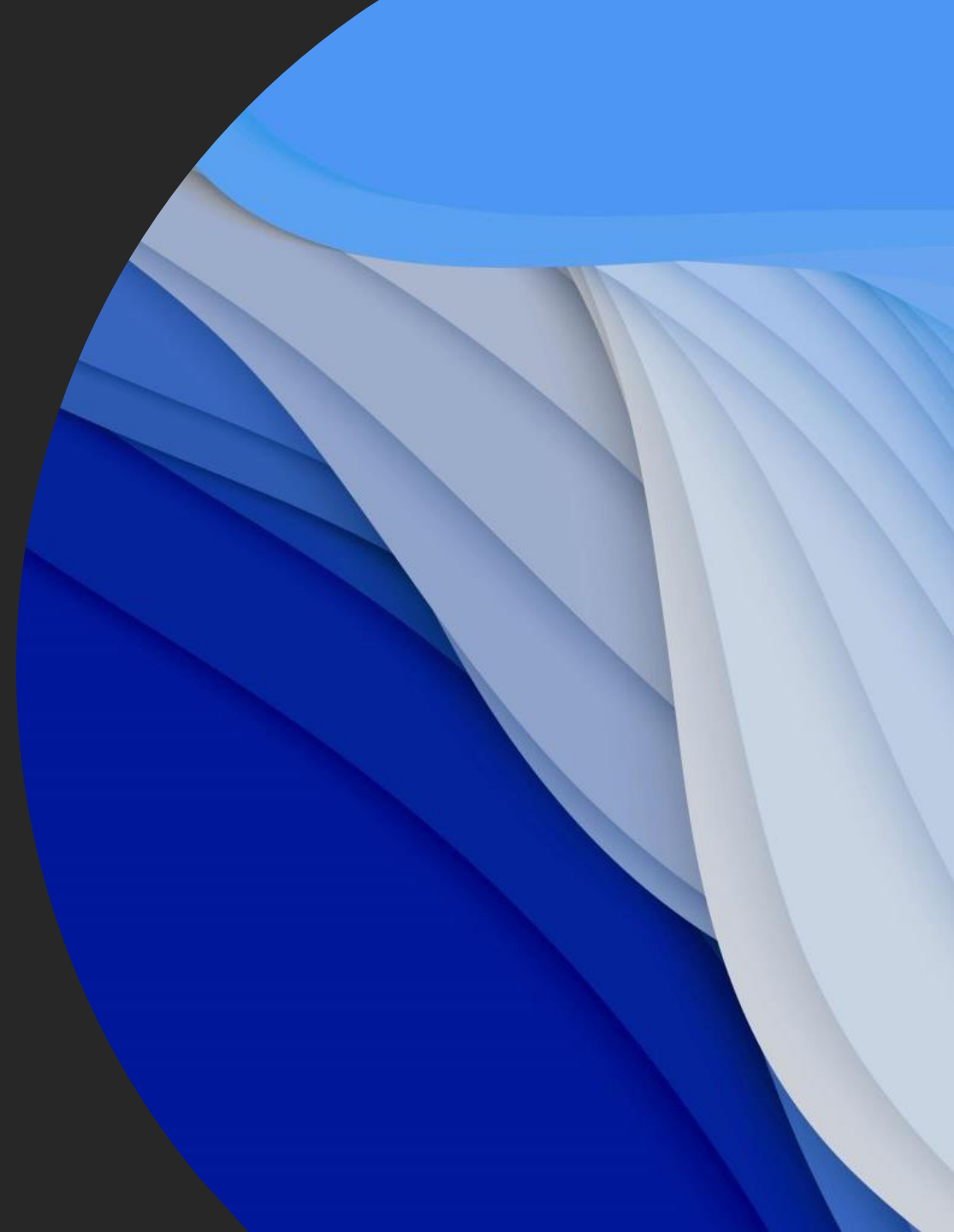


POSTER DESIGN

Formal and Informal Science Communication

CRASC - 27/04/26



TYPOGRAPHY AND READABILITY

Serif vs. sans-serif typeface:

- A. No solid scientific evidence that serif typefaces are inherently easier to read than sans-serif.
- B. Reading habits influence perception: we are more accustomed to serif typeface in books.
- C. More important than serif/sans-serif is: x-height, contrast, letter spacing, font weight.

