.

4.1.5 Graph

From: Arak Mathai/Hans Haubold (2018). *Probability and Statistics. A Course for Physicists and Engineers*. Berlin/Boston: De Gruyter, 137. CC BY.



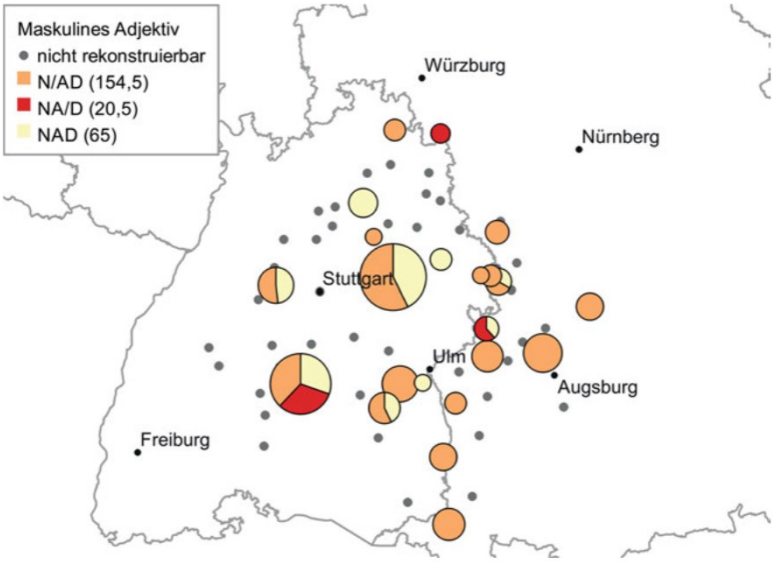
Caption: An extended form of the gamma density.

Alt text: Continuous curve from negative infinity to infinity; f(-∞) converges to 0, f(∞) converges to 0, f(0) = 0; two local maxima close to the y-axis.

4.2 Humanities and social sciences

4.2.1 Map

From: Sophie Ellsäßer (2020). *Kasus im Korpus. Zu Struktur und Geographie oberdeutscher Kasusmorphologie*. Berlin/Boston: De Gruyter, 161. CC BY 4.0.



Caption: Geographical distribution of case morphological patterns according to corpus data for the masculine adjective.

Alt text: A map of the studied area with the cities of Würzburg, Nuremberg, Stuttgart, Ulm, Augsburg, and Freiburg. Dots and pie charts visualize the collected data.

Long description: Gray dots are relatively evenly distributed over the area and correspond to locations where no pattern could be reconstructed. Colored pie charts are concentrated in the center of the area and show different ratios between the patterns N/AD, NA/D, and NAD:

- N/AD (154.5 records): documented across the entire area, especially on both sides of the border between Baden-Württemberg and Bavaria
- NA/D (20.5 records): documented only south of Würzburg, north of Ulm, and in central Baden-Württemberg
- NAD (65 records): documented only in central and northeastern Baden-Württemberg.

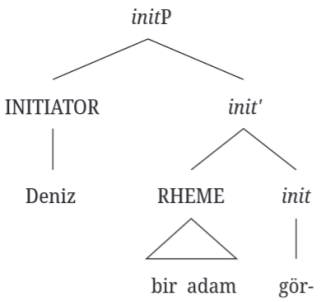
4.2.2 Linguistic tree

In principle, language trees are text: due to their complex structure, however, they appear as images in our e-books and require, as such, alternative texts. Since alt texts offer very limited space and language trees usually convey complex syntactic information, it is crucial to carry out the grammatical analysis in the main text. This way, language trees can fulfill their function of visual representation for sighted readers – but without gatekeeping any important information from visually impaired readers. If this is the case, the alt text can be very short and simple, as in the example below.

From: Semra Kızılkaya (2024). *Affectedness at the Morphosyntax-Semantics Interface. Evidence from Differential Object Marking*. Berlin/Boston: De Gruyter Mouton, 113. CC-BY-NC-ND 4.0.

