



Data Storytelling

How to Tell Engaging Stories with Data

This book was created by [LiveStories.com](https://www.livestories.com)
to help you turn data into action.

This book is not intended for resale,
unless the proceeds go towards charity
(in which case, charge as much as you can).

Why We Tell Stories

Stories help us make better sense of the world, share ideas, and capture knowledge.

Great stories have the power to inspire people and compel action, because stories can help your audience understand the wider context of issues.

In this book, you will learn how to combine the heart (storytelling) and the head (data) in order to engage your audience effectively and achieve the impact you are seeking.

These guidelines will share best practices on how to create engaging stories.

Stories are captivating, they resonate with us,
and we remember them.

(We tried to think of a joke for this page
but we drew a blank)

Your Data Story Tool Box

Data stories can consist of any combination of images, illustrations, charts, maps, videos, and rich text. It is important that you know how to use each type of medium correctly to engage your audience and get your message across. Each chapter will share best practices and things to consider when you create a report, policy brief, fact sheet, story, or presentation, and many of the tips also apply to stories that are not data focused.

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1 | Create a GAME Plan

Before you start creating your story, you should make sure you have made a GAME plan. GAME is short for **Goal, Audience, Message, and Engagement**.

Goal

Determine what you are looking to achieve with your story. Be as concrete as possible. Are you trying to make someone take an action? For example, are you looking to get funding or a higher budget? Are you striving to get a policy changed? Regardless of your goal, make sure you can determine when that goal has been reached.

Audience

Understand who your audience is. Who is able to affect your end goal? Who are the decision-makers and who can influence the process? Determining who your audience is, as well as how they want information presented to inform their decision, helps you develop empathy for your readers and create messaging that is relevant.

Message

Figure out what the most important message is that you would like to get across to your audience. Narrow your message down to 1-3 single sentences (key points) that you want your audience to leave with after having read your story.

Engagement

Once you have determined your goal, your audience, and your message, try to determine the best way to engage with your audience. This includes selecting your channel and your medium. Examples of channels are email, regular mail, website, social media, or webinars, or even in-person venues (e.g. a presentation or a community health fair). Consider where you are most likely to find your audience when you choose a channel. Your choice of channel helps you determine the best medium to use. Examples of mediums are presentations, stories, printed reports, videos or a combination of these.

What's the goal? Who is your audience?
What's the message? How do you engage?

2 | Build Your Framework

You wouldn't construct a building without having a plan for what it should look like. Similarly, you should make a plan for your story.



Sketch out the Layout

When you have created your GAME plan, try and sketch out the layout of your story. Grab a pen and paper and get an idea of what elements you would like to include.

Often the best way to figure out how best to package your info is to go out and meet with your audience. Ask them how they would want the information packaged and presented - that is, what kinds of displays (e.g. a presentation, a larger report, a smaller policy brief) would most influence them to take action.

Keep it to the Point

Try and keep data stories to a maximum of two pages or approximately three to five large paragraphs. This includes an intro, your three main points, and a conclusion with a call to action. If you also can include a personal narrative - quotes, a story from someone in the community, etc. - then it makes sense to allow for more space. Personal narratives can often help influence people in ways that data can't. If your story or report has to exceed this length, consider breaking each chapter into these sections. Putting a limitation on how much you can write may seem challenging at first, but often you will find that it helps you focus your message and cut out unnecessary words and content.

Make a plan for your story.

3 | Appeal to the Mind with Data

Stories - particularly those that give personal examples - often appeal to the heart, but adding charts and maps helps you appeal to the mind. Just make sure to present your data well. Here are three things to consider when presenting data:

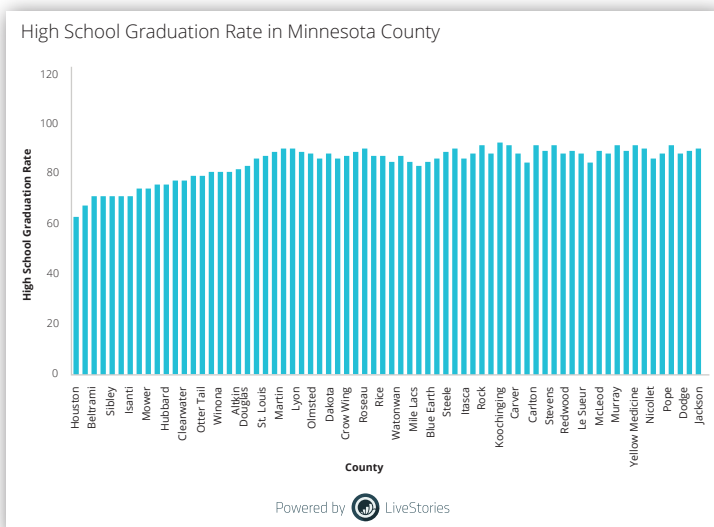
Focus

Decide on the most important aspect of your data and hone in on it. Often people add too much information in a chart, making it difficult for the reader to decipher what is going on. Instead, focus on a single point or divide the information into several graphs. Ideally, the readers should be able to interpret the key point in a chart in less than 5 seconds.

