

Assignment

Your task is to design an interactive data visualization that explains a global issue. Your interactive data visualization should present a thesis supported by clear, carefully-researched evidence presented graphically. You will combine several statistical graphs and maybe some data maps in a composition. Approach an interactive data visualization as you would, any other form of design..

How do I go about this project?

1. Research! Read background information. Locate and analyze relevant data.

Start with a Google Search on your topic. Read EVERYTHING - do not rely on one source for your data. Make certain that your sources are accurate.

It goes without saying that all infographics must be thoroughly researched and the data presented must be backed up by established facts. While doing that, you will inevitably end up with piles of data. Sifting through that you must condense and decide what data is the most relevant and how you are going to present it. The ratio of data to the graphics works best if it is 1:1.

Another extremely important point to remember is demographics. Who is going to be using your interactive data visualization? Are they regular office going people who are used to staring at suburban train line interactive data visualization or tourists from a non-English speaking country or 10 year old impressionable kids who are being taught to recognize bullying and raise a voice against it. Depending on the demographics, your interactive data visualization will accordingly reflect colors, icons, knowledge and complexity.

2. Search to see how others have represented similar data.

Do NOT copy their layouts, but improve on them!

3. Plan the most important elements/assets. Sketch out your "story."

Thumbnail sketches help us "think" on paper. You MUST organize your strategy BEFORE you start producing interactive graphics on the computer. Once you have some hard data to work from, you need to begin to consider the design. Interactive data visualization often work best when the graphics reflect the subject of the data, so try and let the data inform and drive the design. In this part of the design process as many avenues as possible need to be explored.

4. Decide how best to visualize the meaning of those elements.

Determine what kind of visualization will best represent each of the data groups that you will use in your infographic. Investigate different visual approaches by studying the Periodic Table of Visualization Methods: http://www.visual-literacy.org/periodic_table/periodic_table.html

5. Develop a thesis/argument.

You need to "boil-down" your topic to one sentence that clearly defines what you are trying to show with your interactive data visualization.

6. Keep it simple! Keep it clear! Graphics

Remove everything that does not contribute to your thesis. Extraneous borders & decorations are confusing.

There are two kinds of graphics in an interactive data visualization. They are theme graphics and reference graphics.

Theme graphic is the defining visual of the design and is usually always included in the interactive data visualization, except when the interactive data visualization is more statistic based. Choosing the right theme graphic will tell you reader at a glance what knowledge you wish to share.

A PERIODIC TABLE OF VISUALIZATION METHODS

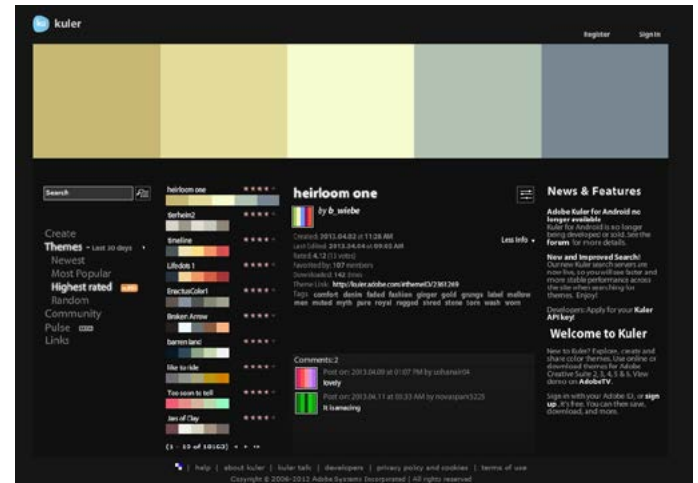
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Reference graphics are not mandatory in the design. They are usually icons used as visual pointers to avoid cluttering up the design when a lot of content needs to be represented. They are brilliantly capable of making numerous references using the same instance. Sometimes words aren't even necessary if powerful reference icons are used, a practice more and more designers are using in a bid to make their interactive data visualization as word-free as possible.

7. Carefully select a color scheme.

A color scheme is very important to convey a wide array of messages while keeping the reader confined inside the interactive data visualization. With huge and complex interactive data visualization, readers will become quickly confused and their perceptions will be scattered all over the place if they don't have colors tying down their thoughts visually. You can have 2, 3 or 10 colors but assigning them before you begin designing will be the most important thing you do.

