

# Multiplier Event

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*AWCAT: Lehr- und Lernunterlagen zum Thema  
Barrierefreiheit in Software und Web*



**AWCAT**

*Applications and Web Content Accessibility Training*



Co-funded by the  
Erasmus+ Programme  
of the European Union

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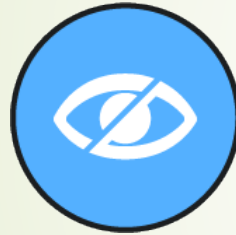
# Description



- ▶ Project: „AWCAT - Applications and Web Content Accessibility Training“ [1]  
№ 2017-1-PL01-KA203-038820
- ▶ Main objective: Development of Innovation
- ▶ Overall Budget: € 262 059
- ▶ Start date: 29-12-2017      End date: 28-12-2019
- ▶ Project Coordinator: Akademia Finansow i Biznesu Vistulauczelnia Niepanstwowa, Poland
- ▶ Project Partners:
  - ▶ Fundacja Instytut Rozwoju Regionalnego, Poland
  - ▶ Johannes Kepler University of Linz, Austria
  - ▶ Varna free University “Chernorizets Hrabar”, Bulgaria



# eAccessibility

- ▶ **Electronic accessibility**, or E-Accessibility, refers to the ease of use of information and communication technologies (ICTs), such as the Internet, by people with disabilities.





# Introduction to Guide for teachers (O2)

# Contents of AWCAT course

- A. Fundamentals of Web Accessibility
- B. Assistive Technology
- C. Guidelines and Legal Requirements
- D. Accessible Web
- E. Design And Usability

# Syllabus

Module	Course		Face to Face	Online	Slides	Practical	Hours	ECTS
<b>A. Fundamentals of Web Accessibility</b>	A.1	Introduction to the course and to Web Accessibility	2	1	12	1	4	0.16
	A.2	Why: Societal Impact and Effects of Accessible Web Design and How: Overview	1	4	20	1	6	0.24
	A.3	Technical Foundations: Accessibility APIs	2	6	32	7	15	0.6
			<b>5</b>	<b>11</b>	<b>64</b>	<b>9</b>	<b>25</b>	<b>1</b>
<b>B. Assistive Technology</b>	B.1	Users and Assistive Technology: Requirements for Accessibility	3	7	40	15	25	1
			3	7	40	15	25	1
<b>C. Guidelines and Legal Requirements</b>	C.1	Web Accessibility Standards and Guidelines: WCAG, UAAG, ATAG, ARIA	2	3	20	2	7	0.28
	C.2	National and International Legal Frameworks	2	2	16	1.5	5.5	0.22
			<b>4</b>	<b>5</b>	<b>36</b>	<b>3.5</b>	<b>12.5</b>	<b>0.5</b>
<b>D. Accessible Web</b>	D.1	Techniques for Accessible Web Design	8	16	96	8	32	1.28
	D.2	Accessibility of Responsive Design	2	5	28	5	12	0.48
	D.3	Rich Internet Applications and Multimedia Accessibility	3	5	32	3	11	0.44
	D.4	Evaluation and Repair Methodology and Tools	2	4	24	8	14	0.56
	D.5	Selected Aspects of Accessibility: Video and Documents, Responsive Design, Personalisation	1	2	12	3	6	0.24
			<b>16</b>	<b>32</b>	<b>192</b>	<b>27</b>	<b>75</b>	<b>3</b>
<b>E. Design and Usability</b>	E.1	User Centred Design & Usability Engineering	2	5	28	5.5	12.5	0.5
			2	5	28	5.5	12.5	0.5
<b>Total</b>	<b>15 courses</b>		<b>30</b>	<b>60</b>	<b>360</b>	<b>60</b>	<b>150</b>	<b>6</b>

# Methodology

- ▶ Study of theoretical materials
- ▶ Researching regulations and legal frameworks
- ▶ Exploring of practical examples
- ▶ Testing of software tools supporting accessibility
- ▶ Creating of accessible web content



# Learning Activities & Teaching Methods

- ▶ Face to face Lectures
- ▶ Labs
- ▶ Online Course





# Examination

- Final Project: Accessible Website
- Assessments during the course

# Plan System

- There is planning for each part of the content. For example:

For section A.1

- | Teaching Hours: |     | Total |
|-----------------|-----|-------|
| OnSite          | 2 h | 4 h   |
| OnLine          | 1 h |       |
| Practice        | 1 h |       |

- There is description for teachers with each slide to use the material in teaching guide.



# Workshop: How to Make Your PowerPoint Presentations Accessible to All

# Add document characteristics (part 1)

If you followed the course of last part the content of this step will be familiar to you. Also in PowerPoint you should always start by including general document properties to your presentation, especially by adding a document title and setting the main language of the document.

