



ADAMS COUNTY
COLORADO

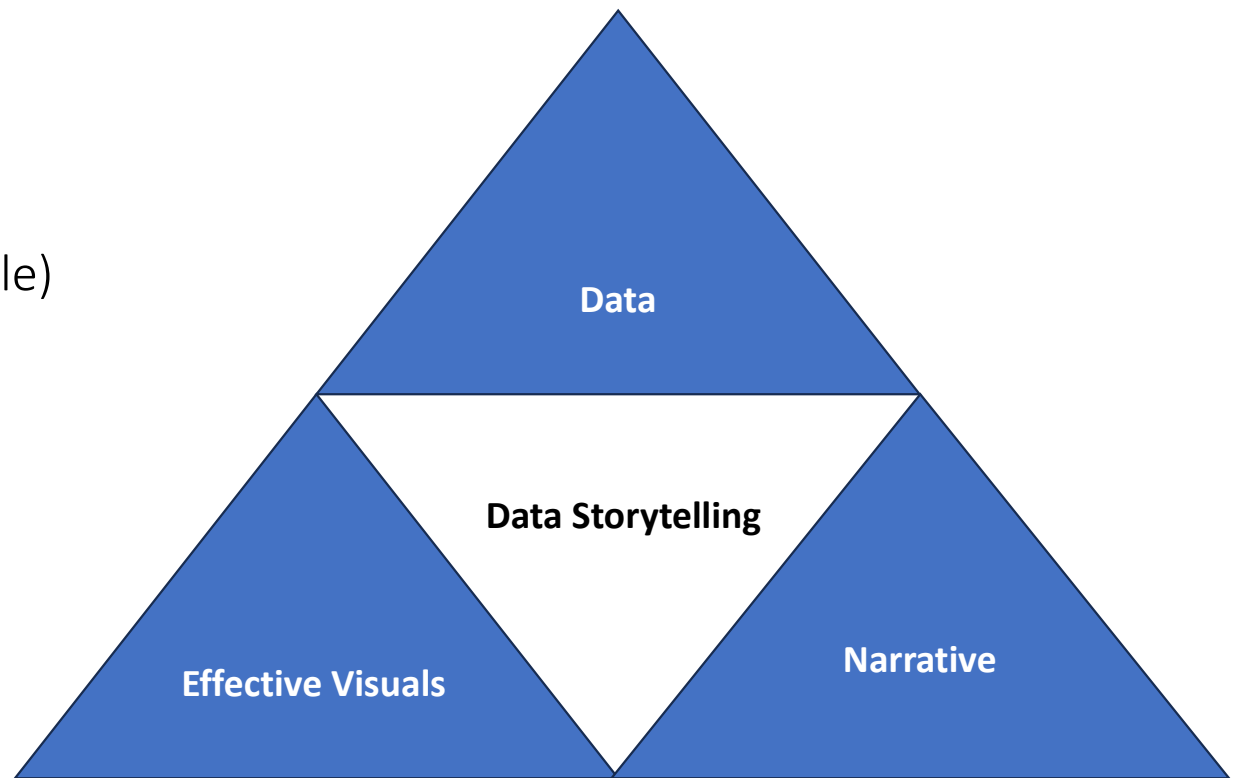
Data Visualization and Storytelling



ADAMS COUNTY
GOVERNMENT CENTER

What makes a good data story

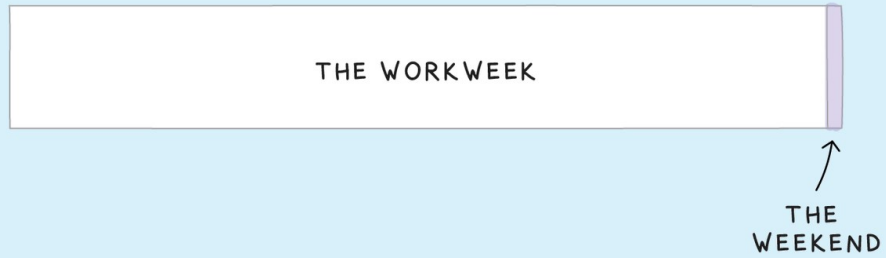
Good Data (relevance/credible)
Effective Visuals
Narrative



HOW IT IS

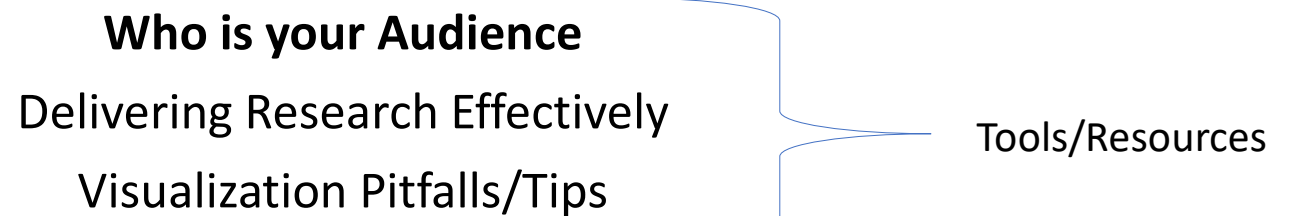


HOW IT FEELS



@LIZ AND MOLLIE

Data & Presentation



Who is Data Audience

Site Selectors
Media
Economic Developers
Workforce Board
Academic Researchers
Elected Officials
Teachers
Businesses
Lawyers
Students
Consultants
Graphic Designer
Marketing Department
Other Government Agencies



Different Perspectives

Consider:

Understand audience bias

Accuracy vs. Timeliness

Confidentiality

Customer service focus

Explain economic concepts without jargon

Data & story reinforce one another

Help support or disprove with relevant examples

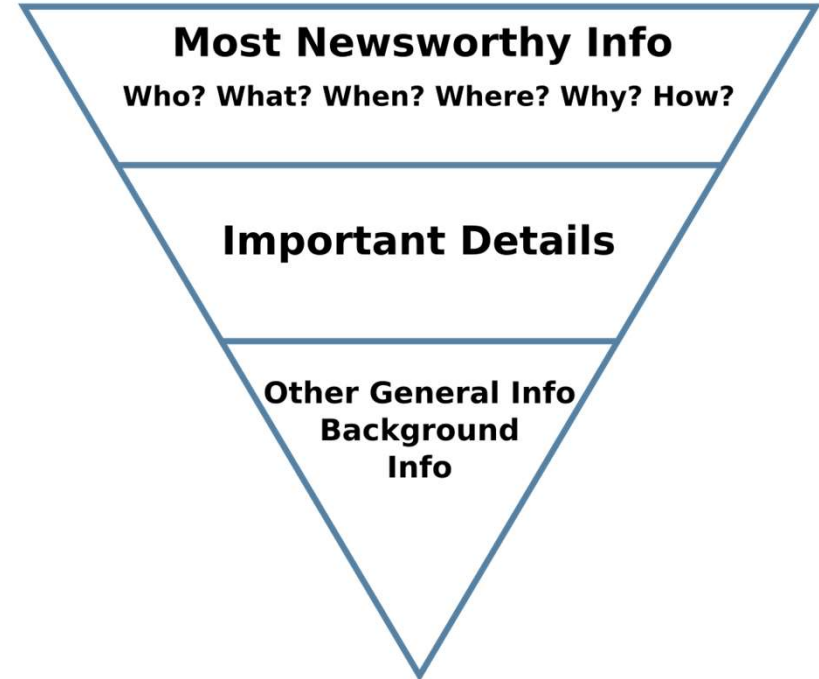
Trying to create visually appealing, well designed, audience focused
and credible research – Positive for everyone