Poster design

Font: Times New Roman Regular (serif)

Poster design

Font: Calibri Regular (sans-serif)

TYPOGRAPHY AND READABILITY

Font weight:

- A. Most typeface families offer a range of weights.
- B. Typeface weight refers to the thickness of the character strokes relative to their height. It determines how "light" or "heavy" a typeface appears on the page or screen.

Roboto Thin

Roboto ExtraLight

Roboto Light

Roboto Regular

Roboto Medium

Roboto SemiBold

Sp c p u ! C p r a

Roboto Extra Bold

Roboto Black

TYPOGRAPHY AND READABILITY

Normal vs. condensed typefaces:

- A. Condensed typeface save space for shorter texts (titles, captions).
- B. Condensed typeface should not be used for longer texts—they reduce readability.
- C. Some fonts use the label "Narrow" which is similar (or equal) as "Condensed".
Example: Arial Narrow.

RESEARCH TITLE

Font: Open Sans ExtraBold

RESEARCH TITLE

Font: Open Sans SemiCondensed ExtraBold

RESEARCH TITLE

Font: Open Sans Condensed ExtraBold

TYPOGRAPHY AND READABILITY

Typeface source:

- A. Typefaces are available on fonts.google.com.
- B. Ensure typeface support required characters:
 - diacritics (č, ž, š etc.),
 - Greek letters (α , β , μ , π etc.).

TYPOGRAPHY AND READABILITY

Typeface sizes:

A. Different sizes:

- titles,
- headings,
- body text.

B. Consider reading distance:

- larger typeface size for distant visibility,
- smaller typeface size for close inspection.

C. To prevent limited visibility during crowded sessions, typeface sizes must be large enough to be readable by multiple observers simultaneously allowing them to view the content from a sufficient distance.

TYPOGRAPHY AND READABILITY

Using multiple typefaces:

A. Maximum of two typeface families.

Fonts for formulas are not included in that count.

B. One typeface for titles/subtitles, and another for body text.

Or one typeface family but in different styles (Condensed, Black, etc.).

C. Most downloaded typeface families with multiple weights on fonts.google.com:

- Open Sans,
- Roboto,
- Montserrat,
- Lato,
- etc.

TYPOGRAPHY AND READABILITY

Emphasizing text:

- A. Vary size, **weight**, and **colour** to indicate importance.
- B. Highlight text using background shapes (e.g., as underlined with pink highlighter or using red square underneath text).

A scientific poster is a unique medium where you spend 40 hours trying to fit 20 pages of text onto a single sheet of paper, only for people to stand three meters away and say: 'Too much text, I'll just wait for the talk.'