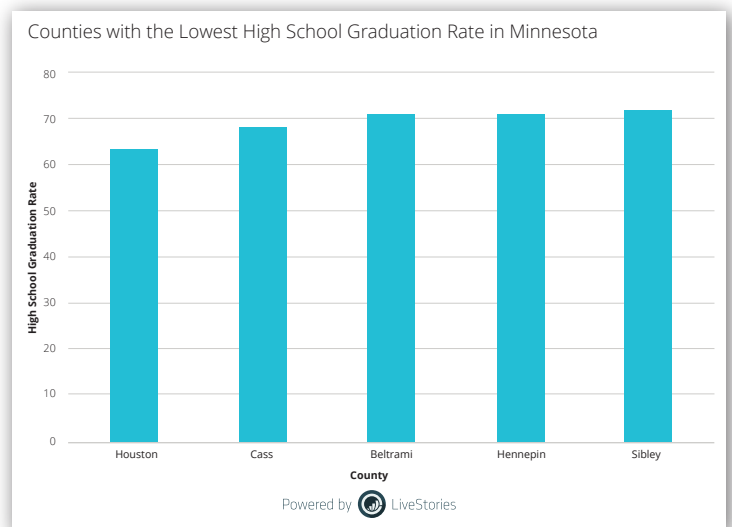
Decide what's the most important aspect of your data and hone in on it.

Limit your Data Points

Don't try and cram too much information into one spot. Our rule of thumb is no more than 10 categories at once if you use bar charts or heat maps, five if you are using line charts or pie charts. Otherwise your point risks being lost in the crowd of data.



A lack of focus returns too many data points and makes it difficult for the reader to analyze and comprehend the data.

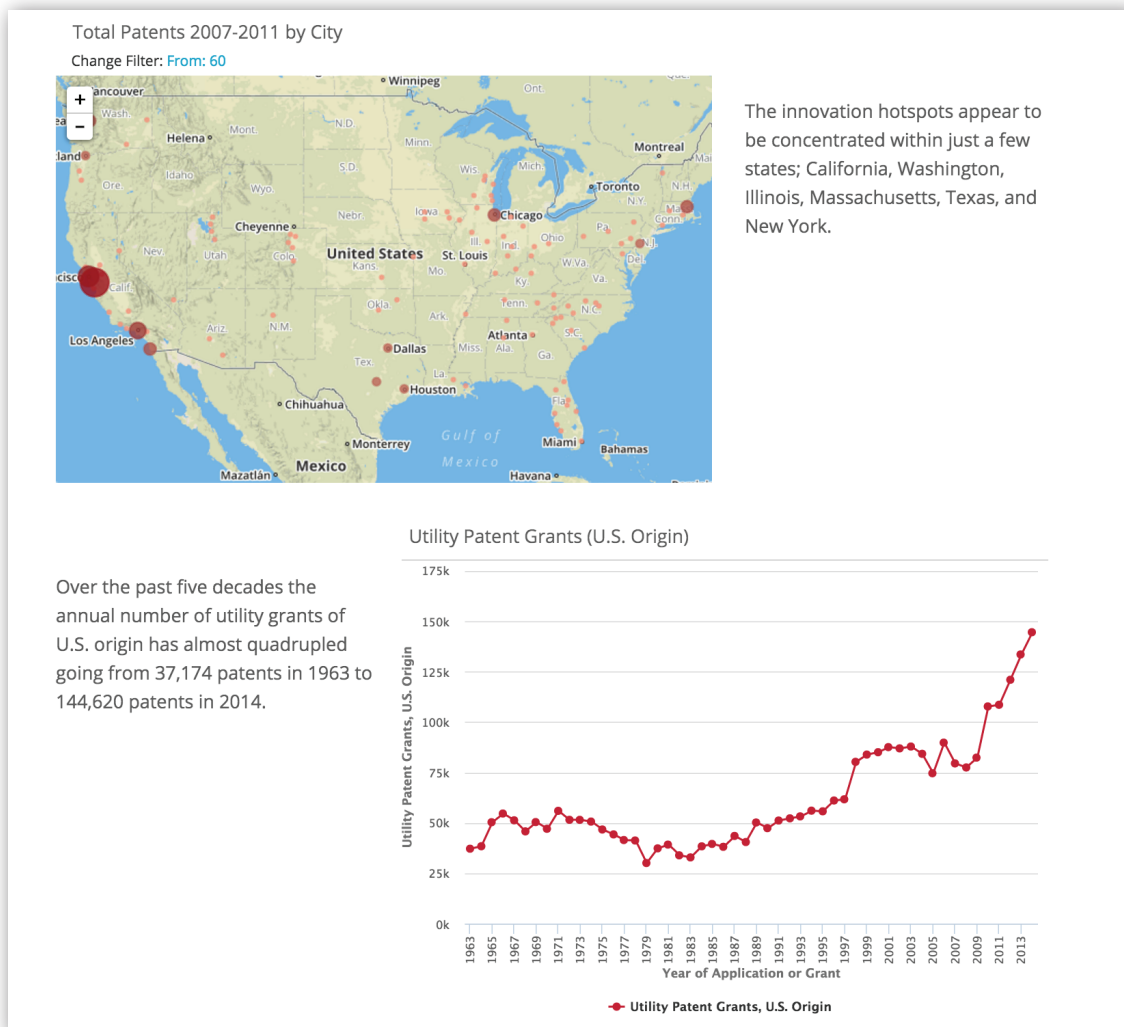
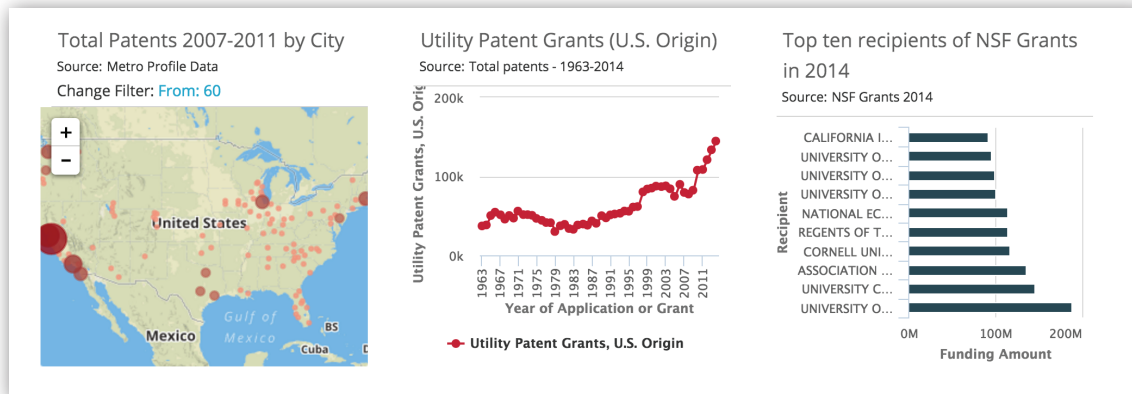


