

The background of the slide features a close-up photograph of a plant with thin, light-colored stems and small, delicate white flowers. The image is softly blurred, creating a gentle, naturalistic backdrop. The overall color palette is muted, with the plant's tones blending into a light beige background.

Effective Use of Colors in Data Visualization

Minimize color variations

Use color as a functional tool in your visualization, not aesthetics. Too many colors can make the data visualization more complex and harder to understand, and your audience will find difficulty in distinguishing between groups in your visualization. Fewer options means more clarity.

Don't default to Brand Colors

If you're obligated to use brand colors in your data visualizations, then use extensions of that color in your graphics. Stretch out the color palette by introducing color categories in darker and lighter versions of the same hue instead of different hues.

Brand Colors



Adjusted colors



Avoid color vibration

Some colors vibrate when put next to other colors.

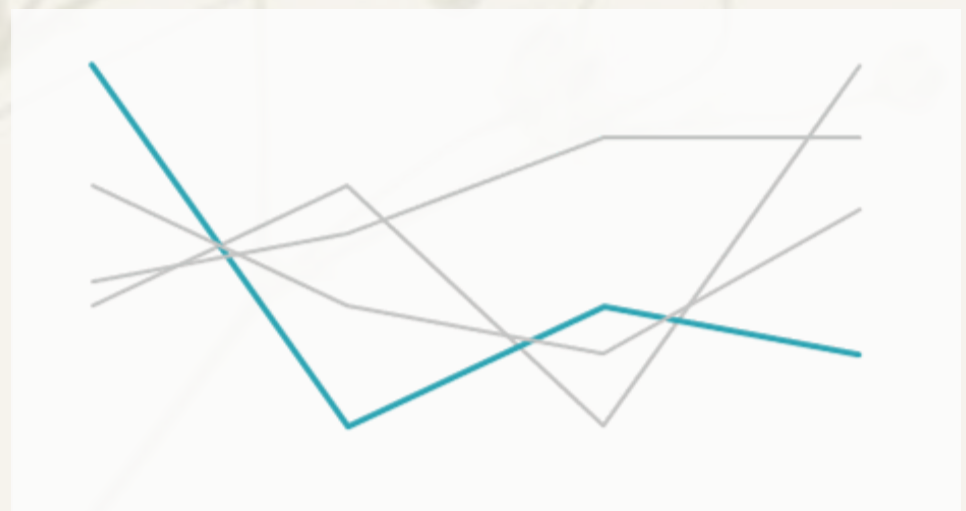
Using very high contrast and saturated colors can not only strain the eyes but if there's text, it can be very difficult to read without looking away.



Make Grey your best friend

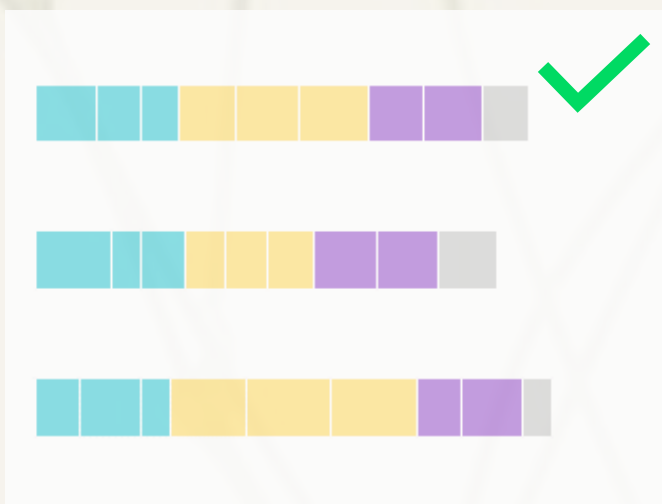
Use muted or grey color to minimize the visual impact of other values, and saturated colors to highlights specific data points.

Grey can also be used to calm down the overall visual impression of your charts.



Group similar data under varying shades of the same color

Reduce the number of colors in a chart by grouping similar categories, or alternatively use other chart types such as split-stacked chart shown below.

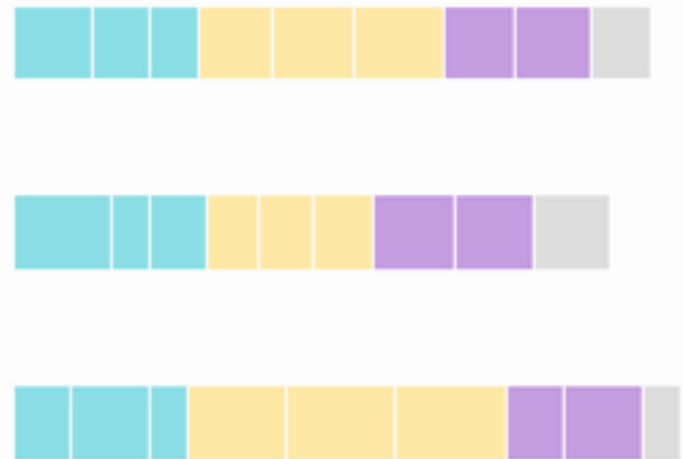


Use data-driven color schemes

Choose color palette depending on the type of data you want to present: Qualitative, Sequential & Diverging.

