



Customer-Focused Data Presentations

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It's Data Day!



Lieutenant Commander Data, Star Trek: The Next Generation

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It is interesting that people try to find meaningful patterns in things that are essentially random. I have noticed that the images they perceive sometimes suggest what they are thinking about at that particular moment.

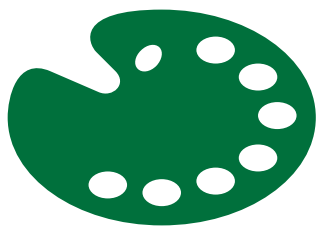
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About me

- Journalism Education, Ball State University, 1993
- Digital Storytelling, Ball State University, 2006
- Graphics Reporter 1992-1995
 - Gannett Graphics Network & USA TODAY, Washington, D.C.
 - Palladium-Item, Richmond, IN
 - Ithaca Journal, Ithaca, NY
- Graphics Editor 1995-2008
 - Journal & Courier, Lafayette, IN
 - Reno Gazette Journal, Reno, NV
 - The Star Press, Muncie, IN



Keys to a customer focus



Aesthetics:

Type, labeling, color



Audience:

Personas, web analytics
and accessibility



Storytelling:

Show & tell, trends,
explanations, prompt

Aesthetics (contrast & consistency)

- Use an appropriate chart type.
- Pay attention to typography, especially in labeling.
- Establish a hierarchy to direct eye flow.
- Use appropriate colors.
- Integrate with website.



Chart types

- Many types, some can be quite complicated.
- Charts show comparisons, relationships, distribution or composition.
- Select for your data AND audience.
- Don't combine in same chart.

Types of charts the public easily understands:

- Bar - Compare amounts.
- Line - Trends over time.
- Area – Related (subset) values over time.
- Pie – Relations to the whole.

Typography

- Choose fonts optimized for web.
- Sans serif with a large x-height.
- ~~Avoid Times New Roman.~~
- Avoid ALL CAPS.
- Avoid vertical type. Roads in map okay.
- Don't over label.
- Don't underline unless linking.
- Use contrast between type sizes.

the x-files in Arial
the x-files in Calibri
the x-files in Times

CAN YOU
READ THIS?
TURN YOUR HEAD

CAN YOU
READ THIS
TURN YOUR HEAD
I'M A LABEL.
READ THIS
TURN YOUR HEAD
Times New Roman

Hierarchy & eye flow

- Use a grid and/or stack the layout.
- Use headings to move people through your presentation.
- Position filters adjacent to the data being manipulated.
- Avoid never-ending drop downs.
- Don't over filter.*
- Include a reset all for filters.



*Unless you are NASA and your audience is astronauts.

Color

- Cool colors recede; warm colors pop; color has meaning.
- Check contrast online. <https://webaim.org/resources/contrastchecker/>
 - Pay attention to type on color backgrounds (buttons and disclaimers), maps layers.
 - Avoid small type in color. Please. We are not Microsoft Word.
- Keep color disabilities in mind when selecting background/highlight colors.
- Ask your webmaster for the #hex codes of your website (hint, look at CSS stylesheet).
- Limit the color palette. Use shades (tints) of a color. Eye can quickly determine 5-7 tints in a chart.

Integrate with website

- Should you embed or not? Depends on technology and audience.
- Landing pages are a good way to introduce and explain the dashboard with narrative text.
- But embedding can be a problem with responsive design.
- Use several pages if necessary to prevent dashboard overload (decreases page load time, helps with SEO).
- Create two versions of the dashboard, one for wide screens and one for small screens. Coding on web page can switch out depending on window size.

Audience

- User centered design features personas, fictional representations of your target audience based on demographics, occupations, access to devices.
- Develop through research including surveys, focus groups, email, social media feedback, telephone calls.
- Writing level: Some jargon may be appropriate depending on audience but also use “plain language.”
- Accessibility: WCAG 2.1 Level AA by 2026. This involves tagging, alt-text, summaries, focus and keyboard tab order.

Storytelling: Show & Tell

- Include narrative text. Suggestions:
 - How data is gathered, how often.
 - How data is used, why it is important.
 - Explain how to use filters.
 - Explain terminology.
 - Include questions or prompts for exploration, demonstrate how to filter to see the trend (recipe/settings).
 - Explain gaps, include disclaimers.
- Use default/preset views to preload trends.
- Good examples: Washington Post and New York Times.

Further learning

- Minnesota's Office of Accessibility (visualizations, maps, and more):
 - <https://mn.gov/mnit/about-mnit/accessibility/>
- Plain Language Guidelines from the federal government:
 - <https://www.plainlanguage.gov/>
- ESRI Accessibility Resources (Hub pages, Maps, StoryMaps):
 - <https://www.esri.com/en-us/accessibility/resources>
- Tableau Build Data Views for Accessibility:
 - https://help.tableau.com/current/pro/desktop/en-us/accessibility_overview.htm

Examples

- [Next Level Trails Progress](#) – Effective eye flow and example of grid.
- [State Fairgrounds Architectural Tour](#) – Elegant use of StoryMap platform features.
- [Forestry Management Dashboards](#) – Integration with multiple pages
- [Deer Harvest](#) – View data button for accessibility.
- [Fuel Efficiency](#) – Effective filter locations and reset.
- [Tableau Public's 11 Most Favorite Dashboards](#) – Keep them simple.