This chart is focused on the five lowest performing counties in Minnesota. The clear focus makes it easy for the reader to follow the logic.



Give Your Charts Room to Breathe

Whether you are creating a presentation, a webpage, or a PDF report, make sure to leave plenty of margin around your charts so they can “breathe”. Also, try and show only one graph at a time. Leaving room around an important chart helps emphasize its importance - just like great speakers leave longer pauses after an important point.

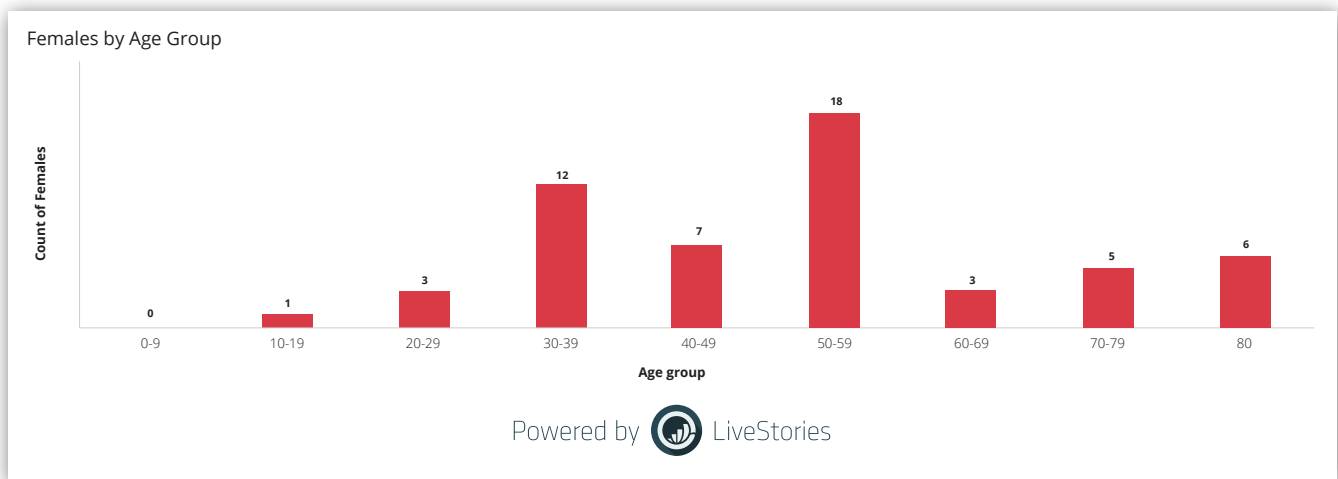


4 | Select the Right Visualization

Your choice of visualization, or chart type, depends on what type of data you are looking to present. Below are a number of common scenarios and what visualizations you should choose.