Data Storytelling forms

The Inverted Pyramid

Summary news lead or bottom-line up front



Presenting Data and Information

Who is your Audience

Delivering Research Effectively

Visualization Pitfalls/Tips



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Research and Analysis Process

Develop an agreed upon set of facts (data) from which to make decisions or inform (persuade) i.e. tell story

1. Identify relevant data

Do you understand the question/context

Leading Data, Current, Lagging

Data often needs context – Comparison with state

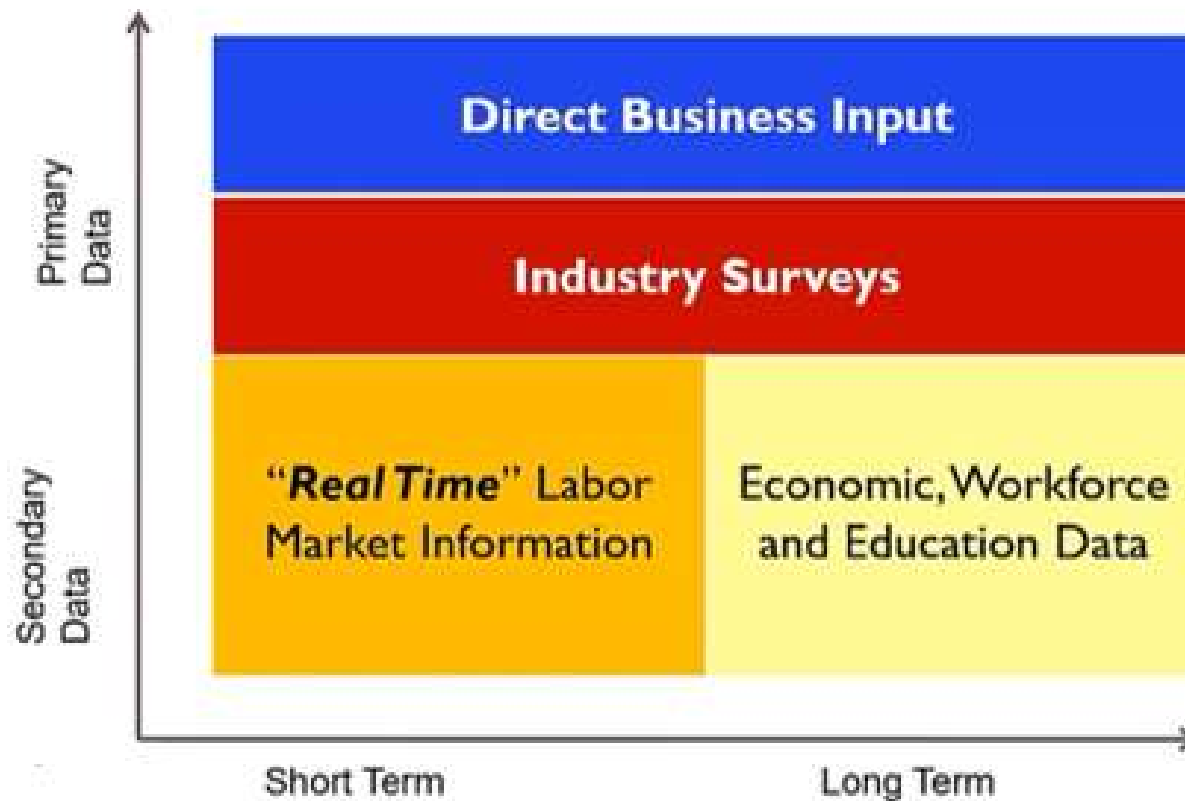
2. Interpreting and validating data

Can you get data for appropriate geography or time period or group

3. Explaining Data

Do you see patterns or key points?

Multiple Data Sources



Lack of Data Standardization and Consistency

- Utilize a consistent data source whenever feasible to develop time-series analyses.
- Provide training to personnel on statistical methodologies.
- Refrain from employing non-standard or unfamiliar data sources for frequently requested data points.
- Enable comparisons with similar jurisdictions through standardized metrics and sources.
- Offer detailed information on sources, methodologies, definitions, and metrics utilized.
- When encountering disparities among multiple sources, present the range of data.



Geographic Mismatch

- Supplement federal and state data with locally collected data
- Fill in missing data by interpolating from comparable geographic units.
- Cross-check data whenever feasible.

Datedness

- Subscribe to receive notifications of data releases from prominent federal and state statistical agencies.
- Establish a schedule for routine data collection and updates.
- Inform users that a referenced source is the most current available, even if the source itself is dated.



Explaining Research

Lots of time on analysis but people only see final product

Need to explain (Tell a Story)

Why is it relevant or important

What does it say
What does it not say



Resource (Analysis)

StatsAmerica <http://www.statsamerica.org/> provides actionable data for economic developers to use in site requests, development metrics, grant writing and strategic planning.

DataUSA <https://datausa.io/> Explore, map, compare, and download U.S. data

Census Reporter <https://censusreporter.org/> provides useful facts about every place in America

Headwaters Economics <https://headwaterseconomics.org/> Customize and download socioeconomic reports for U.S. communities, counties, and states

Colorado Labor Market Information Gateway
<https://www.colmigateway.com/vosnet/lmi/default.aspx?plang=E>

Colorado Demographer <https://demography.dola.colorado.gov/>

Colorado information marketplace <https://data.colorado.gov/>

St Louis FED – FRED <https://fred.stlouisfed.org/> Download, graph, and track 824,000 US and international time series from 114 sources.

IPUMS (Integrated Public Use Microdata Series) IPUMS USA collects, preserves and harmonizes U.S. census microdata and provides easy access to this data with enhanced documentation.