8. Stuck for ideas? Select Kuler in the extensions menu of InDesign & Illustrator, or go to: <https://kuler.adobe.com/>



9. Carefully select your font.

Do not use display fonts that distract and detract from your message.

10. Create the individual elements and bring them together into a cohesive layout.

Use Adobe InDesign or Illustrator for your layout. Any graphic elements created in Photoshop must have enough resolution (use 300ppi resolution) so that there is no degradation of quality if the image is scaled. In other words, because your Photoshop work will be pixel-based (Raster), make the image size bigger than you think you will need.

All the different sections should all feel part of the same theme. The layout must have good spatial organization, structure of elements, and informative value. Continue the refining process and gain feedback from as many people as possible. You should begin to see the finished product coming into shape.

Remember: main point on top, secondary point next, and supporting details at bottom.

11. Organization of the Elements: L.A.T.C.H.

12. Make sure your conclusion is evident.

Ask a colleague (who is not involved with this project) to tell you what message they get from viewing your interactive data visualization.

13. Reference your sources.

Always. Always. No exceptions. Use 7 point type

from: <http://tumblr.co/Zc5ibxZD3xQQ>

One trend I'm noticing more and more are data-laden graphics with no source indicated for the information included.

THIS IS WRONG. VERY WRONG.

If you use someone's information, you need to cite it. Properly. Full stop, people.

If you don't, it's called plagiarism, aka cheating, lying and general ne'er-do-well-ing.

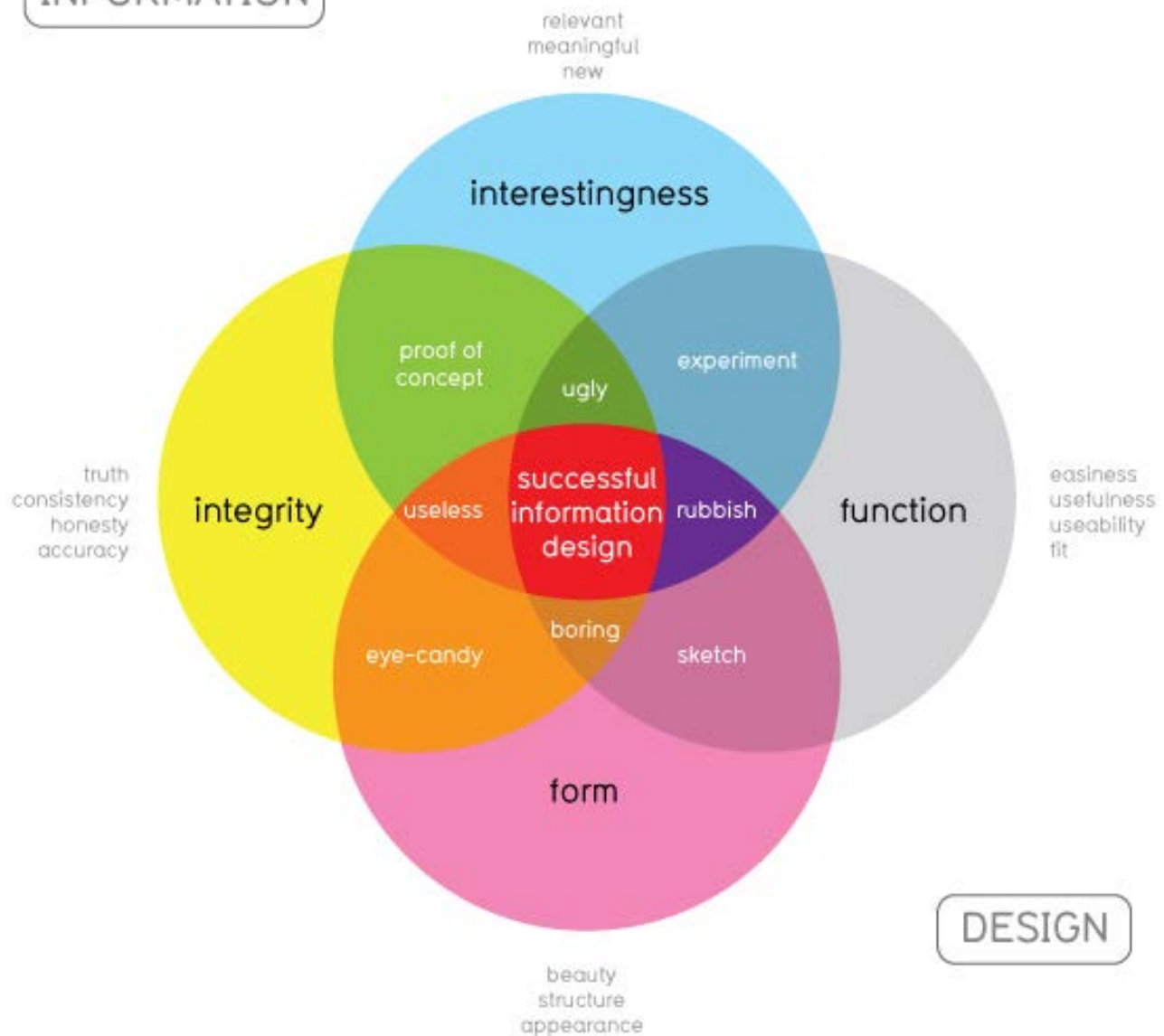
You know, you don't cite something just to give credit to the source for actually doing the research; it also gives your info-graphic credibility, and that's a good thing. There's really no excuse not to do it.