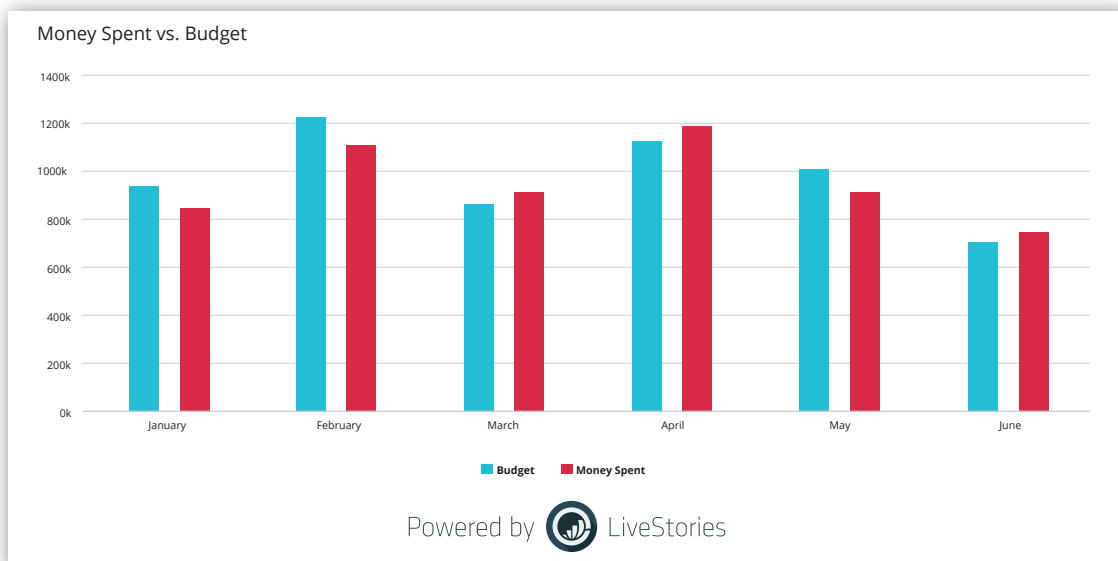
Distribution

Distribution means looking at the count of something across a dataset's various categories, e.g. the number of survey respondents by age groups. Your best choices for showing distributions are: Bar Chart, Column Chart, Line Chart, and Area Chart.



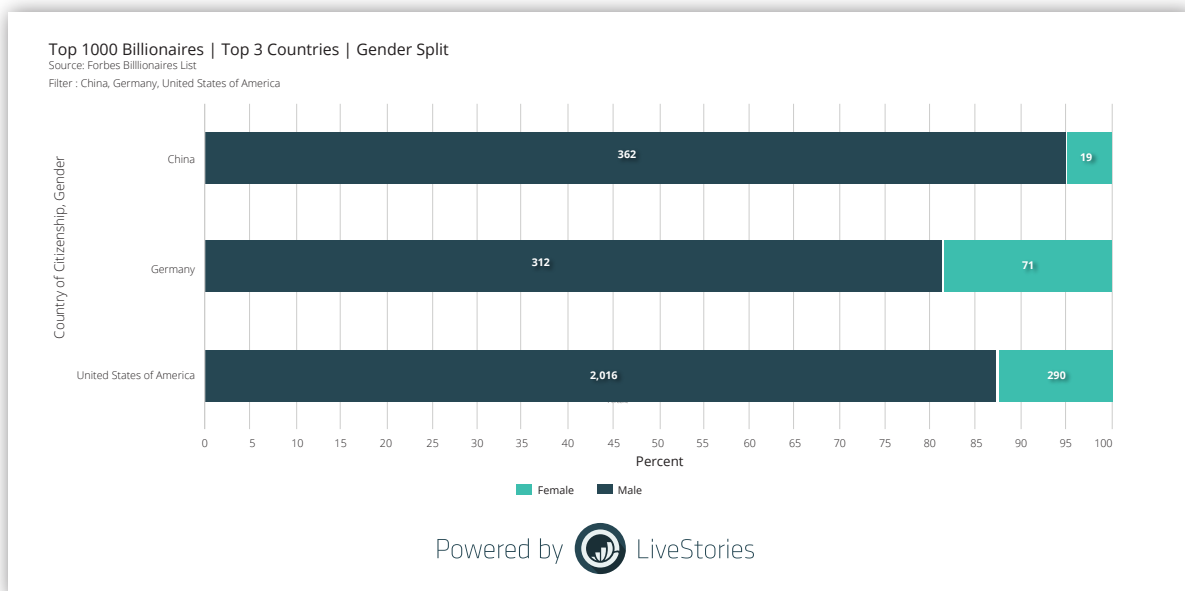
Comparison

A comparison is when you compare two or more categories in a chart, e.g. departments, cities, income breakdowns, or budget versions. Your best choices for this type of data presentation are: Column Chart, Bar Chart, Line Chart, Line-Bar Chart, and Multi-line chart.



