

Usability and UX in Technical Communication
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Introduction

Have you ever needed to convey complex information in a matter of seconds? Well, data visualization allows users to quickly understand complex information with the use of simplified data visuals. These visuals allow the user to understand information quicker, which better allows them to better understand the data given, understand trends and patterns, and make decisions.

The usage of visual data is more user friendly due to the human eye being drawn to colors and patterns. The culture of people is a visual one and data visualization is another important form of visual art that grabs our interest and helps us interact with data and draw conclusions from it through tools like charts and graphs.

Overall, while data visualization is a great tool for corporate financial discussions and business analytics, it also benefits many other professional industries, such as marketing and education, as long as the right kind of data visualization is chosen and is conducted correctly.

The article **Choosing Chart Types: Consider Context** by Kate Moran covers the importance of goal-oriented visuals, chart types, and how to present your graphs and charts with minimal clutter and maximum efficiency to teammates, stakeholders, and clients.

Our Professional Guide: Kate Moran

Kate Moran, published the article “Choosing Chart Types: Consider Context” on January 30, 2020. Moran is a Vice President with Nielsen Norman Group, a computer user interface and user experience consulting firm, which has given her extensive experience in conducting user research and UX strategies both qualitatively and quantitatively.

In this experience, Moran has found that oftentimes UX professionals struggle to present their data. Their data visualizations tend to be vague, over-complex, and due to these weak points; misinterprets and misrepresents their data findings.

What You Need to Know

Importance of Data Visualization: Data visualization makes data more accessible, understandable, and helps bring people onto “the same page”, regardless of their level of expertise. It can interpret your data in an accurate and understandable way to your clients, which boosts your credibility and helps hone your team in on other solutions and conclusions.

Context Matters: Numbers need context to be meaningful. The comparison of a number against another number is needed in order to interpret data and understand it. A popular comparison that is often drawn is the difference of time; for example, the difference between two stages or rounds of a project or study. However, other comparisons can be meaningful as well, such as comparing data from a similar product, or even a competitor, to highlight key advantages (or disadvantages) between them and your own product. Without comparison, your data report might come off as vague.

Chart types: Choose the type that best suits your goal. For UX purposes, the basics like barcharts, line charts or scatter plots suit most UX data visualizations, as we are often focused on our quantitative results. Avoid complex charts like pie charts and bubble charts unless it's absolutely necessary. This means that while some complex data might need more complex visualization, ask yourself; Could this be portrayed more clearly and minimally?

Professional relevance: Every industry benefits from data visualization, making it a valuable skill for professionals. For example, information architecture testing tools use dendograms because they are good for indicating clusters of objects. Historians make use of timeline charts to display their information chronologically. Sales and marketing might make use of infographics to sell consumers on a product by telling a story around their data. All professionals benefit from data visualization.

Relevance to UX

Data visualization has to do with the simplification of data, which affects user experiences heavily. In the case of a UX professional, whether they are a researcher or developer, they often need to present quantitative data on the impact, usage, or results of a clients (or their own) product.

Stakeholders, clients, and teammates all look at the quantitative data to find the answers for their questions; Should we continue to invest? Should I continue with this product? Should I change the product? Did I get the desired result out of my product? All these questions can be answered through the data that a UX professional presents, so it really matters that the information is accurate and understandable, so that these audiences do not misinterpret the data.

Of course, the other type of audience relevant to the UX professional and data visualization is the user of the product. The test subjects. Not only is this because these are the groups that we draw our data from, but also because if the information presented through the product is confusing, then this will construe the resulting data.

User experience relies on if the information given is easily accessible, intuitive, and helps further engage users without them having to think as much to absorb the information. In these instances, data visualization like infographics, tables, and charts can be super helpful because it

is the most effective way to present information without the over usage of time and energy explaining.

Questions

1. What are some real-life examples of data visualization?
2. What types of conflicts may arise with using only data visualization?
3. How does accessibility play a role in creating effective data visualization?
4. What role does color choice play in the effectiveness of data visualization?