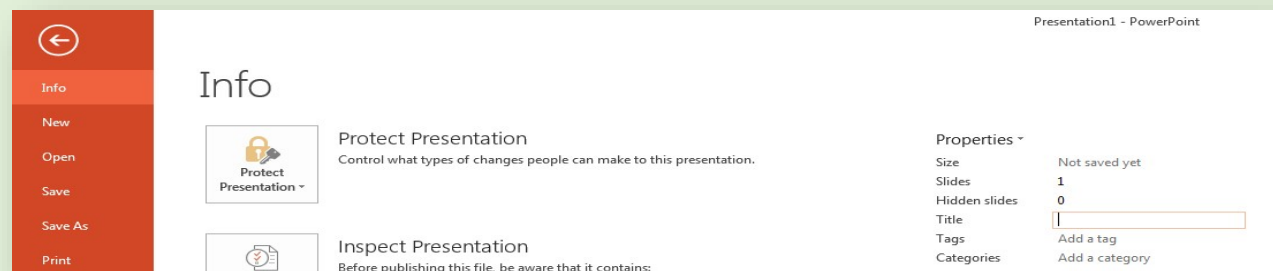
## Add/Change the Document title

Like in Word you can add or change the title of the document as follows:

Go to the File tab. Click Info to go to the document properties area. To add or change the document title, hover the mouse pointer over (or tab to) the Title property and enter a meaningful title.

The document title will be read aloud of a screen reader. Announcing the document title is essential for people relying on speech output to know which document they are looking at.

To return to your presentation click the File tab again. Any changes you made will be saved automatically.



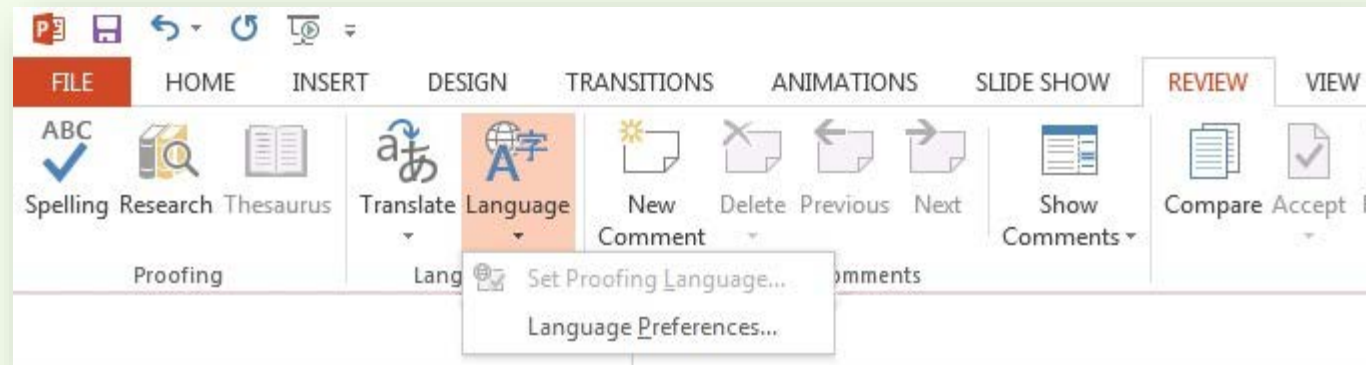
## Add document characteristics (part 2)

### Main Document Language

The main language of your presentation can be set in same way as it works for Word. Check if the main language is set correctly, so that screen readers will use the proper pronunciation rules for the speech output.

To set the main language of the document go to **Review tab**. In the **Language group** click **Language** and then click **Set Proofing Language**. The bar at the bottom of the program always shows you, if the language of the document or parts of it are set correctly. You should also change the language of single words or paragraphs to ensure, that blind people will get the correct pronunciation of a word in a deviating language. After this preparations, you can start creating the contents of your presentation.

**Note:** Microsoft Word 2013 still does not always support a correct language conversion into PDF. So, you must double check the document language in the pdf later, for instance with Pave.