<https://usa.ipums.org/usa/>

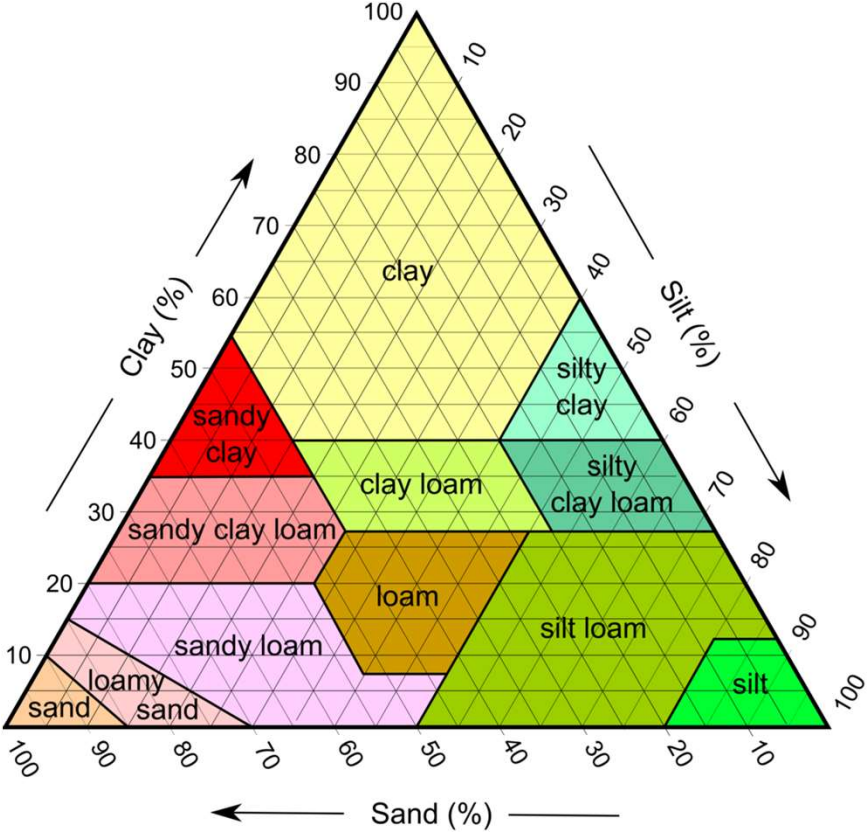
Presenting Data and Information

Who is your Audience
Delivering Research Effectively
Visualization Pitfalls/Tips



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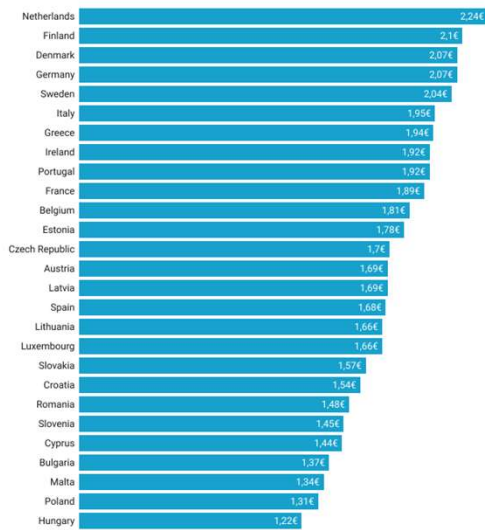
Choosing charts: the audience



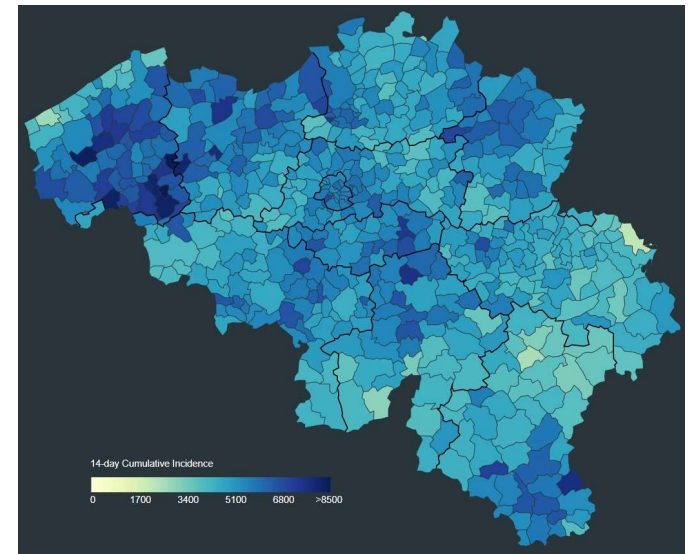
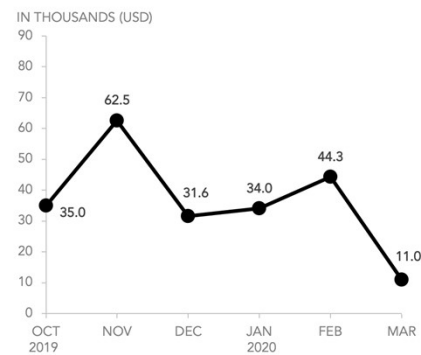
Source: usda/usda-soil-maps

Choosing charts: data types

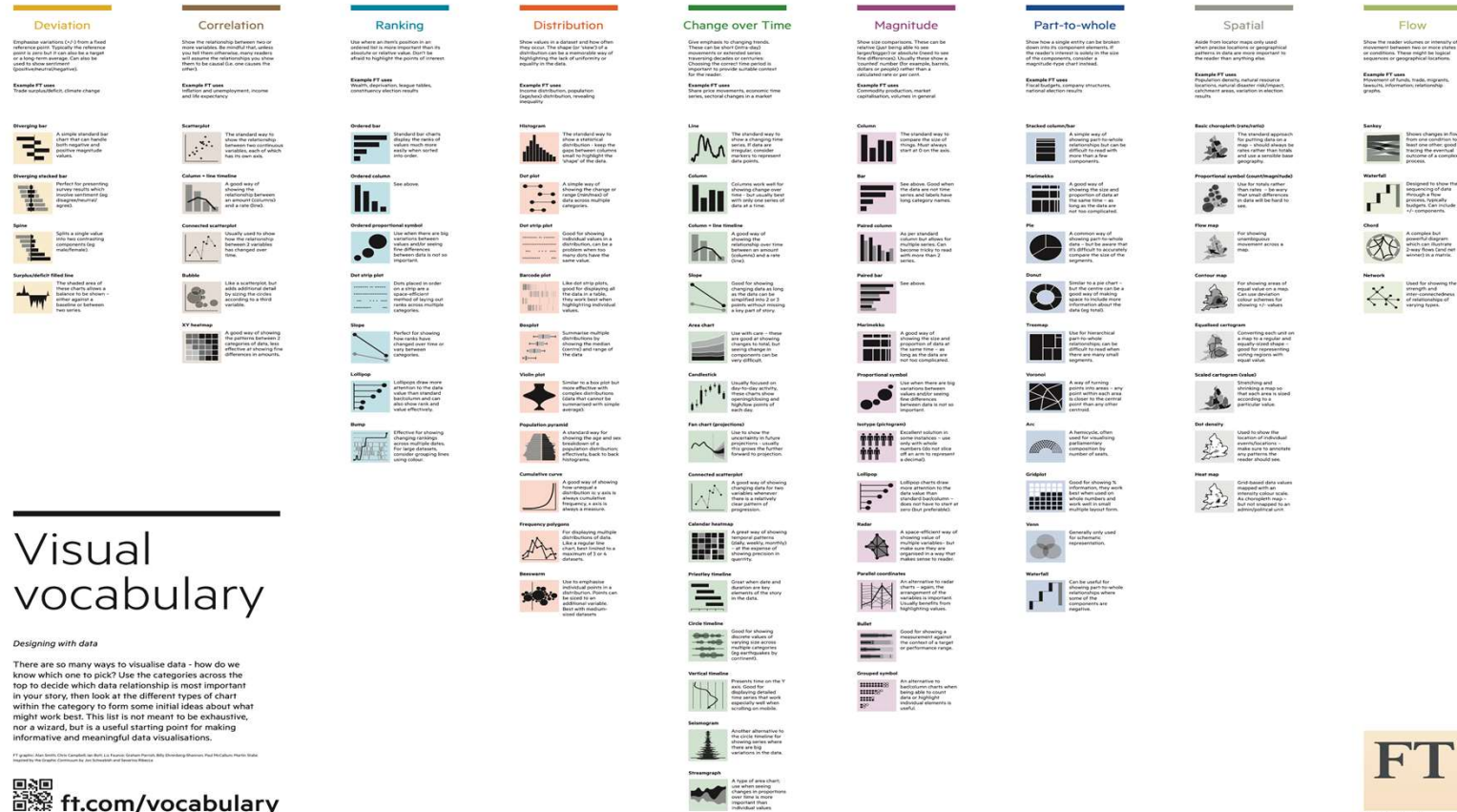
Data Types: Categorical, Numerical, relational, times-series, map