DATA VISUALIZATION AND GRAPHICS

Bitmap image



Vector graphics



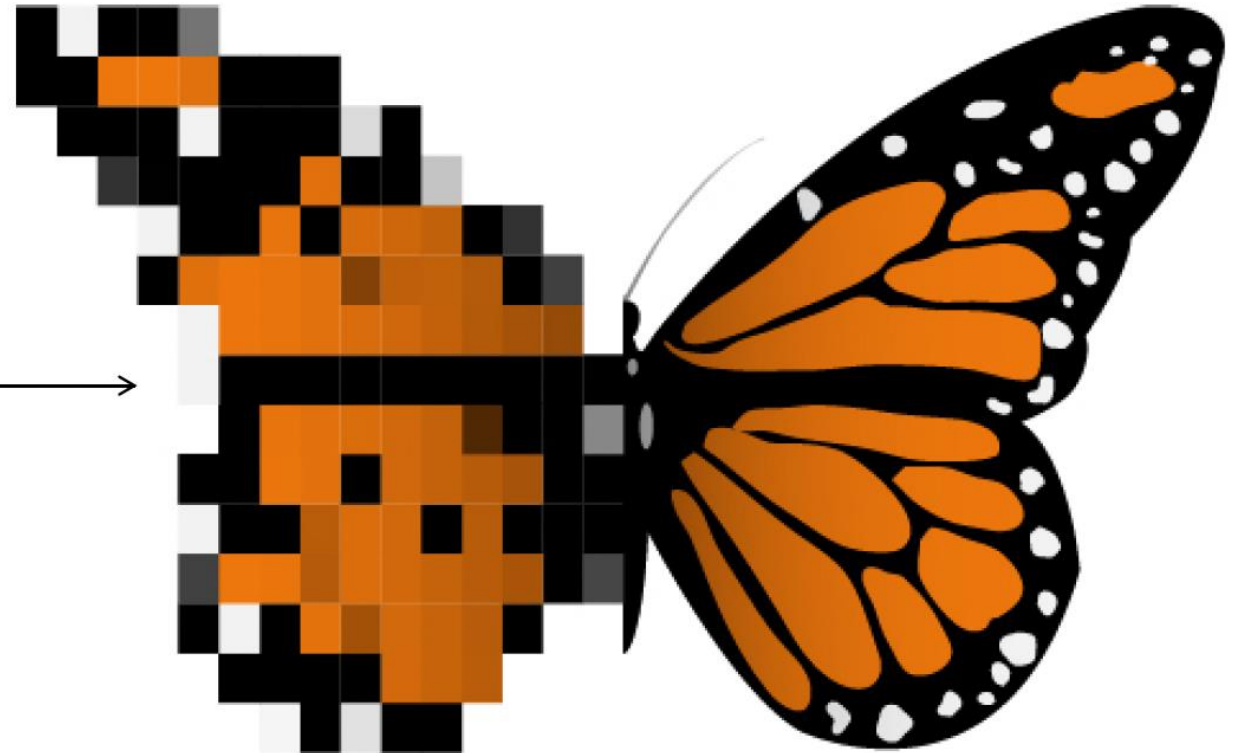
DATA VISUALIZATION AND GRAPHICS

This butterfly is
16 px high.



The left side of
the butterfly is a
bitmap image;
the right side is a
vector graphic.

Enlarge
Zoom in



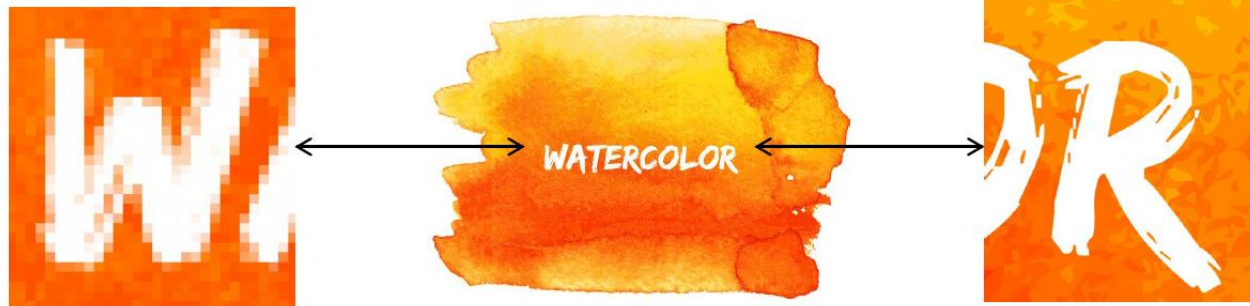
DATA VISUALIZATION AND GRAPHICS

Bitmap image formats:

- A. JPG
- B. TIFF
- C. PNG
- D. PSD

Vector graphics formats:

- A. AI
- B. EPS
- C. SVG
- D. CDR
- E. PDF (not always!)