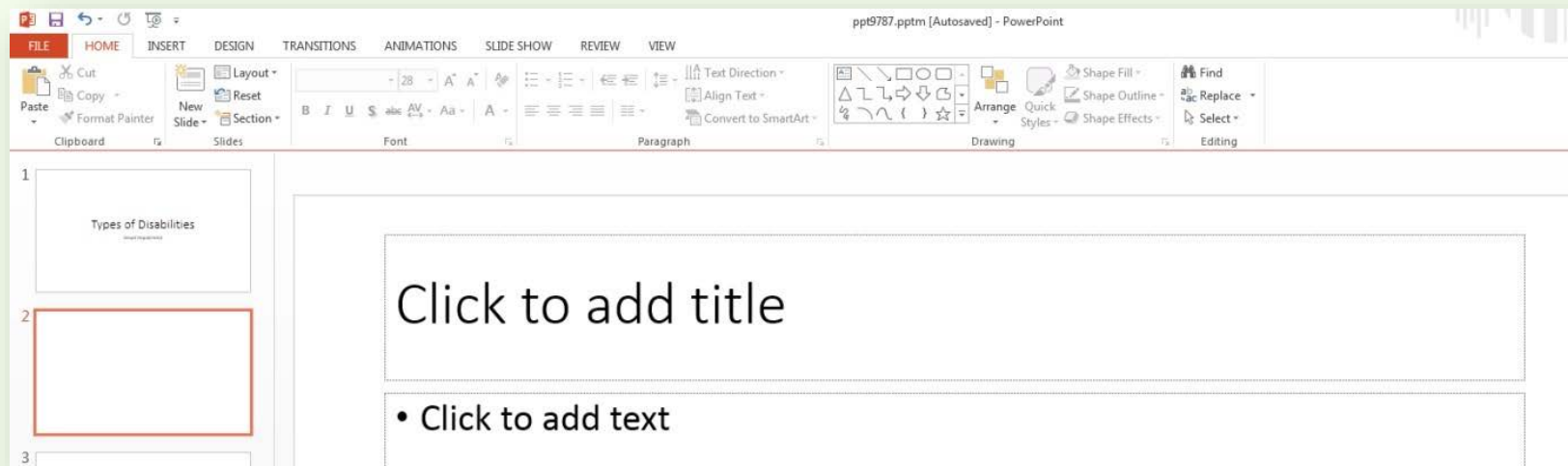


# Title your slides (part 1)

## Add a Slide Title

Slide titles are used to name the content of a slide sententiously. They are the basis of the Outline View and blind people use them to navigate through your presentation. For that, you should make sure that every slide has a unique title. Always use the intended placeholders to create a slide title instead of a simple text field.

Choose a slide and assign the required slide layout (for instance Title and Content). Then type the title into the new placeholder of the slide. In this way it is ensured that your presentation has a complete overview of contents and a structure. In the Outline View you can check if you applied your slide titles correctly (In the View tab, Presentation Views ribbon, click Outline View). This means that your title should be displayed in boldface to the right of the slide number.



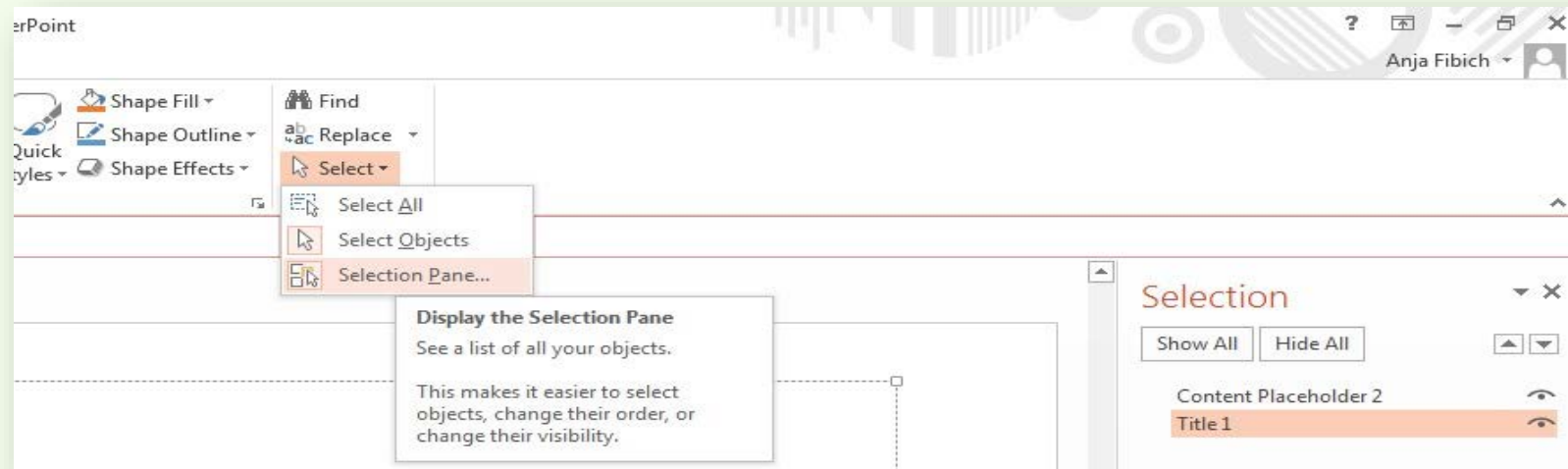
# Title your slides (part 2)

## Hiding elements on a slide without deleting them

Maybe in some cases you don't want to display a slide title, for instance if your slide only contains a figure. Then you should insert an invisible title at least. You can do this by hiding the title as follows:

In the **Home tab, Editing group, Select**, click on **Selection Pane**. In the appearing dialog box you can click on the **eye symbol** right to the concerned element to switch its visibility. In this way the slide title is correctly displayed in the Outline View, but hidden on the slide itself.