6-Month sales report and forecast



Resource (Charts)



Deviation
Emphasize variables (1-2) from a fixed reference point. Typically the reference point is a peak or a trough, after the signal has been filtered. The reference point is then used to show deviation (positive/negative).

Example FT uses
Trade surpluses/deficit; climate change

Grouped bar
A simple standard bar chart that can handle both quantitative and qualitative variables.

Diverging stacked bar
Perfect for presenting binary results, which don't necessarily fit along percentage (ie. 50%/50%) splits.

Spine
Splits a single value into two contrasting categories.

Subtractor Head bar
The shaded area of the chart is used as a baseline to show a difference in values between two series.

Correlation
Shows the relationship between two or more variables. The ideal for scatter plots is to show a relationship between two variables, such as the relationship between the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Example FT uses
Consumer and environmental; income and life expectancy

Scatterplot
The standard way to show the relationship between two variables. Scatterplots can show both quantitative and qualitative variables, such as the relationship between the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Column + line timeline
A good way of showing the relationship between an amount (columns) and a time (line).

Connected scatterplot
Usually used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Bubble
Like a scatterplot, but with additional detail by using the colour and size of the bubbles to represent a third variable.

XY heatmap
A good way of showing the difference between 2 categories of data. Heatmaps can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Slope
Perfect for showing how variables change over time. The slope of a line can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Lollipop
Lollipop charts are perfect for showing the difference between two variables. The length of the lollipop can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Bar
Effective for showing the difference between two variables. The height of the bar can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Ranking
Used when an item's position in an ordered list is more important than its absolute value. The position of the item in the list is more important than the value of the item.

Example FT uses
Health; education; budget; politics; connectivity; education; health

Ordered bar
Standard bar charts which display the parts of a whole. The parts of the whole are ordered by importance.

Ordered column
See above.

Ordered proportional symbol
Used when there are big differences between two variables. The size of the symbol is proportional to the value of the variable.

Dot map
Data plotted in order of importance on a grid. The size of the dot is proportional to the value of the variable.

Slope
Perfect for showing how variables change over time. The slope of a line can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Population pyramid
A standard way for showing the distribution of a population. The width of the bars represents the number of people in each age group.

Compositional cone
A good way of showing the distribution of a population. The width of the bars represents the number of people in each age group.

Frequency polygons
The frequency polygon is a good way of showing the distribution of a population. The width of the bars represents the number of people in each age group.

Brewster
Used to emphasize the difference between two variables. The height of the bar can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Distribution
Shows values in a dataset and how often they occur. The shape of the distribution can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Example FT uses
Source distribution; population; Department distribution; housing; economy

Histogram
The standard way to show a statistical distribution. The shape of the histogram can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Dot plot
A simple way of showing the distribution of a population. The width of the bars represents the number of people in each age group.

Dot map
Data plotted in order of importance on a grid. The size of the dot is proportional to the value of the variable.

Barcode plot
Like a bar chart, but with additional detail by using the colour and size of the bars to represent a third variable.

Barplot
Used to show the difference between two variables. The height of the bar can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Value plot
Perfect for showing how variables change over time. The slope of a line can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Population pyramid
A standard way for showing the distribution of a population. The width of the bars represents the number of people in each age group.

Compositional cone
A good way of showing the distribution of a population. The width of the bars represents the number of people in each age group.

Calendar heatmap
A good way of showing the difference between two variables. The height of the bar can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Priority timeline
Used to show the difference between two variables. The height of the bar can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Circle bubble
Used for showing the difference between two variables. The height of the bar can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Vertical timeline
Perfect for showing how variables change over time. The slope of a line can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Sankeygram
Another alternative for the circle timeline for showing data where there are many variables in the data.

Dotmap
A type of pie chart where each slice is represented by a dot. The size of the dot is proportional to the value of the variable.

Change over time
Good emphasis on changing trends. There can be short (dramatic) fluctuations for a few weeks or months, but the overall trend is more important.

Example FT uses
Consumer price index; market; contribution; volume; in general

Line
The standard way to show a changing trend. The line can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Column
Columns are used for showing the relationship between two variables. The height of the bar can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Column + line timeline
A good way of showing the relationship between an amount (columns) and a time (line).

Slope
Perfect for showing how variables change over time. The slope of a line can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Area chart
Used with one - these are good for showing the relationship between two variables. The area of the chart can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Candlestick
Usually based on binary data, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Fun chart (funnel)
Used to show the difference between two variables. The height of the bar can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Connected scatterplot
Usually based on binary data, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Calendar heatmap
A good way of showing the difference between two variables. The height of the bar can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Priority timeline
Used to show the difference between two variables. The height of the bar can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Circle bubble
Used for showing the difference between two variables. The height of the bar can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Vertical timeline
Perfect for showing how variables change over time. The slope of a line can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Sankeygram
Another alternative for the circle timeline for showing data where there are many variables in the data.

Dotmap
A type of pie chart where each slice is represented by a dot. The size of the dot is proportional to the value of the variable.

Magnitude
Shows comparisons. These can be relative (but being able to use the size of the bars to represent the magnitude of the variable) or absolute (the bars are all the same size, but the magnitude of the variable is represented by the length of the bars).

Example FT uses
Country price index; market; contribution; volume; in general

Column
The standard way to show the size of a variable. The height of the bar can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Bar
The absolute value of the data is shown on the left-hand side of the chart. The bars are used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Paired column
As per standard, but with two bars for each category. The height of the bars can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Paired bar
See above.