(189) Deniz bir adam(-ı) gör-dü.
PN a man-ACC see-PST
'Deniz saw a (certain) man.'

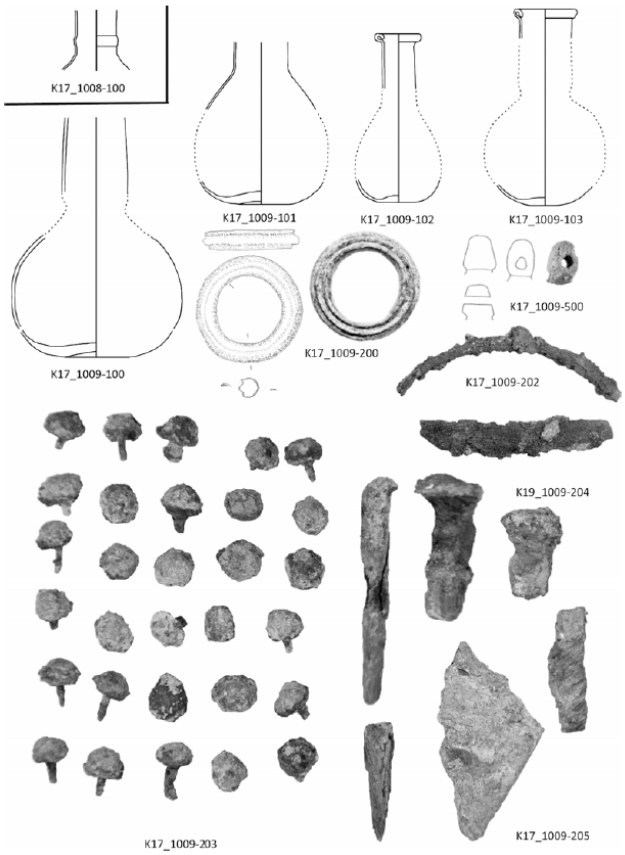
(190)



Alt-text for (190): Lexical syntactic structure of the verb *görmek* in (189), with nodes INITIATOR "Deniz" and RHEME "bir adam".

4.2.3 Composite image / mixed media

From: Constanze Höpken et al. (2022). Ein Felsgrab aus der Nekropole von Doliche. In: Michael Blömer/Engelbert Winter (eds.). *Exploring urbanism in ancient North Syria*. *Fieldwork in Doliche 2015–2020*. Berlin/Boston: De Gruyter, 138. Courtesy of the volume editors.



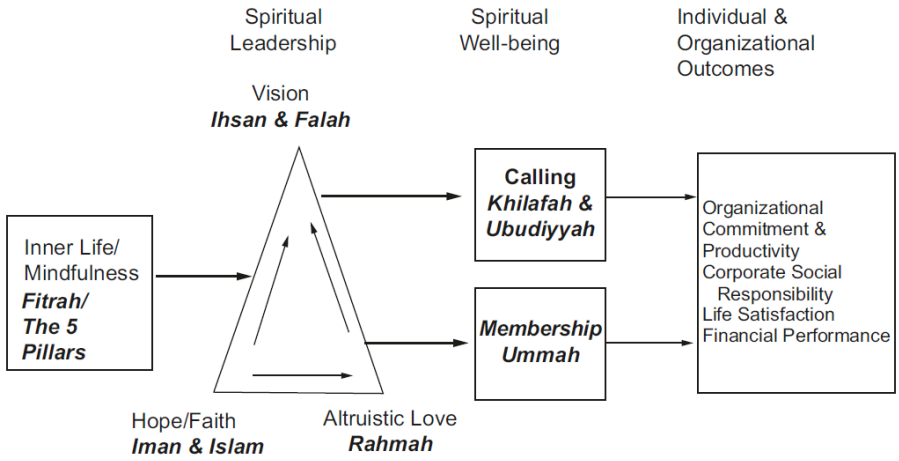
Caption: Finds from grave box K17/1008: K17_1008-100 glass unguentarium (scale 1:2). Finds from grave box K17/1009: K17_1009-100 to K17_1009-103 glass unguentaria (scale 1:2). K17_1009-200 Copper alloy ring. K17_1009-202 Fragments of an iron bracelet with tissue traces. K17_1009-203 Shoe nails. K17_1009-204 Nails and nail fragments with wood remains. K17_1009-205 Fragments of a metal plate with wood remains. K17_1009-500 Amber eye bead/pendant fragment (if not stated otherwise scale 1:1).