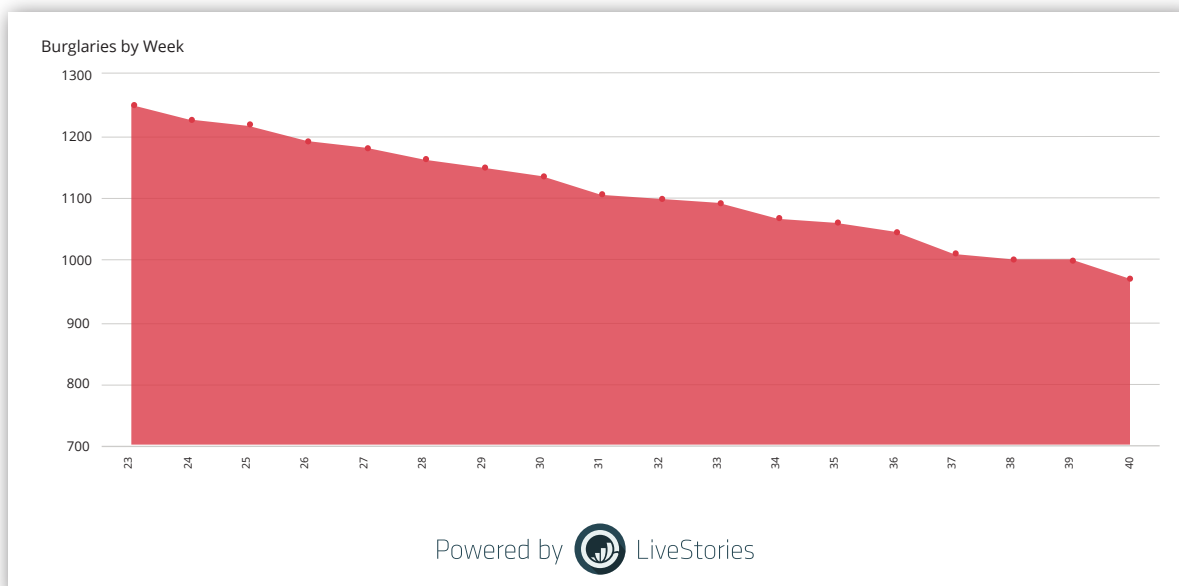
Composition

Looking at the composition of something means you are looking at the underlying categories of a number. Take for example a budget: An organization's budget is the sum of each department's budget, which again might have another layer underneath. In a composition, you are looking at the percentage split and for this purpose your best choices are: Pie chart, Stacked Column Chart, Stacked Bar Chart, and Stacked Area Chart.



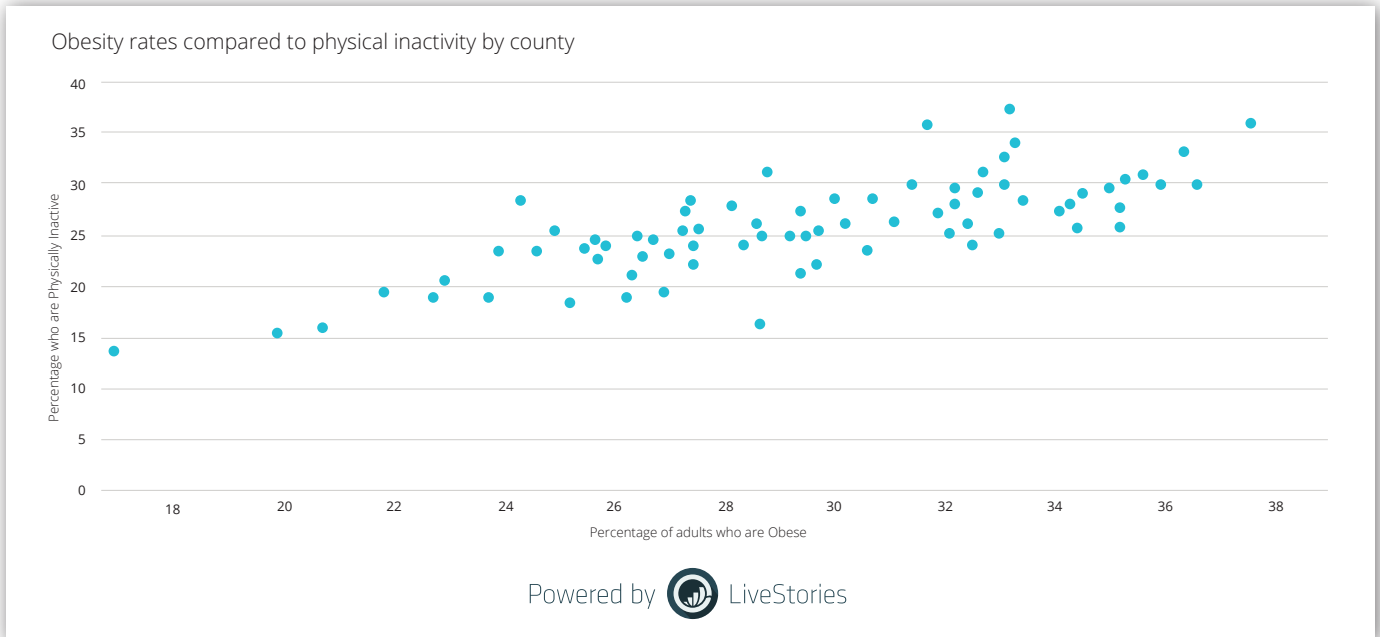
Trend

Trend has to do with time, whether hours, days, months, or years. Trend charts show data over a span of time to get a sense of the development and where things might go in the future. Your best choices for trend data are all different types of line charts, namely: Line, Dual Axis line, Multi-line, Date/Time Line Chart, and Cumulative Date/Time Line Chart.