**Note: In the converted PDF hidden elements are not included.**



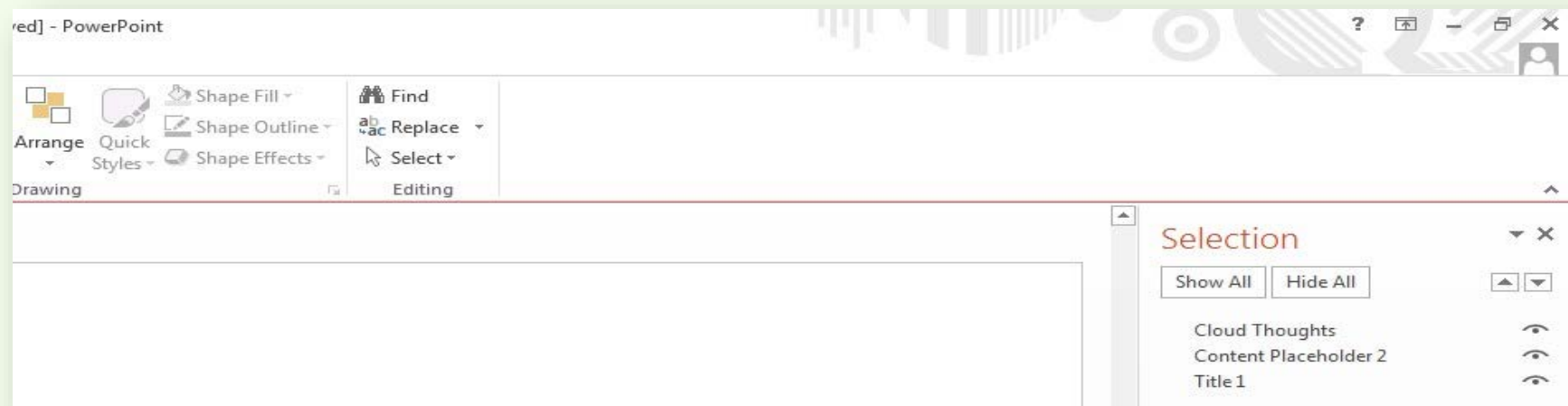


# Check the reading order

If your slides contain more elements than the defined placeholders of the slide layout you have to **set the reading order**. Blind people perceive the content of a document in a linear outline, one element after the other. If you arrange elements side by side it isn't obvious which one should be read first. Here you have to set the reading order.

You can check and adjust the reading order in the **Selection Pane** as well: **Home tab, Editing group**, click on **Select**, and **Selection pane**. Here you can sort the order of the single elements with a mouse or with the arrow buttons on the top of the list.

**Attention: The element at the bottom will be read first, the element on the top last!**



# Using Lists and Hyperlinks

## Lists

In general, you should avoid writing whole sentences in your slides. Instead you better present your information in lists as short and concise bullet indents. Apart from the form of display you should always insert the slide contents in the intended placeholders of the slide layouts.

For structuring you can use the list tool: **Home tab, Paragraph group**, click the arrow on either the **Bullets or Numbering button**, and then click Bullets and Numbering.

For the accessibility of your document it is not relevant what kind of bullet indents you prefer. More important is the structure of your list. This means that you should structure your contents with different levels of a list if it is appropriate. Indentations should never be created with space characters, but by using the tab key or the PowerPoint tools for Increase List Level and Decrease List Level.

To create an indented (subordinate) list within a list, you first place the cursor on the line you want to indent. Then go to Home tab, Paragraph group, and click Increase List Level. To move the text back to a less indented level in the list, click Decrease List Level. With this structuring indentions won't only be displayed visually, they will also be semantically marked up. If this is the case, a correct conversion to PDF normally happens.

## Hyperlinks and Cross-References

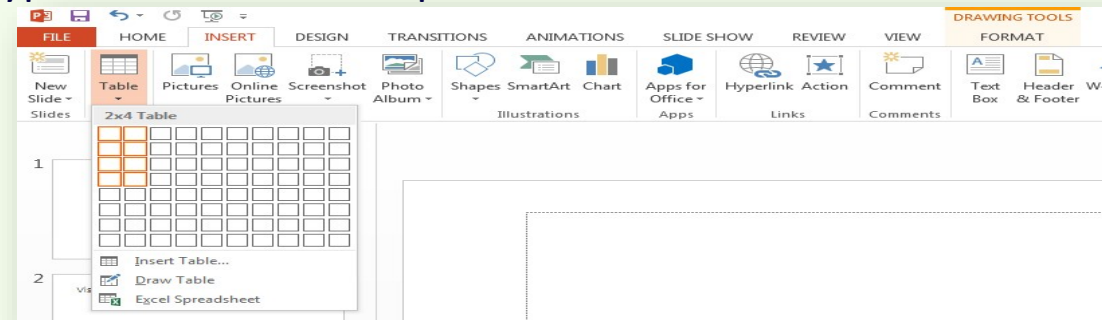
Hyperlinks and cross-references in your presentation should be active objects. Further information on how to create active links you will find in Guidelines for accessible Word documents.