Alt text: See caption.

In this example, the caption already contains detailed information about the objects pictured in the image, so that any alt text would be repetitive.

4.2.4 Diagram

From: Roger Gill (2022). Leadership and Spirituality. In: Yochanan Altman/Judi Neal/Wolfgang Mayrhofer (eds.). *Workplace Spirituality: Making a Difference*. Berlin/Boston: De Gruyter, 55. CC BY-NC-ND 4.0.



Caption: Theoretical transposition of the components of Fry's spiritual leadership model into a model for Islamic leadership (Egel & Fry, 2017, reprinted by permission of the publisher).

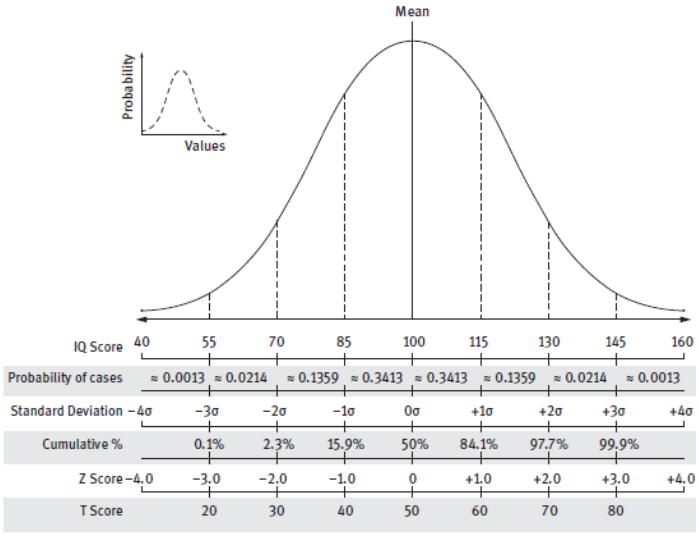
Alt text: See caption.

Long description: Inner Life/Mindfulness (corresponding in Islam to Fitrah/The 5 Pillars) fosters the three dimensions of Spiritual Leadership (Vision: Ihsan & Falah, Hope/Faith: Iman & Islam, and Altruistic Love: Rahmah), which elicit Spiritual Well-being (including Calling: Khilafah & Ubudiyyah, on the one hand, and Membership: Ummah, on the other hand), which itself impacts Individual & Organizational Outcomes such as Organizational Commitment & Productivity, Corporate Social Responsibility, Life Satisfaction and Financial Performance.

This flowchart includes a lot of text: giving an accurate account of it would automatically result in more than 150 characters. We choose to refer to the caption in the alt text and provide detailed information in the long description. Note that this long description wouldn't be necessary if the surrounding text already discussed the model's components in detail.

4.2.5 Chart

From: Jürgen Deters (2022). *Analytics and Intuition in the Process of Selecting Talent: A Holistic Approach*. Berlin/Boston: De Gruyter, 66. CC BY.



Caption: Welchsler (WAIS–IV, WPPSI – IV) IQ classification (data provided by 123test, 2022).