Heatmap
A good way of showing the size and colour of the data. The height of the bar can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Proportional symbol
Used when there are big differences between two variables. The size of the symbol is proportional to the value of the variable.

Isotype (stick figures)
Excellent solution for showing the relationship between two variables. The height of the bar can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Lollipop
Lollipop charts are perfect for showing the difference between two variables. The length of the lollipop can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Radar
A good way of showing the relationship between two variables. The height of the bar can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Parallel coordinates
Used to show the relationship between two variables. The height of the bar can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Barler
Used for showing the difference between two variables. The height of the bar can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Grouped symbol
An alternative to a standard bar chart where each bar is represented by a symbol. The size of the symbol is proportional to the value of the variable.

Part-to-whole
Shows how a single entity can be broken down into its constituent parts. It is often used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Example FT uses
Country; regional; industry; structure; national; election; results

Stacked column/bar
A common way of showing part-to-whole data. The height of the bar can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Heatmap
A good way of showing the size and colour of the data. The height of the bar can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Pie
A common way of showing part-to-whole data. The size of the slice can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Donut
A good way of showing part-to-whole data. The size of the slice can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Funnel
Used to show the difference between two variables. The height of the bar can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Timeline
Used to show the difference between two variables. The height of the bar can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Variant
A good way of showing the size and colour of the data. The height of the bar can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Ann
A heatmap, often used for showing the relationship between two variables. The height of the bar can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Gridmap
Used for showing the relationship between two variables. The height of the bar can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

View
Used to show the difference between two variables. The height of the bar can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Waterfall
Can be useful for showing the relationship between two variables. The height of the bar can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Spatial
Shows the relationship between two variables. The height of the bar can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Example FT uses
Proportion; density; volume; population; country; regional; industry; structure; national; election; results

Basic choropleth (contour)
The standard approach for showing data on a map. The height of the bar can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Proportional symbol (contour)
Used to show the difference between two variables. The height of the bar can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Flow map
Used to show the relationship between two variables. The height of the bar can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Cartoon map
Used for showing the relationship between two variables. The height of the bar can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Equalized cartogram
Used to show the relationship between two variables. The height of the bar can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Scaled cartogram (Globe)
Used to show the relationship between two variables. The height of the bar can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Dot density
Used to show the relationship between two variables. The height of the bar can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Heat map
Used to show the relationship between two variables. The height of the bar can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Flow
Shows changes in flow over time. The height of the bar can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Example FT uses
Migration of funds; trade; migration; business; information; relationships; graphs

Sankey
Shows changes in flow over time. The height of the bar can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Waterfall
Used to show the relationship between two variables. The height of the bar can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Chart
A simple bar chart with multiple bars. The height of the bars can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Network
Used for showing the relationship between two variables. The height of the bar can be used to show the relationship between two variables, such as the amount of time spent on the internet and the number of hours spent on the phone (i.e. one causes the other).

Visual vocabulary

Designing with data
There are so many ways to visualise data - how do we know which one to pick? Use the categories across the top to decide which data relationship is most important in your story, then look at the different types of chart within the category to form some initial ideas about what might work best. This list is not meant to be exhaustive, nor a wizard, but is a useful starting point for making informative and meaningful data visualisations.

ft.com/vocabulary

Source: <https://www.ft.com/content/c7bb24c9-964d-479f-ba24-03a2b2df6e85>





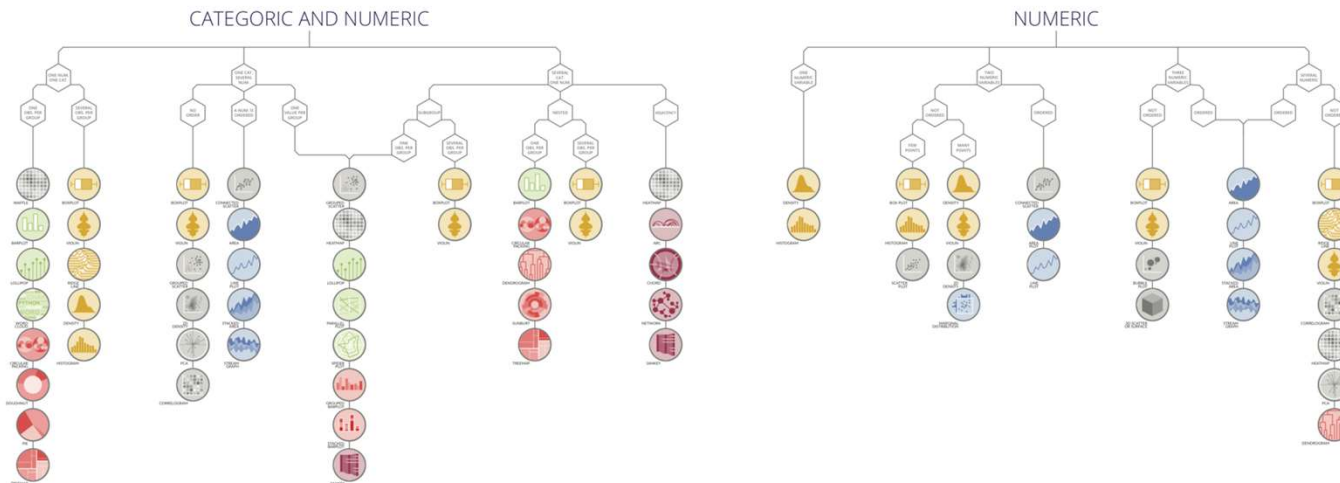
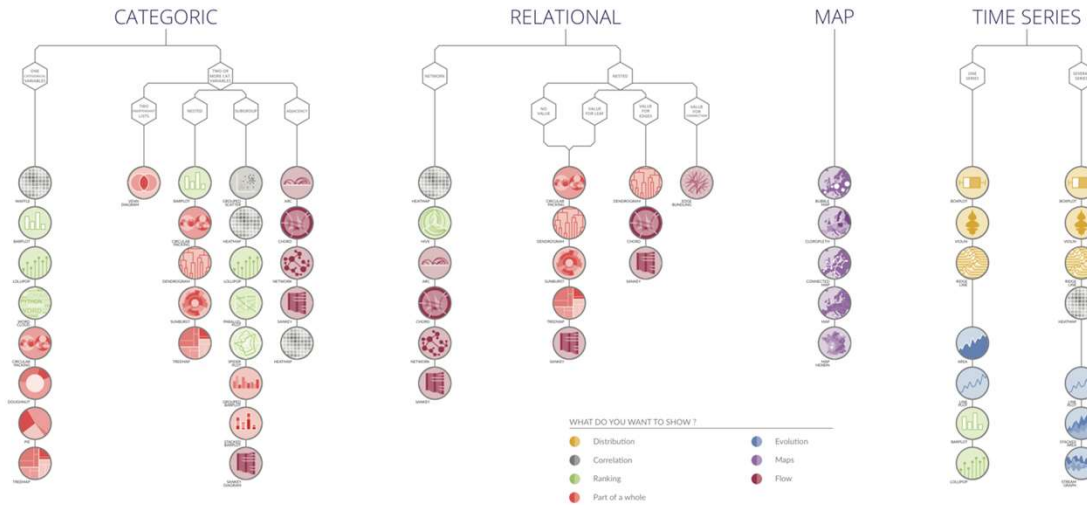
from Data to Viz

'From Data to Viz' is a classification of chart types based on input data format. It will help you find the perfect chart in three simple steps.