DATA VISUALIZATION AND GRAPHICS

A. "Glossary":

- px (on screen) = dot (on paper)
- dpi = dots per inch
- inch = 2,54 cm
- 300 dpi is the standard resolution for high-quality print reproduction.

B. If the image doesn't have enough pixels, the print on the poster will be blurry, out of focus or pixelated.

B. For an image with X (cm) horizontal side, that image should have Y (px):

$$C. Y = \frac{X}{2,54} \times 300 \text{ dpi}$$

D. Example:

$$Y = \frac{30}{2,54} \times 300 = 3543 \text{ px}$$

E. Easier solution - online calculator
elementor.com/tools/px-to-cm/

DATA VISUALIZATION AND GRAPHICS

Image resolution guide: minimum pixel widths for 300 dpi printing.

CM	PX
10	1181
20	2362
30	3543
40	4724
50	5906
60	7087
70	8268
80	9449
90	10630

DATA VISUALIZATION AND GRAPHICS

Photographs and graphics:

A. Use for visual emphasis (e.g., background, experimental illustration, icons).

B. Paid stock portals:

- shutterstock.com,
- stock.adobe.com,
- bigstockphoto.com.

C. Free stock portals:

- pixabay.com,
- unsplash.com,
- pexels.com.

D. Icons:

- fontawesome.com (2000 free icons, 60,000 paid, SVG files).



DATA VISUALIZATION AND GRAPHICS

How to make good photographs of experiments:

- A. neutral background,
- B. main subject fills most of the frame,
- C. proper focus and lighting,
- D. correct white balance.



DATA VISUALIZATION AND GRAPHICS

Improve photographs with do-it-yourself techniques:

- A. Background
Different colours poster boards,
format B0 (100 x 70 cm).
- B. Lighting
Desk lamp with diffuser made of
white parchment paper (used for
baking).
- C. Reflectors for making shadows less
intensive and less sharp:
 - Styrofoam,
 - silver aluminium foil glued to
cardboard
- D. tripod for stability.

DATA VISUALIZATION AND GRAPHICS

Graphs:

- A. Provide a **concise title** to ensure the subject matter is immediately apparent.
- B. Axes and data labels must be **presented clearly** and legibly.
- C. While graphs should generally adhere to the poster's **colour scheme**, an alternative colour scale may be utilized for critical data to ensure maximum visual impact.

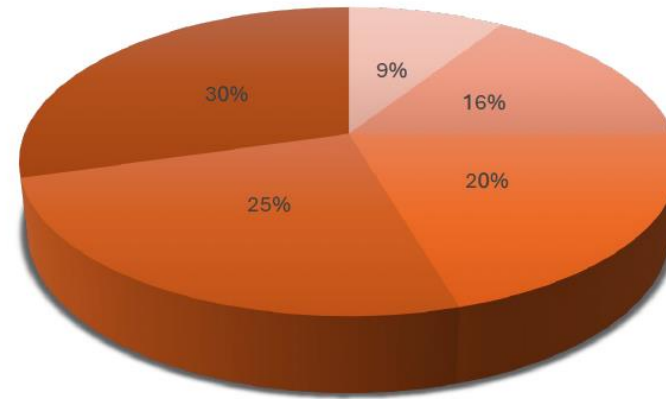


Chart comment: The numbers are not clearly visible (especially 30% on a brown background). Because of the 3D effect the portion of the pie representing 30% appears smaller than the portion representing 25%.

DATA VISUALIZATION AND GRAPHICS

Infographics:

- A. Use infographics to present data whenever possible and appropriate. This format significantly increases the likelihood of capturing the audience's attention.
- B. Where to get ideas for creating infographics?