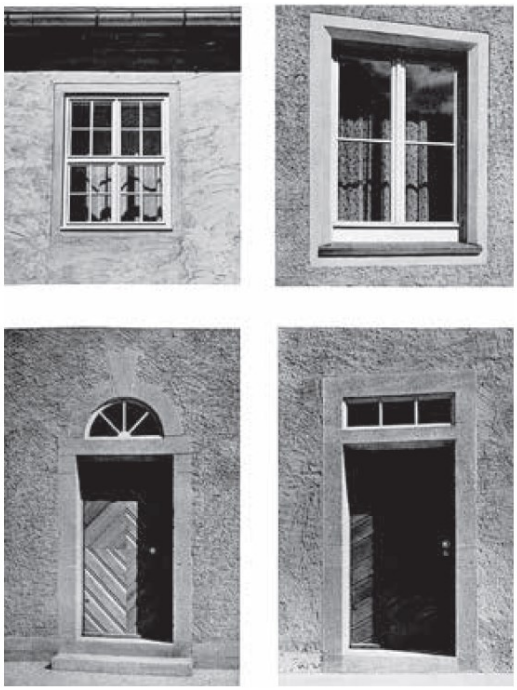
Alt text: A bell curve ranging from IQ 40 to IQ 160 with a norming sample median raw score defined as IQ 100.

4.3 Arts, architecture, and design

In theory, artworks cannot be described by alt texts, since describing an artwork already means interpreting it and alt texts are not supposed to include any kind of subjective interpretation (see above, §2). If your publication includes visual representations of artworks, make sure to describe them in the main text and/or caption.

4.3.1 Photograph (historical architecture)

From: Birgit Knauer (2022). *Die gesunde Stadt. Die Assanierung der Stadt Wien (1934–1938)*. Basel: Birkhäuser, 187. CC BY-NC-ND 4.0.



Caption: Willem Bäumer, construction details of houses on X Street, Weimar, 1939.

Alt text: Two examples of window design (top); two examples of door design (bottom).

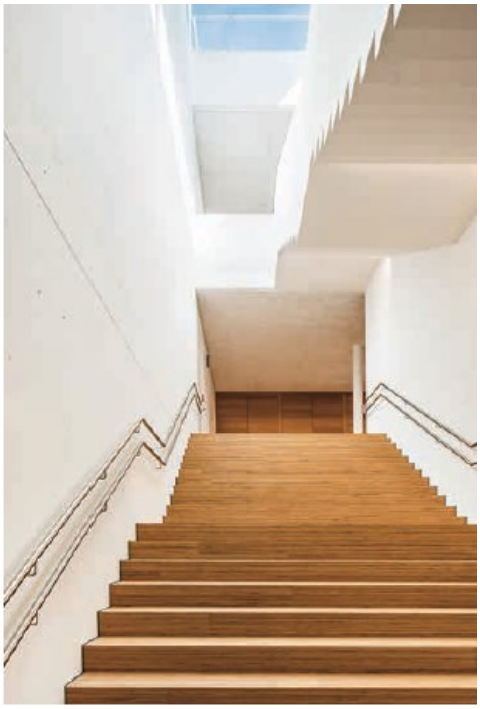
Long description: From top to bottom and from left to right: a two-wing muntin window with 16 panes; a muntin window with 4 panes; a wooden front door with concentric diamond-shaped millings and a half-round transom window; a wooden door with a rectangular transom window.

4.3.2 Photograph (modern architecture)

From: Wolfgang Fiel (ed.) (2021). *Coming Full Circle. Nachhaltige Architektur von Baumschlager Hutter Partners*. Basel: Birkhäuser, 64–66. Courtesy of the editor and Baumschlager Hutter Partners.

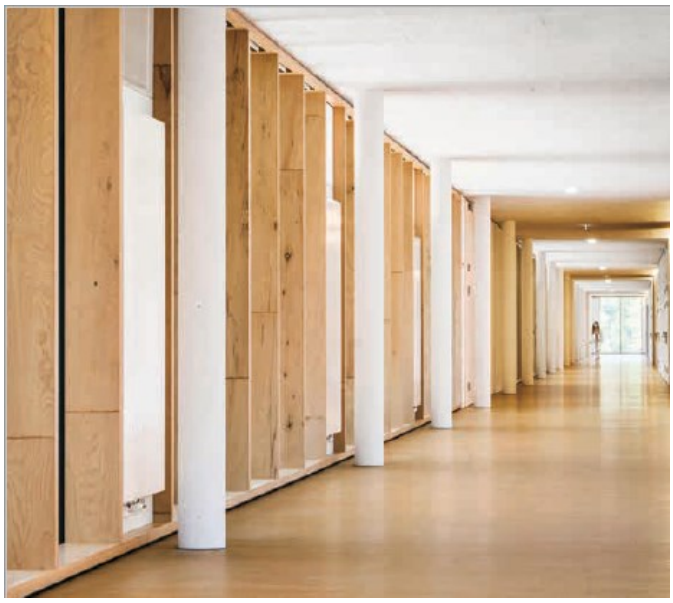
Caption: School by the lake, Hard, Austria. On the left, the elevated gymnasium with tuck under parking, in the middle, the school entrance and a walkway to the lake.