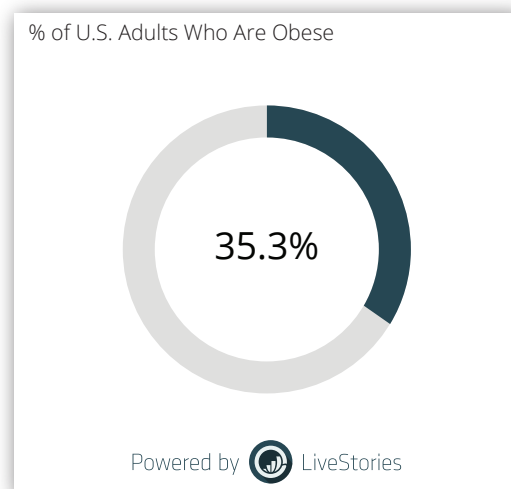
Relationship

If you are looking at the relationship between different categories or indicators (numerical values), you are directly or indirectly looking at the correlation and perhaps a causation between data points. E.g. cities that do less exercise also have higher obesity rates. The best visualizations to use for this type of data are: Heat Maps, Bubble Charts, Line-Bar Chart, Line Charts, and Scatter Plots.



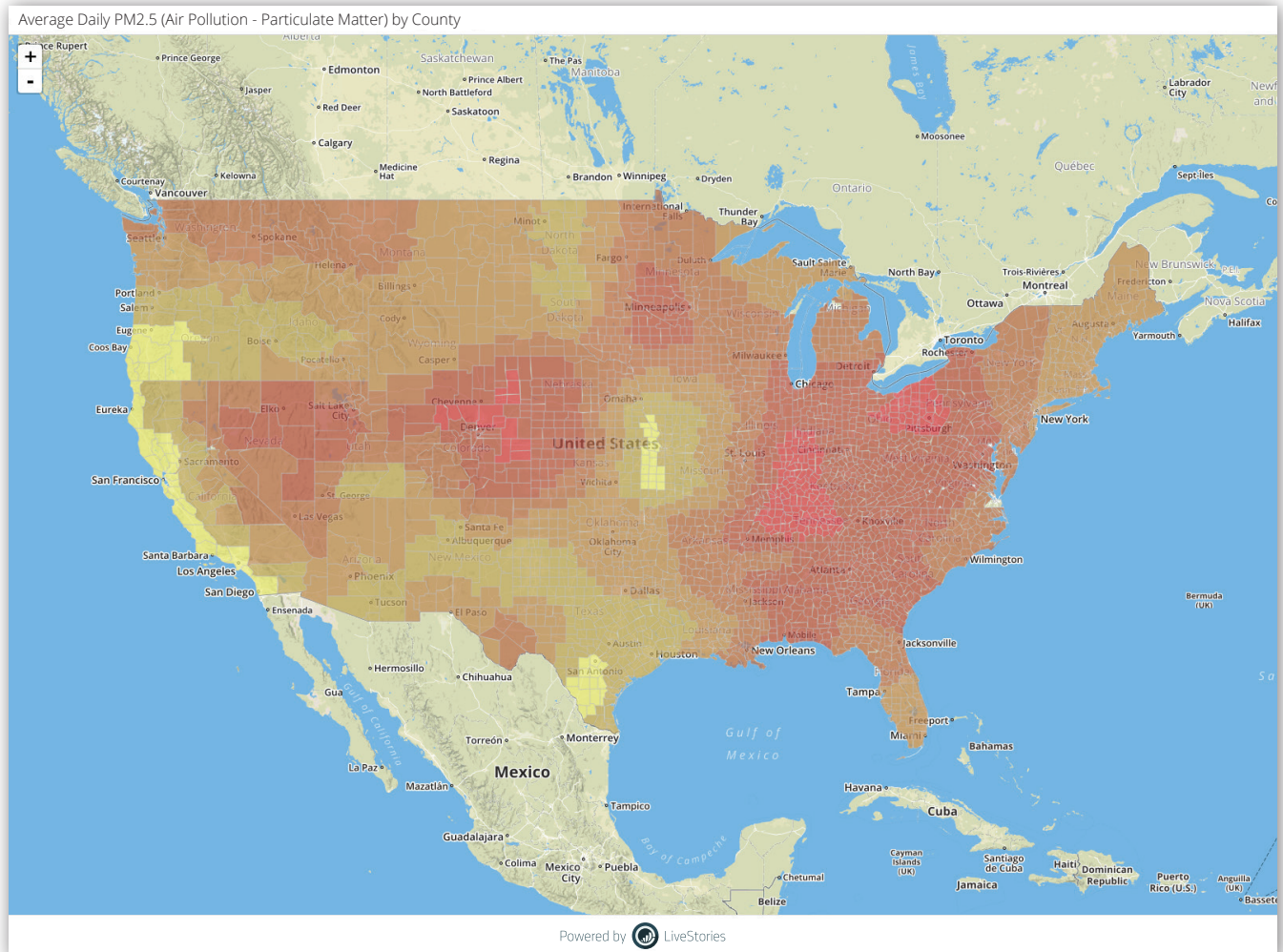
Statement

When showing a single number or percentage in your story — what we call a statement — you can use Number Tiles or Donut Charts.



Location

If your data has a geography associated with the data points, consider displaying it on a map. Maps can be particularly engaging and are great at showing a larger number of data points, as the geographic context helps the reader comprehend and compare the data with ease.