# Create accessible tables (part 1)

There are different ways to create a table in PowerPoint. But **avoid Excel-spreadsheets**, because in many cases the conversion to PDF doesn't work correctly. The preferred method to insert a table in PowerPoint is the use of the **table tool of Microsoft Office**. Click on the placeholder in your slide to which you want to add the table. Go to **Insert tab, Tables group, Table** and select the required number of columns and rows. If you move the mouse over the array in the table tool you can choose the number dynamically and confirm it with a click.

Screen readers often do not work well with tables in PowerPoint files. For this reason try to **keep your tables simple and avoid merged or splitted cells**. Blind people can have great difficulties to understand these structures. Furthermore give additional information by using marked up header rows and added titles and summaries. A header at the top of each column or at the beginning of each row helps the reader to understand what type of information is provided.

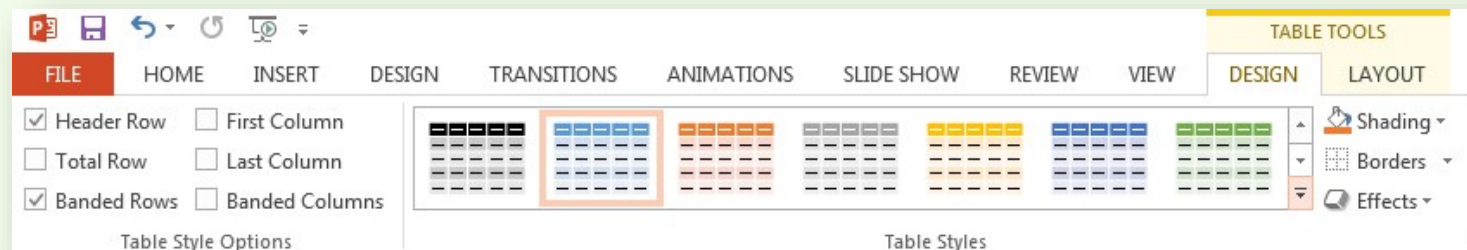


# Create accessible tables (part 2)

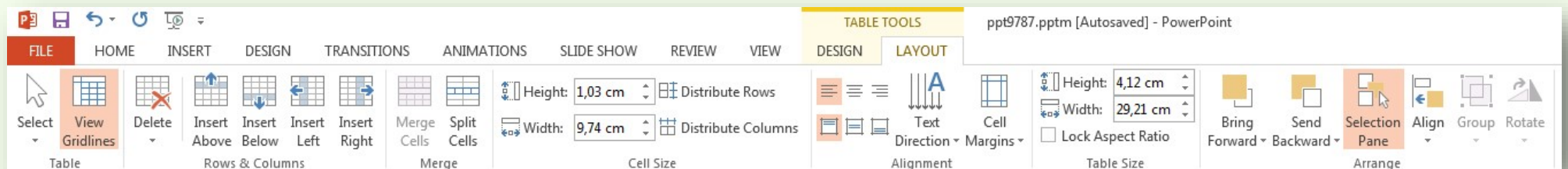
## The Formatting of your Table

Now you can select a template for your table, irrespective of the way you created a table. This affects the colouring and the appearance of the table. Put the cursor on the table and select the **Design tab** to open the corresponding table tools. To meet the specific needs of people with low vision or limited colour vision you should make sure to **use high contrasts** and that **all information is visible even without colours**.

If the option Header Row in the Table Style Options of the Design tab is checked then the table header will be visually distinguishable. But there is no structural mark up of the header. Therefore, the header won't be applied automatically in the PDF. You should correct this in the generated PDF later.



If your table is selected you can change further settings in the **Layout tab** of the **Table Tool**, for instance to show and hide grid lines, to insert rows or columns or to split and merge cells.