So, let's all agree that we're going to stop creating information without proper citation!

14. Post your image

taken in part from: <http://www.queeness.com/post/9942/how-to-design-your-own-infographics> and <http://spyrestudios.com/the-anatomy-of-an-infographic-5-steps-to-create-a-powerful-visual/>

INFORMATION



DESIGN

Universal Principles of Design

from: Universal Principles of Design by Lidwell, Holden, Butler. Rockport Press, 2003 & The 7 essentials of Graphic Design by Allison Goodman, 2001, HOW Design Books, Cincinnati, OH

TYPOGRAPHY: The artful representation of words is an art, and cannot be left solely to the computer to accomplish. Pay attention to the details of how a designers handle type.

COLOR: used in design to attract attention, group elements, indicate meaning, and enhance aesthetics.

CONSISTENCY: the usability of a system is improved when similar parts are expressed in similar ways

HIERARCHY: Organization is the simplest structure for visualizing and understanding complexity.

CHUNKING: a technique of combining many units of information into a limited number of units or chunks, so that the information is easier to process and remember.

ALIGNMENT: The placement of element such that edges line up along common rows or columns, or their bodies along a common center.

PROXIMITY: Elements that are close together are perceived to be more related than elements that are farther apart.

IMAGES: Pictures have more immediate impact than words.

L.A.T.C.H.: The Five Methods of Organization Information/Data

Location

Location is the natural form to choose when you are trying to examine and compare information that comes from diverse sources or locales. If you were examining an industry, for example, you might want to know how it is distributed around the world. Doctors use the different locations in the body as groupings to study medicine. (In China, doctors use mannequins in their offices so that patients can point to the particular location of their pain or problem.)

Alphabet

This method lends itself to organizing extraordinarily large bodies of information, such as words in a dictionary or names in a telephone directory. As most of us have already memorized the twenty-six letters of the alphabet, the organization of information by alphabet works when the audience or readership encompasses a broad spectrum of society that might not understand classification by another form such as category or location.

Time

Time works best as an organizing principle for events that happen over fixed durations, such as conventions. Time has also been used creatively to organize a place, such as in the Day in the Life book series. It works with exhibitions, museums, and histories, be they of countries or companies. The designer Charles Eames created an exhibit on Thomas Jefferson and Benjamin Franklin that was done as a timeline, where the viewers could see who was doing what, when. Time is an easily understandable framework from which changes can be observed and comparisons made.

Category

Category pertains to the organization of goods. Retail stores are usually organized in this way by different types of merchandise, e.g. kitchenware in one department, clothing in another. Category can mean different models, different types, or even different questions to be answered, such as in a brochure that is divided into questions about a company. This mode lends itself well to organizing items of similar importance. Category is well reinforced by color as opposed to numbers, which have inherent value.