TIP

MAPS

LiveStories.com makes it easy for anyone to create beautiful maps. Some of the standard map options include: zip code, city, county, state, country, and longitude/latitude.

5 | Add Visual Oomph

Visuals can be a powerful addition to a data story as they help engage your audience and amplify your message. Here is what to keep in mind when using images/photos and illustrations.

Captivating Cover Images

A story's cover image is your version of a movie poster or a book cover. Its purpose is to draw the reader in and convince them to engage with your story. Select an image or illustration that is engaging yet describes what your story is about. If you add text to your image keep the text near the center of the banner and use a maximum of two fonts. Below you can see two examples of great cover images.



Visuals Should Support Your Narrative

A good visual conveys the same message as your written narrative but without words. If there is too much discrepancy between the narrative of your story and the image, you will leave your reader confused. Similarly, a great visual, whether an image or illustration, can help emphasize your point. Newspapers are particularly good at this. Take the image example below from a New York Times article. Even without reading the headline, you can easily tell that three soccer players haven't just lost a game. They are devastated. The headline confirms the hunch, namely that the English national soccer team was upset by Iceland in the European Championship quarter finals.

Upset Loss to Iceland Has England Gnashing Its Teeth



NYT.com - The New York Times

Creative Commons Images

Finding images for your story can be time consuming and costly. Use Creative Commons image databases such as Compfight or Flickr to find images that you can use for free. Just remember to change the copyright filters to 'Creative Commons' photos. Note: There are a number of different types of Creative Commons licenses, so read the Creative Commons guidelines to make sure you are giving the right attributions. You can find the guidelines at www.CreativeCommons.org.

TIP

EASY ILLUSTRATIONS

A great tool for creating cover images or banner images is canva.com. Canva makes it easy to create illustrations, banners, and cover images for reports. The free version has a decent number of templates, layouts, and icons available and even more options if you are willing to pay a small fee.

Use Action Shots. They Make Your Story Come Alive

When selecting supporting images, look for action shots - images with movement. Images are more engaging if you show action in the picture as opposed to a portrait or group photo. Just be careful not to choose a picture with too many things going on, as this will make the reader spend too much time trying to figure out what is happening in the photo.

Below you will see two images, both with a beach theme. The top photo would be a poor choice for your story. It doesn't show movement and the detailed background makes it challenging to decipher what is happening. The second photo is a great example of an action photo. The image is relatively simple with a clear foreground, middle ground, and background, and the flying skater is almost moving on the page.



6 | Be a Video Star

Videos are great at making your story engaging and well-rounded, because they can provide a wider context in a short amount of time. It's also one of the biggest advantages to publishing stories online as opposed to in static PDFs (LiveStories, for example, offers the capacity to easily embed videos into data stories).

Embed Videos from YouTube and Vimeo

YouTube.com and vimeo.com are the most popular video hosting sites. Both allow you to search for videos and embed these directly into your story or webpage. To embed a video, simply find the share button and click embed. Copy the code and paste it into your website or story.

TIP

SUGGESTED VIDEOS

If you don't want your Youtube video to end with the screen of 'Suggested Videos' simply click 'Show More' under the 'Embed' and remove the tick mark from the box saying 'Show suggested videos when the video finishes' . You can turn off suggested videos on Vimeo.com if you have a paid account.

Start on a Strong Note

Try and use videos that captivate the audience in the first 15 seconds. Readers tend to have short attention spans when it comes to videos, and if it doesn't seem useful from the get-go, few will continue viewing the video.

Keep it Short and Sweet

Wistia.com analyzed more than 1 million videos and looked at when viewers would stop watching them. They found that videos that were longer than 3 minutes would on average lose almost 40% of their viewers. Try and select videos that are short, ideally less than 2.5 minutes in length. This is not only because the longer the video, the more people will drop off on the way, but also because fewer people will commit to watching the video in the first place.

7 | Colors Make Us Happy (or Sad)!

Add colors to your story to make it jump off the page. Here are some easy tips on how to make your story look even better.

Add a Sentiment Using Colors

When you are creating a story, try to think of the mood you would like to portray and who you are trying to impact. Colors can help you invoke certain emotions and associations. For example, the colors red, orange, and yellow are perceived as warm and welcoming, whereas blue tones are considered to be “cold” and less approachable. Color symbolism is highly dependent on the context and varies greatly between cultures. Below you can see some of the symbolisms that are associated with certain colors as well as the warm/cold color divide.



TIP

COLOR PALETTES

Color.adobe.com can help you create good-looking color palettes. Just upload a photo and the tool will suggest matching colors palettes for you.

8 | To Write or Not to Write

The writing is what makes everything come together. All your other story elements are only there to support and amplify your message and writing.

Use Engaging and Descriptive Titles - POW!

Create engaging titles that capture the content of a section. When the reader glances over your story, they should get the gist of it just by reading the section titles. This is another discipline that newspapers excel at and where you can get some inspiration. Below are three examples from the New York Times:

Sorry, Kids: Flu Shots Work Better Than Nose Spray

For Detroit's Children, More School Choice but Not Better Schools

Wildfires, Once Confined to a Season, Burn Earlier and Longer

Each of the three examples above describes what the article is addressing. Their choice of words, such as: "Sorry, Kids" and "Wildfires" also piques the reader's curiosity and makes the title more engaging.