Citation

Moran, K. (2023, June 28). *Choosing chart types: Consider context*. Nielsen Norman Group. <https://www.nngroup.com/articles/choosing-chart-types/>

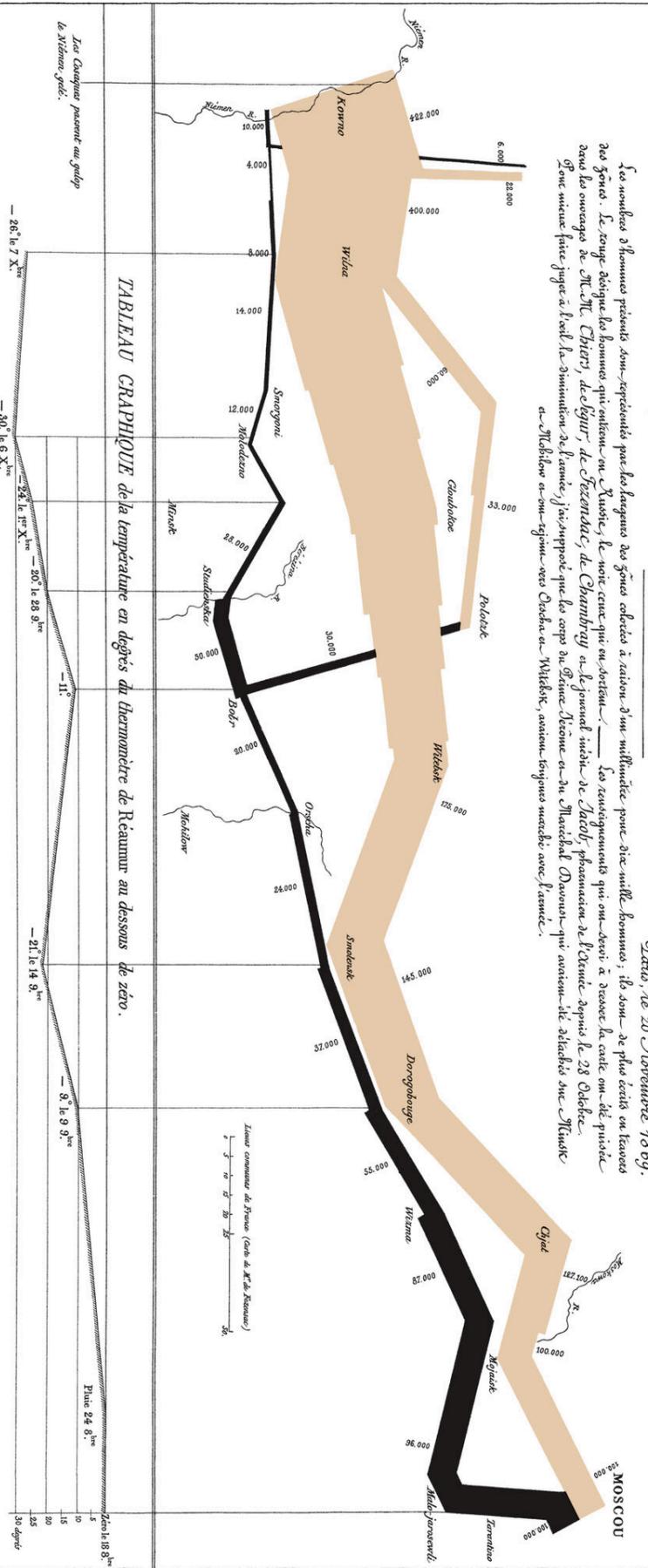
Glivinska, A. (2024, June 26). *The 30 best data visualizations of 2024 [examples]*. Visme Blog. <https://visme.co/blog/best-data-visualizations/>

What is data visualization? definition, examples, and learning resources.
Tableau. (n.d.). <https://www.tableau.com/learn/articles/data-visualization>

Carte Fig

Des poètes successifs en hommage de l'Armée Française dans la Campagne de Russie 1812-1813.
Discrte par M. Steinach, Inspecteur Général des Postes et Chasseur en retraite.

Les nombreux démontages présentés sous copierets par les Saenger des zones dévastées à raison d'un millionne pour dire dix mille hommes, ils sont... en train de faire des zones. Le rouge désigne les bonnes qui arrivent en Russie, le noir celles qui en sortent. — Les renseignements que nous avons à dresser la carte ont été pris dans les ouvrages de M.M. Chiers, de Lefebvre, de Chambrey et le journal médical de Jacob, pharmacien de l'Armée depuis le 28 Octobre. Pour mieux faire juger à quel point la diminution des forces, j'ai supposé que les corps du Prince Néron et du Maréchal Davout qui avaient été défaits avec l'armée à Malakof et qui rejoignirent l'armée russe, étaient toujours marchés avec l'armée.



Autog. par Reynier, S. Pass. S^e Marie St. G^emin à Paris.