- 1 Identify what type of data you have.
- 2 Go to the corresponding decision tree and follow it down to a set of possible charts.
- 3 Choose the chart from the set that will suit your data and your needs best.

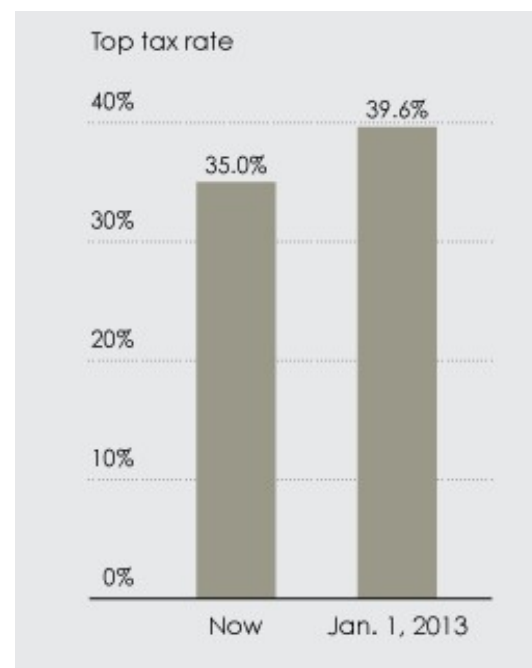
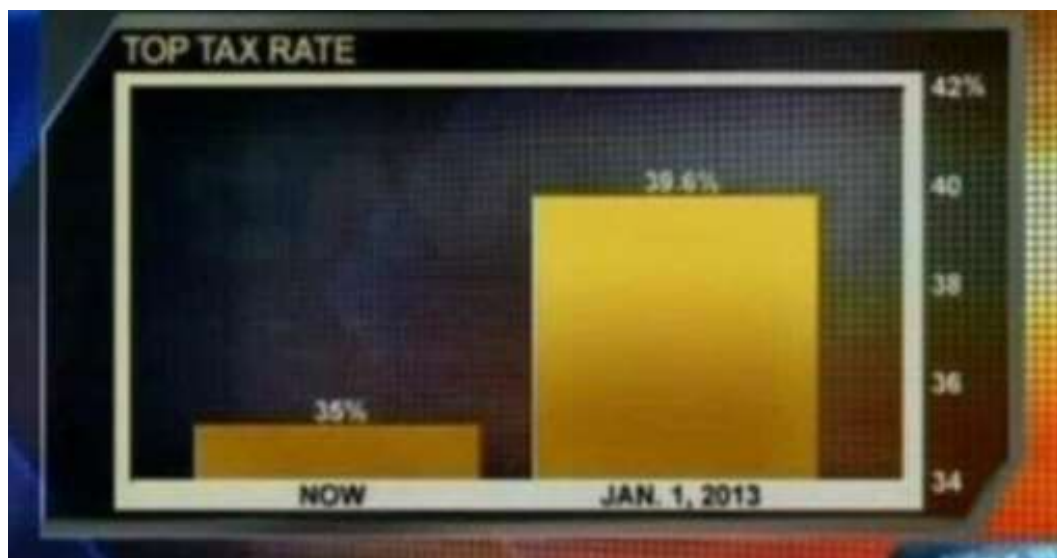
DataViz is a world with endless possibilities and this project does not claim to be exhaustive. However it should provide you with a good starting point. For an interactive version and much more, visit:

data-to-viz.com



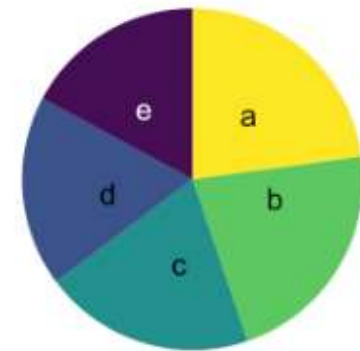
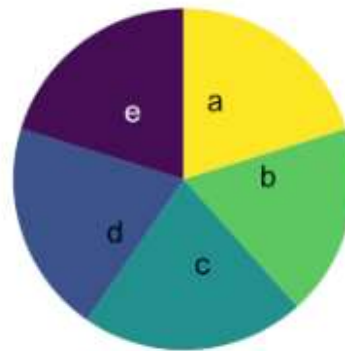
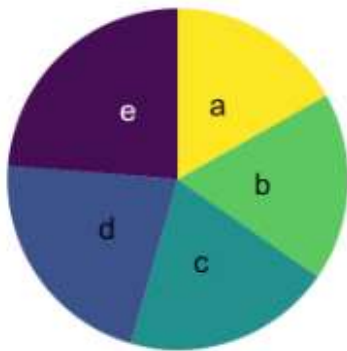
Example Pitfall Scaling

Y-axis used on line/bar charts should always start at zero

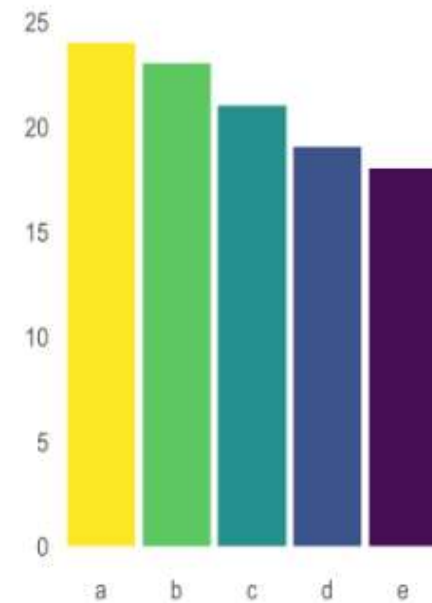
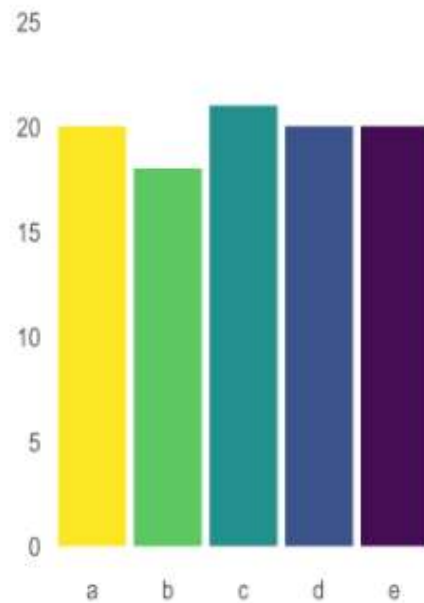
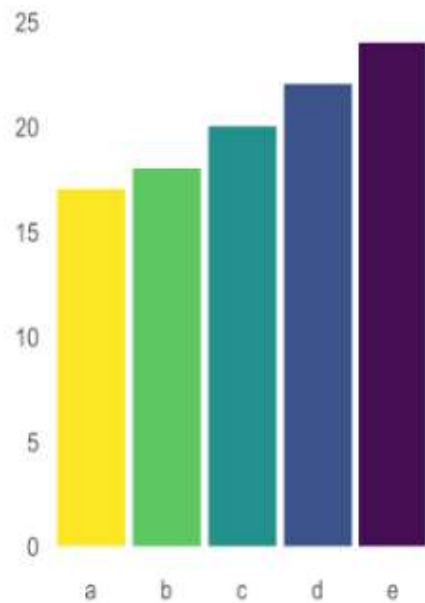