QUALITATIVE

Use different hues to represent different categories.



SEQUENTIAL

Use single color gradient when values are low or high in the same category



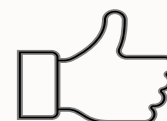
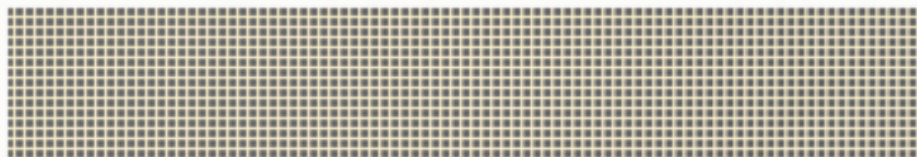
DIVERGING

Use two color gradients on each side with a neutral tone in the middle, for displaying position on a range, such as thermometer or a satisfaction survey.



Make it color-blind accessible

Be mindful of color blindness and improve accessibility. Consider using **icons & shapes** as indicators, using **patterns** in bar or column charts, or changing the **line width** and **dashes** in line charts. You can also adjust the **opacity** of certain chart elements to better tell them apart.



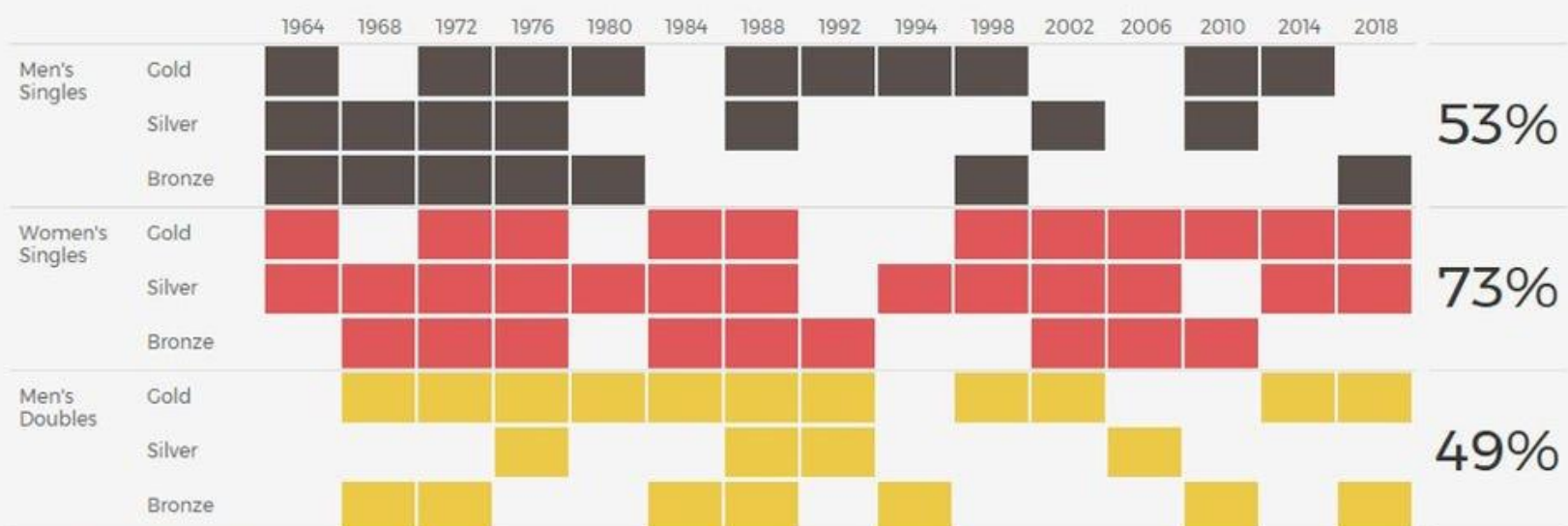
Create associations through color

Associating colors with certain topics brands, locations etc. can help bring information to the audience more easily by making it more accessible and memorable.

Check out this example about an Olympic sport called Luge which has been dominated by German competitors. The author consciously chose colors of the German flag to make it immediately relatable to the audience.

The German Discipline

Luge became an olympic discipline in 1964. Since then German teams have won around 59% off all possible medals in men's singles and doubles and women's singles competitions. In addition to that there was a mixed relay competition for the first time in 2014 which was - of course - won by the German team.



Data: <https://www.sports-reference.com/>

Design: Klaus Schulte for #MakeoverMonday

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