Hierarchy

This mode organizes items by magnitude from small to large, least expensive to most expensive, by order of importance, etc. It is the mode to use when you want to assign value or weight to the information, or when you want to use it to study something like an industry or company. Which department had the highest rate of absenteeism? Which had the least? What is the smallest company engaged in a certain business? What is the largest? Unlike category, magnitude can be illustrated with numbers or units.

Different ways to make your interactive data visualization more appealing:

1. Make use of as many colors that you have in the color wheel
2. Use different types of fonts because by using multiple fonts, even a boring sentence can also draw user attention
3. Don't write long paragraphs, use short and precise sentences
4. Copy simple charts available on the internet and paste it in the infographic
5. Don't waste time by checking the facts because most of the facts present in websites will be correct.
6. You can extend the interactive data visualization by placing content instead of statistics
7. Structure the interactive data visualization using nice styles
8. Don't worry about the proof reading, mistakes in interactive data visualization are neglected by the readers
9. Use other interactive data visualization as resource to create a new interactive data visualization.

Components	Exceeds Expectations	Meets Expectations	Needs More Work
Topic	The topic of the IDV is specific in nature and is intended to inform or convince the viewer.	The topic of the IDV may be a bit too broad to allow the viewer to understand the main points.	The topic of the IDV is hard to ascertain and needs to be made more specific.
Type of IDV	The type of IDV chosen (timeline, informational, etc.) highly supports the content being presented.	The type of IDV chosen represents the content being chosen but another type may lead to more clarity for the viewer.	The type of IDV chosen does not convey the information well or support the content being presented..
Objects	The objects included in the IDV are repeated to support various data points and to make it easier for the viewer to understand the IDV.	Some objects included in the IDV are repeated but the IDV did not seem to include enough repeated elements to make it understandable.	Too many different types of objects are used in the IDV and that makes it hard for the viewer to understand the content.
Data Visualizations	The data visualization formats chosen make the data presented easy for the viewer to understand the information. Selection of images and text demonstrates clear understanding of audience & purpose. High quality graphics created or modified from stock art.	The data visualization formats chosen showcase the data, but some may make it difficult for the viewer to understand the points. Images used are mismatch and add to visual confusion. Graphics are low quality clip art.	Other data visualization formats should be chosen to best showcase the data presentation for the viewer. Images are not consistent, sized poorly. Low-quality clip art used. Extraneous graphic elements.
Fonts	The IDV includes an appropriate font to both complement the content and make the text readable. Title & headings easy to distinguish from other text. Appropriate font sizes.	The IDV includes multiple fonts and/or the fonts do not seem related to the IDV topic.	The font(s) used in the IDV make the text almost unreadable.
Colors	The color choices enhance the visibility of the IDV. Different saturations of the same color are used wisely.	The color choices are fine, but too many colors may have been used.	The color choices for the IIDV are not visually pleasing and detract from the IDV.
Layout	The principles of design: consistency, hierarchy, chunking, alignment, and proximity were used to create a pleasing composition that guides the viewer's eyes quickly and easily through the information. No pixelation on images.	Alignment issues. Some images are pixelated. Images obviously downloaded from internet, bad resolution, no consistency.	Elements are thrown on the page. Pixelation. No original artwork done.
Information Organization	The IDV uses one of the LATCH (location, alphabetical, timeline, category, or hierarchy) information organization formats to allow the viewer to understand the information in the IDV.	The IDV uses some components of the LATCH information organization formats, but the cohesiveness of the information presentation is lacking.	No information organization choice is present in the IDV. Disregard for copyright laws.
Citations	Full bibliographic citations for all sources used are included. Respect for Intellectual property.	The URL of sources used are included. Copyright laws broken?	No citations to sources used are included.
Content	Research demonstrates a complete understanding of the topic. Extends audience vocabulary by defining or illustrating words that might be new to most of the audience.	Information is gathered together, but no conclusion can be reached about the facts. No jargon used.	Haphazard collection of data.
Mechanics			

Rubric from Kathy Schrock kathy@kathyschrock.net and from other rubrics