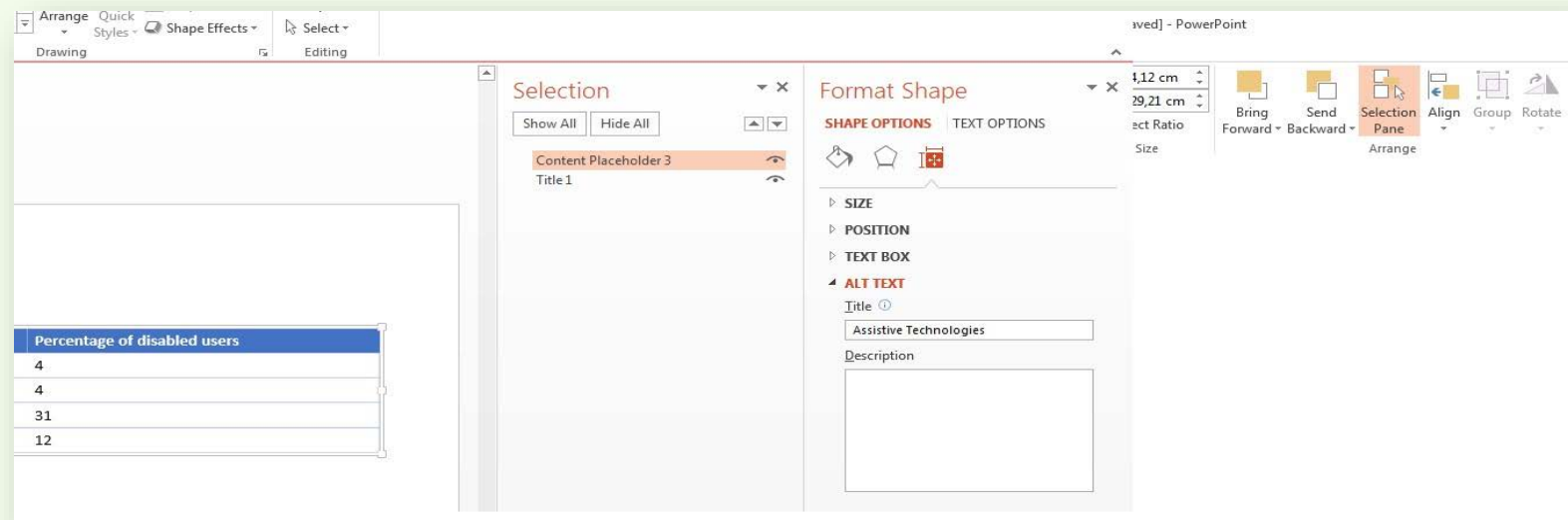
# Add a Title and a Summary to your Table

Tables should have a title and a summary. The title helps a blind reader to quickly recognize and assess the meaning of a table. A summary is particularly important for complex and big tables, and also if you have added visual highlights within your table.

You can add a title and a summary for your table as follows:

Select the table, right-click, in the context menu select the item Formatting Shape. In the Format Shape pane, Shape options, select the symbol for Size & Properties and insert a title and an alternative description.

Note: Unfortunately, the title gets lost during the conversion to PDF. So you have to add it later manually, too.



The screenshot shows a PowerPoint slide with a table and the 'Format Shape' task pane. The table is titled 'Percentage of disabled users' and contains the following data:

Percentage of disabled users
4
4
31
12

The 'Format Shape' pane is open, showing the 'ALT TEXT' section expanded. The 'Title' field contains 'Assistive Technologies' and the 'Description' field is empty.



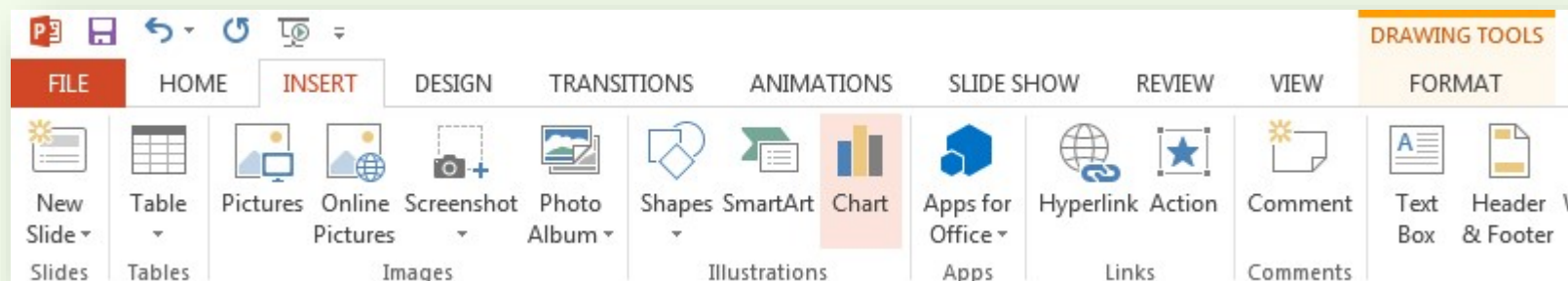
# Using images, charts and shapes (part 1)

PowerPoint presentations often contain different kinds of graphics and images. As you know they must have a **meaningful alternative description**. This applies also to images and graphics of PowerPoint documents.

## Charts in PowerPoint

If it is possible try to **avoid using charts as graphics**. Create them directly in PowerPoint instead. For that you can click on the chart symbol of an empty placeholder of a slide or you add a chart by going to the **Insert tab**, and selecting **Chart** in the **Illustrations group**.