POSTER TEXT

- A. The amount of text on poster is influenced by whether the poster will be presented "independently" (without the author's presence) or if the author will be available to provide further clarification.
- B. How can the core message be conveyed with minimal wording? Consider the desired reading time for attendees.
- C. Text Guidelines:
- Sentences should remain simple and direct.
 - All text must be proofread or at least verified using online tools:
 - » InstaText (free for students of University of Ljubljana), Grammarly, etc.
 - » Generative AI models (ChatGPT, Gemini, etc.).

POSTER TEXT

D. The width of text columns should not be too wide for comfortable reading; if a line is too long, the eyes may lose their place when moving back to the first word of the next line.

E. Can any part of the text be replaced with graphics to enhance comprehension and/or visual appeal?

DESIGNING IN POWERPOINT

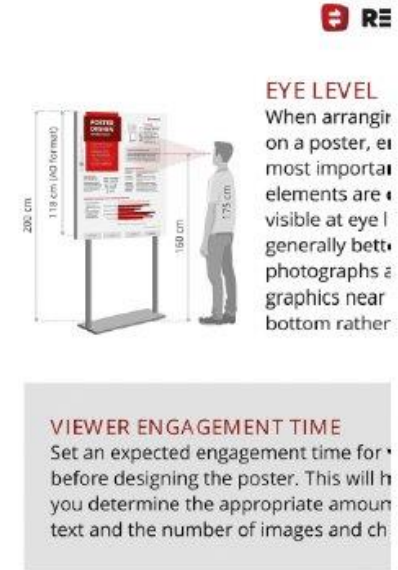
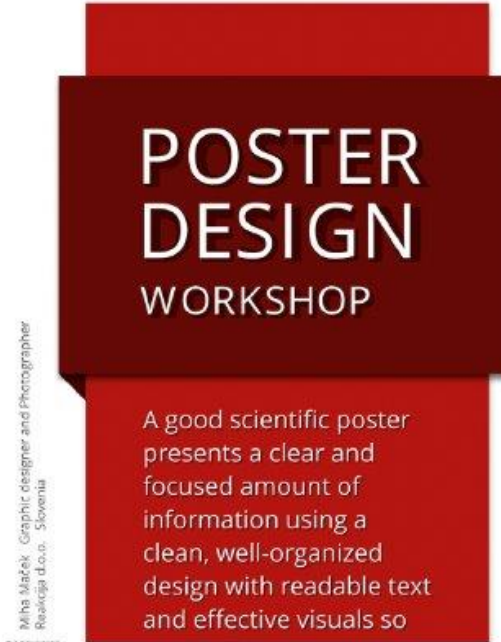
- A. Set the final dimensions of the document.
- B. Enable gridlines:
- C. To simplify the layout grid and facilitate easier work, you may temporarily modify the original file format.
If using A0 (84.1×118.9 cm), you can work on an 84×116 cm canvas. Once the design is complete, revert dimensions to the standard A0 format.

- D. Caution: If content of poster extends to the very edge of the poster, ensure that increasing the format size does not result in empty margins or gaps in the top and bottom graphics.

DESIGNING IN POWERPOINT

Possible PDF export issues:

- A. Occasionally, specific fonts used for headings may fail to display correctly after exporting to PDF.
- B. Text shadows can appear in significantly lower quality in the PDF version compared to PowerPoint. Shadows applied to rectangular shapes typically render correctly.



PRINTING

A. Material options

- Paper: eco-friendly, transportable in tube, may crease.
- Polyester fabric: foldable, transportable in luggage, minor creases.

B. Mounting Options

- Double-sided tape or pins/nails.

C. Submitting to print

- Export 1:1 PDF in final poster size.
- Ensure correct colour profile (RGB or CMYK).
- **Carefully review final PDF before submission!**
- Include format and material in filename (e.g., Miha-Macek-A0-Polyester.pdf).