Alt text: Brightly lit building with large windows, photographed at dusk.



Caption: Access Auditorium – Administration.

Alt text: Wide beechwood staircase with white walls and ceiling, brightly lit thanks to a skylight window.



Caption: Corridor leading to the cluster rooms.

Alt text: Corridor with beech flooring and wall profiles as well as white supporting columns on the left side. Floor-to-ceiling windows let daylight in.

4.3.3 Photograph (art)

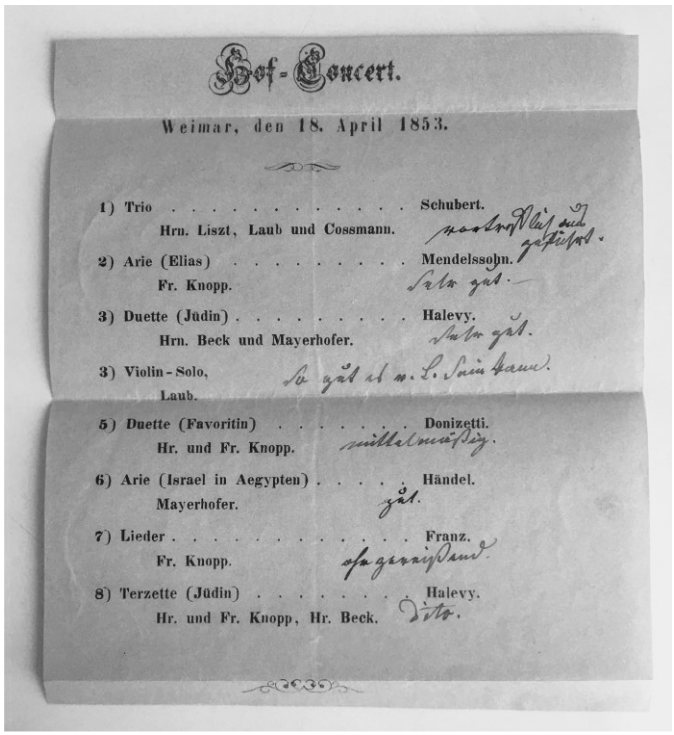
From: Arne Lindemann (2022). *Vom Germanenerbe zum Urkommunismus. Urgeschichtsbilder in Museen der SBZ und DDR*. Berlin/Boston: De Gruyter, 38. CC BY 4.0.

Caption: Department of Old and Middle Stone Age of the State Archaeological Museum, Halle, 1946/47.

Alt-Text: Exhibition room with showcases displaying small objects. On the wall, an ice age landscape depiction, maps, and deer antlers.

4.3.4 Archival material (art)

From: Reinhard Wegner (ed.) (2023). *Briefedition Friedrich Preller d. Ä. Ich habe die Feder in Bewegung gesetzt*. Berlin/München: Deutscher Kunstverlag, 210. Courtesy of the editor.



Caption: Concert program with handwritten notes by Preller.