Even though you might not be writing about wildfires in your reports, it is still possible to write engaging and descriptive titles. Take the example below that concerns a public transit budget. On the left-hand side you see a typical report or paragraph title - it's unengaging and non-descriptive except from giving the reader a general idea of the topic. On the right-hand side, you will see a title that is not only more descriptive, it is also more engaging as it pulls out interesting insights from the report while making the reader curious to learn more about the specific details, such as "How much funding is 14%?" and "Which neighborhoods are we talking about exactly?".

**2017 Public
Transit Budget**



**14% More Funding
for Public Transit in
Outer Neighborhoods**



Make Your Story Easy to Read

Be careful not to make your story unnecessarily difficult to read and understand. This is often exemplified by the use of jargon or abbreviations, which your audience might not be familiar with (this applies to both chart titles and contextual information).

Another way to make your story easy to read is by pulling out quotes or other key points and giving them more prominent visual treatment, just as we do with the blue text that you see in this book.

The Economist are experts at writing about complex topics in a manner that makes them easily comprehensible. They even created a style guide with rules for how to write easily comprehensible articles. Below you can see the introduction to The Economist's style guide:

The first requirement of The Economist is that it should be readily understandable. Clarity of writing usually follows clarity of thought. So think what you want to say, then say it as simply as possible. Keep in mind George Orwell's six elementary rules ("Politics and the English Language", 1946):

- 1. Never use a Metaphor, simile or other figure of speech which you are used to seeing in print.**
- 2. Never use a long word where a short one will do (see Short words).**
- 3. If it is possible to cut out a word, always cut it out (See Unnecessary words).**
- 4. Never use the Passive where you can use the active.**
- 5. Never use a foreign phrase, a scientific word or a Jargon word if you can think of an everyday English equivalent.**
- 6. Break any of these rules sooner than say anything outright barbarous.**

TIP

THE ECONOMIST STYLE GUIDE

You can find the entire style guide at www.economist.com/styleguide/introduction

Ask Someone to Proofread Your Story

Many mistakes can be avoided just by having one other person proofread your story. Chances are that they will find spelling mistakes and sentences that do not make any sense. So don't forget to ask a colleague or a friend, preferably one who's not as familiar with the subject matter as you or who has communication/writing expertise, for feedback on your story before you publish it.

9 | This is Not the End

As you just learned, a good story should have a call to action. In this case, we hope you will take a look at LiveStories.com and learn more about how government agencies, foundations, nonprofits, and advocacy groups from around the world use LiveStories to turn data into action.

LiveStories is a user-friendly data platform that helps you present data in engaging and effective ways. We built our platform with ease of use and collaboration in mind. This means that virtually anyone can use LiveStories to explore data, discover new insights, and communicate findings.

As a mission-driven company, we are proud to empower the most important sector in the world with a tool that can help create healthier, safer, and better communities. The power of data-driven storytelling has helped our partners bring important societal issues to the attention of decision-makers, funders, the media, and the public.

Learn how LiveStories can help you inspire change within your organization and community.

[Request a meeting today at www.LiveStories.com/meeting](http://www.LiveStories.com/meeting)



LiveStories



Download the digital version of this book at:
www.livestories.com/blog/data-storytelling

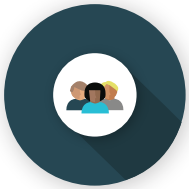
LiveStories is the Fastest, Easiest, and Most Effective Way to Communicate Data

LiveStories offers a user-friendly data platform that helps you make data easily accessible, promote collaboration, and communicate data effectively.



Open Up Your Data

LiveStories brings all your data into one place and makes it easy for data novices and experts alike to explore, share, and present data. This allows you to open your data up to whomever you want while maintaining full control of what is shared. Make your data easily accessible to your colleagues, partner organizations, or the world.



Get Everyone on the Same Page

Whether you are looking to collaborate within a small team, an entire organization, or even across organizations, LiveStories makes it a breeze. LiveStories was built with collaboration in mind and you will be amazed to see what happens when data analysts, communicators, designers, and decision-makers collaborate using LiveStories.



Engage Your Audiences and Compel Action

Our many publishing options help you communicate data more effectively to any audience. Quickly and easily create engaging and interactive content that can help inform decision-making and compel action. All of our content options are easy to create, share, and update.

To learn how LiveStories can help your organization go to:

www.LiveStories.com

Our Partners Include:

California Health Care Foundation	USC Children's Data Network	City of New Orleans
San Francisco Department of Public Health	California Center for Public Health Advocacy	UCLA
Louisiana Public Health Institute	San Bernardino County Superintendent of Schools	Health Link New York
San Carlos School District	San Diego County Health and Human Services Agency	Gramercy Research Group
Case Western Reserve University	Washington State Department of Enterprise Services	and many more...



The background features a dark green gradient with several out-of-focus, colorful bubbles in shades of blue, purple, and yellow. The bubbles are scattered across the frame, creating a dynamic and visually appealing effect.

Turn Data Into Action

Start presenting data in more engaging and effective ways

Learn more at [LiveStories.com](https://www.livestories.com)