After you select your chart type a new window appears where you can insert your data in a table as usual and select the data area. If your chart is selected you can use the chart tools: Design and Format.

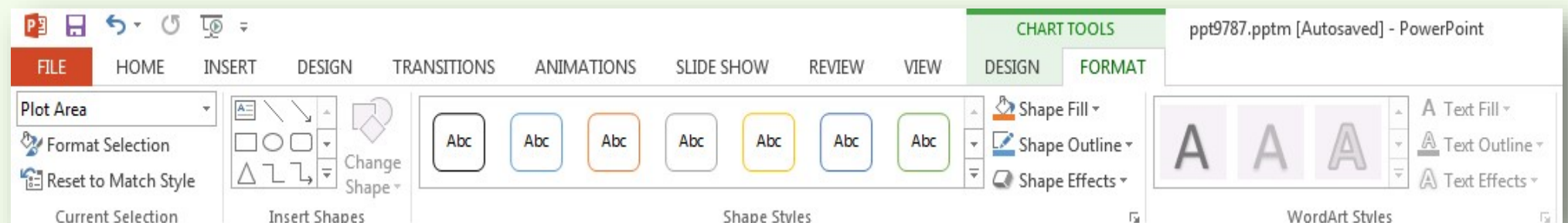


## Using images, charts and shapes (part 2)

Click on the **chart type** and then double-click on the chart you want. Similarly to the table tools you can select a predefined chart style in the **Design tab**. Again, take into account the special needs of people with a visual impairment or colour vision impairment. And therefore use high contrasts between the data sets and that all information is understandable also when they are supplied without colour as well. To adjust single colours manually click on an element of the data set and define the filling effect: Go to the **Home tab**, in the **Drawing group** select **Filling Effect**.

Furthermore, you should **add a meaningful title to your chart**. Double-click on the corresponding placeholder in the diagram to edit the text.

**Note:** Nevertheless, you should **add an alternative description for the diagram**. Complex data mostly get lost when the document is exported to PDF.



# Shapes and Groups in PowerPoint (part 1)

The **Insert Shapes** dialog offers many different geometric shapes, arrows, equation signs and more that you can add and combine as desired. If you want to design your own graphics or diagrams with multiple shapes then you should join the single elements to a group. The advantage is that you have to write only one alternative description for your graphic instead of a description for every element. Furthermore, you can place the group easier than single items. To group elements you have to select them first. Hold down the **Shift key** and click on every single element. Now you can group them with the context menu: **right-click**, select **Group** in the context menu and click **Group**. You can ungroup a group to its single elements via the same context menu. It is still possible to select child elements of a group to edit or move them without ungrouping.

**Note: In PowerPoint 2013 groups are not exported to PDF. You have to Group them manually later.**



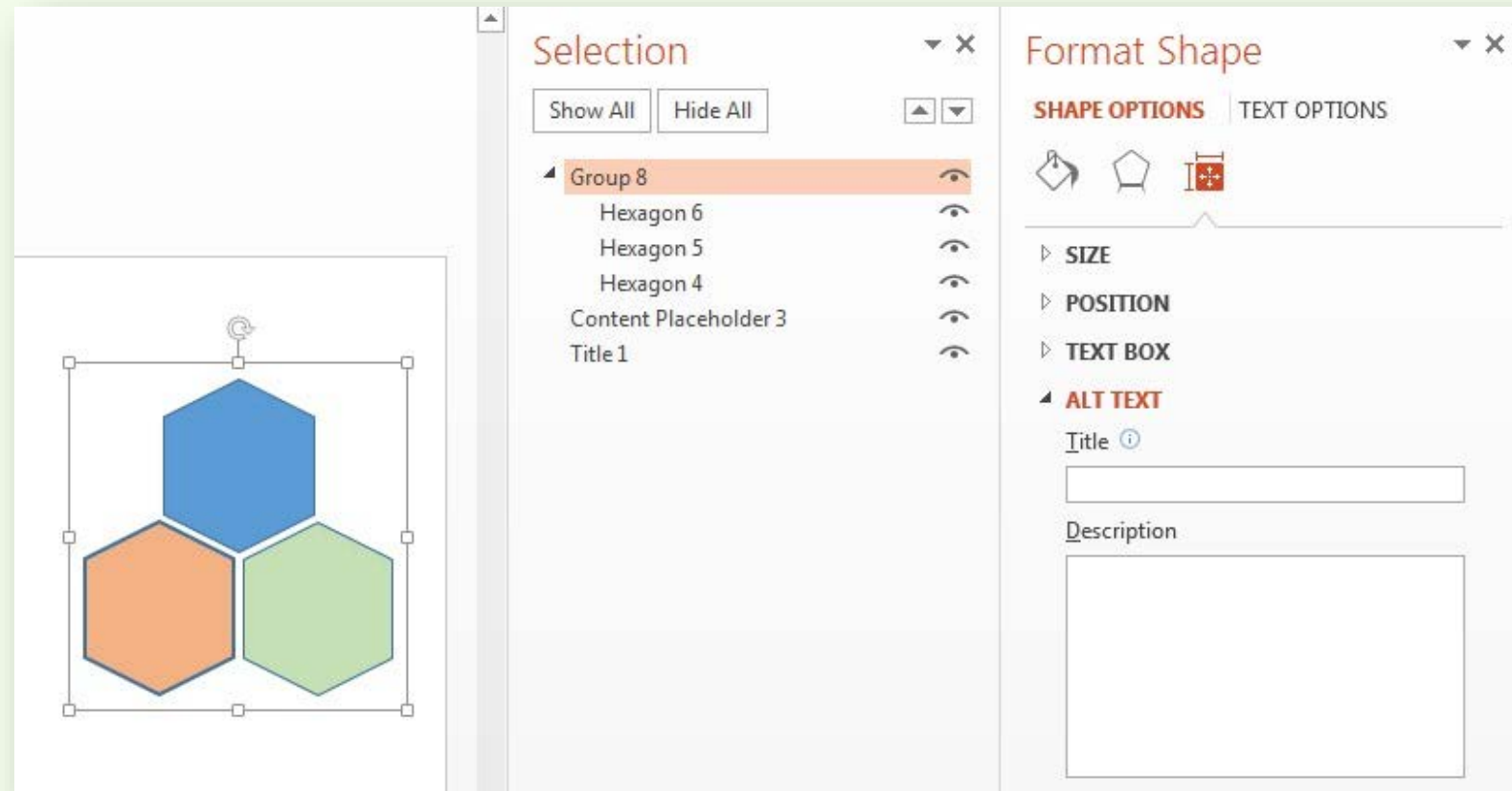
**Hint: For exporting a document to PDF you can use the context menu to save the whole group of shapes as a graphic and replace the group by a single image.**