Example Pitfall Pie Charts

Pie charts must be avoided



Example Pitfall Pie Charts



Example Pitfall Statistics

Small sample size effect

This effect is seen in many fields: cities or regions with small populations tend to show more extreme (very high and very low) numbers. Rare events can swing numbers significantly up or down because of the small population.

Percentages versus percentage points

To avoid any misunderstanding about the size of an effect or of a change in values, make sure to call the result of a simple subtraction of percentages a difference in percentage points.

Ecological fallacy

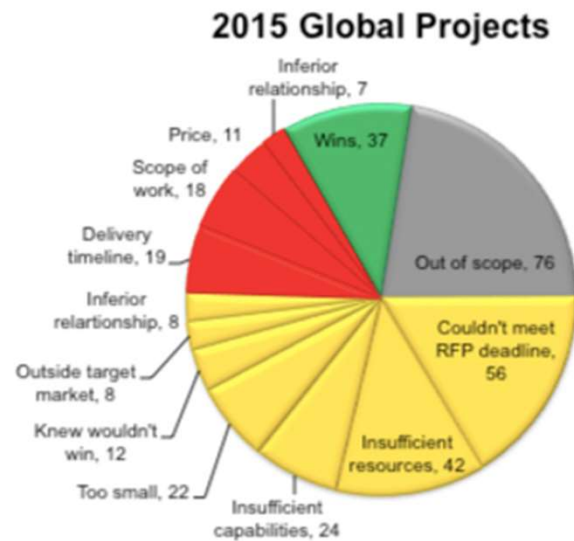
There is a negative relationship between a state's degree of education and its poverty rate. The ecological fallacy occurred when some people assumed that rising education levels would inevitably lower poverty rates. In truth, the statistics simply revealed that states with greater levels of education had lower poverty rates as a group than states with lower levels of education. This study did not investigate the individual-level association between education and poverty, nor did it evaluate other potential factors that may be contributing to poverty rates.



Example Bring it all together

BEFORE: SHOWING DATA

Global Competitive Summary



Global Competitive Summary (1/1/2015-12/31/2015)	
	Global
Total Projects	340
In Scope	264
Proposals	92
Wins	37

Example Bring it all together

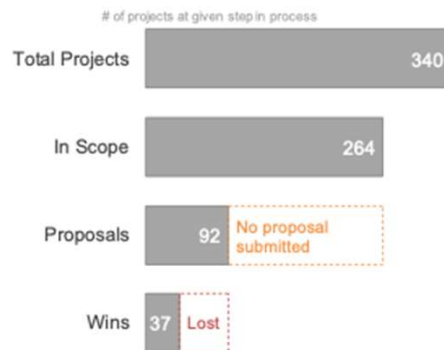
AFTER: STORYTELLING WITH DATA

Opportunity: resolve timing, resource issues

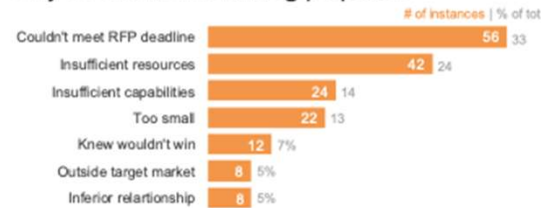
Timing & resource issues are top reasons we aren't submitting/winning proposals.

Global project summary

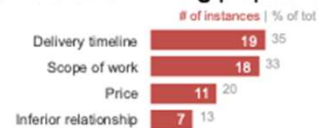
January - December 2015



Why we aren't submitting proposals



Why we aren't winning proposals



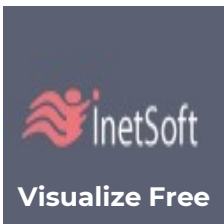
storytellingwithdata
All rights reserved.

Resource (Data Viz Tools)



Tableau offers robust tools for data storytellers, and this version is free, just note that everything you create is publicly visible. “Easily create stunning interactive graphs, maps, and live dashboards in minutes on our free platform. No coding required. Connect to data in a variety of formats like Excel, CSV, and Google Sheets.” Explore and share with a global community of creators.

<https://public.tableau.com/s/>



Visualize Free is a free cloud-hosted, zero-client app for data visualization and analytics. Simply upload your spreadsheet data and drag-and-drop to create visualization dashboards with built-in interactivity.

<https://www.visualizefree.com/>



Create charts, maps and tables with Datawrapper, no coding required. Datawrapper focuses on mobile-responsiveness and ease of use to get more people visualizing.

<https://www.datawrapper.de/>

Practical Tips

- Know Your Audience: Tailor visualizations to the preferences and expertise of your audience
- Choose the Right Tool/chart: Select visualization tools based on the complexity of the data and desired outcomes
- Tell a Story: Craft narratives around the data to engage and captivate your audience
- Rip-off and Duplicate, Borrow and Educate, Learn and Create: Continuously refine visualizations based on feedback and evolving data insights**
- Embrace Creativity: Experiment with innovative visualization techniques to convey data-driven stories in unique ways





ADAMS COUNTY
COLORADO

Telling Your Story



ADAMS COUNTY
GOVERNMENT CENTER

Benefits of Telling Your Story

- Report measurable outcomes
- Show return on investment
- Highlight key projects
- Educate your audience on “what is economic development?”
- Build support for future projects and initiatives



Getting Started

- Who is your audience?
- What information are you trying to convey?
- What do you want to tell them vs. what do they want to hear?
- Format?
- Frequency?



Impact Report Example

Who is your audience?

- Internal audience/stakeholders/commissioners

What information are you trying to convey?