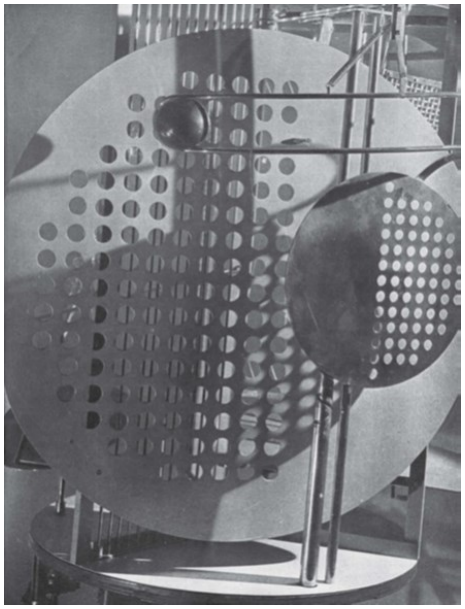
Alt-Text: In block letters: “Hof-Concert, Weimar, den 18. April 1853”. Each of the 8 program items is followed by a handwritten predicate in German Kurrent.

Long description: The program heading (in old German block letters) reads: “Hof-Concert, Weimar, den 18. April 1853”. Eight program items follow, with handwritten notes in German Kurrent evaluating each performance:

1) Trio … Schubert. Hrn. Liszt, Laub und Cossmann. [Handwritten] nachdenklich (?) und geführt (geflüstert?)
2) Arie (Elias) … Mendelssohn. Fr. Knopp. [Handwritten] sehr gut
3) Duette (Jüdin) … Halevy. Hrn. Beck und Mayerhofer. [Handwritten] sehr gut
4) Violin-Solo. Laub. [Handwritten] So gut es m. L. sein kann
5) Duette (Favoritin) … Donizetti. Hr. und Fr. Knopp. [Handwritten] mittelmäßig
6) Arie (Israel in Ägypten) … Händel. Mayerhofer. [Handwritten] gut
7) Lieder … Franz. Fr. Knopp. [Handwritten] ohr genießend
8) Terzette (Jüdin) … Halevy. Hr. und Fr. Knopp, Hr. Beck. [Handwritten] dito

4.3.5 Installation (art)

From: Hannah Wiemer (2021). *Camouflage. Landschaftslektüren zwischen Theater, Kunst und Krieg 1914–1945*. Berlin/Boston: De Gruyter 2021, 239. Courtesy of the author.



Caption: Moholy-Nagy, detail from the “light display machine”, 1922/30, in: Moholy-Nagy, *Vision in Motion*, p. 239.

Alt text: Perforated metal discs and spheres of different sizes that cast shadows as they move.

4.3.6 Drawing (design and design theory)

From: Lars Lerup (2022). *The Life and Death of Objects. Autobiography of a Design Project*. Basel: Birkhäuser, 216. Courtesy of the author.

Caption: Household Vehicles (1996).

Alt-Text: Freehand crayon drawing: 15 furniture items such as shelves, armchairs, cabinets are depicted as mobile devices with wheels.

5 Additional resources

In the following, we list other alt text guidelines available online, which may give you additional examples and information. Keep in mind, however, that they are not tailored to the specificities of scientific publications and might contradict some of our recommendations.

Institute of Professional Editors (2023). *Books without barriers*. CC BY 4.0 [EN]
https://www.iped-editors.org/resources-for-editors/books-without-barriers/
➔ See Part 3 “Describing images and tables”, 81–138.

Accessible Books Consortium/International Authors Forum (2016). *Accessibility Guidelines for Self-Publishing Authors* [EN]
https://www.accessiblebooksconsortium.org/en/web/abc/w/news/2016/news_0002
➔ See Part 4 “Constructing an accessible source document”, 8–11.

iBoB, inklusive berufliche Bildung ohne Barrieren (2019). *Gut fürs Image. Praxisleitfaden zur Erstellung textbasierter Alternativen für Grafiken*. CC BY-NC-ND 3.0 [DE]
https://www.dvbs-online.de/index.php/publikationen/leitf%C3%A4den

Domingos de Oliveira (n.d.). *Leitfaden zum Schreiben sinnvoller Alternativtexte* [DE]
https://www.netz-barrierefrei.de/wordpress/barrierefreies-internet/barrierefreie-redaktion/leitfaden-zum-schreiben-guter-alternativtexte/

Document version: 31.3.2025/GC