## Shapes and Groups in PowerPoint (part 2)

**Add an alternative description** to your group which describes the structure of the grouped elements. Similarly to other graphical elements you can do this in the dialog Size & Properties. Right-click the group and click Format Chart Area, Format Picture, Format Shape. Click Size & Properties and click Alt Text.



# Using videos and animations (part 1)

## Videos

Just like images and charts, videos can be inserted in any PowerPoint document by clicking on the empty placeholder icon, or by using the menu: Click on the **Insert tab**, then **Video in the Media group**, and select **Online video...** or **Video on my computer...** . We recommend to always use online media if you will be online at the time of the presentation.

Videos should always have **an alternative text to summarize what happens in the video**. To add this information select the video, open the context menu by right-clicking, select Format Video, then Format video ... , then Size & Properties, and add the description text.

Dynamic contents cannot be applied to a static document, for instance a printed version. A PDF represents such a static document in some ways. Therefore, an alternative for the video content needs to be added, which is accessible to seeing people as well, who don't have a direct access to the alternative description.

In addition to the alternative text, you should show the link of the source, if it is an online medium. This ensures the access to the video content if it is provided within a static PDF or a printed document. You should also link the domain address. The simplest way to add the web address of the video is to use a text field, which you can position in your slide freely. Go to Insert tab, Illustrations group, Forms, Standard Forms group, select Text Field.

It is difficult to make a video fully accessible to everyone, as even subtitles are often not enough. For example: blind users need an additional audio output, whereas deaf people rather prefer sign language.

# Using videos and animations (part 2)

## Animations

Microsoft PowerPoint offers multiple possibilities to animate your presentation. For instance, it's possible to hide or show single objects or even whole slides. However, they are not transferable into static documents or onto paper, which is why you should create your presentation without animations, and highlight your contents in other ways instead. Doing it that way would also benefit blind people.

If despite this, you still want to use animations, they should not activate until a user input comes into play (e.g. click of a button). This ensures a manually control of the content.



# Key issues for Online and Blending Course

- ▶ **Accessibility to benefit everyone**
  - ▶ Accessible learning materials: Web Accessibility, Accessible Documents (MS Word, PDF, MS PowerPoint)
- ▶ **Provide an engaging student experience with Assessments**
- ▶ **Making Learning without borders a reality**
  - ▶ Student introduce themselves online, Meet & Greet
  - ▶ Article Discussion
  - ▶ reflect on their experience of participating
- ▶ **Effective Online Discussions:**
  - ▶ Convey Clear Expectations
  - ▶ Provide Feedback and Coaching
  - ▶ Track Participation
  - ▶ Create questions you care about

# Developing Web Accessibility Training

- **Develop Accessibility Training:** AWCAT offers materials for speakers, lecturers, educators, and other presenters to help their participants understand more about web accessibility.
  - Accessibility Topics
  - Presentation Topics
  - Workshop Outline
- **“Creative Commons License (CC)”** section of Using AWCAT Material