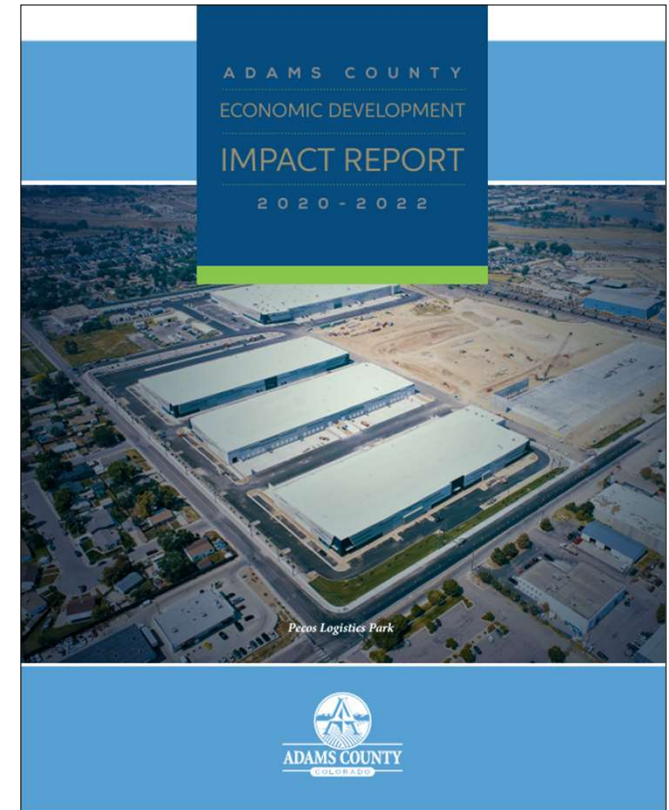
- Projects, impacts, results of last several years

Format?

- Digital pdf and printed booklet

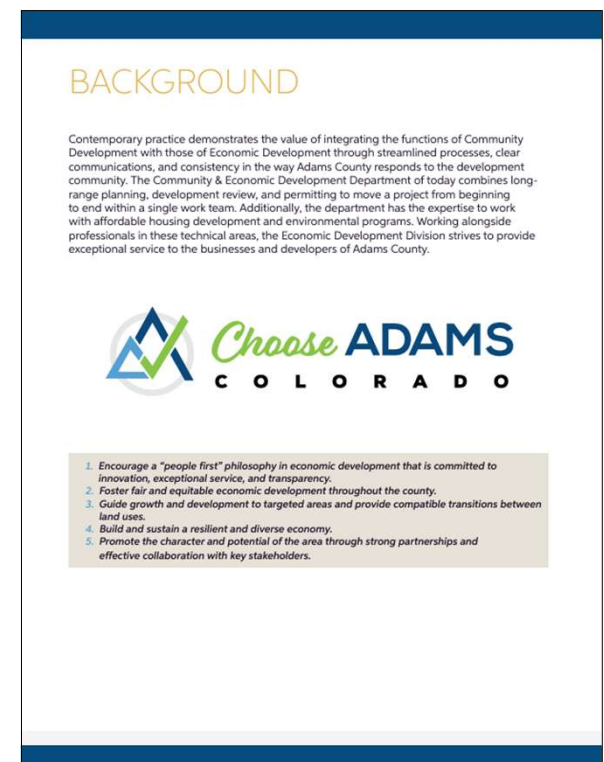
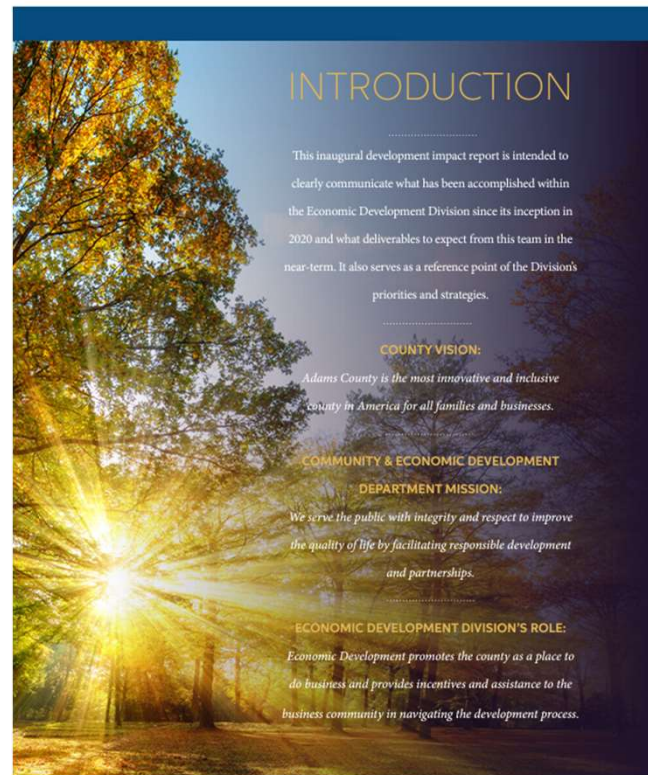
Frequency?

- Annual impact report



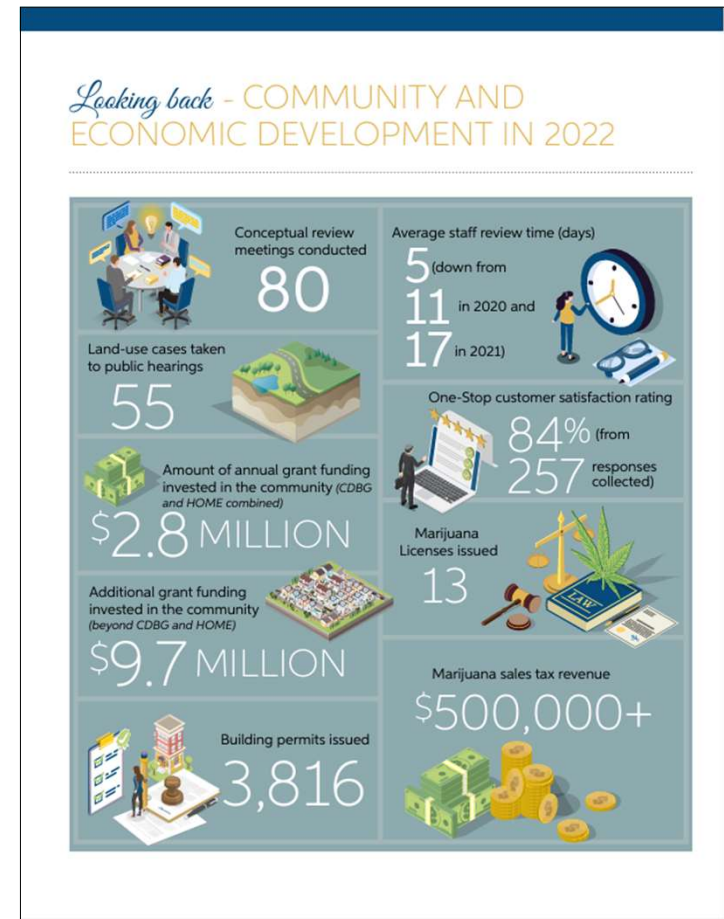
Setting the Tone

- Letter from Director?
- Vision/Mission
- Organizational goals
- Imagery
 - Photos
 - Icons
 - Charts



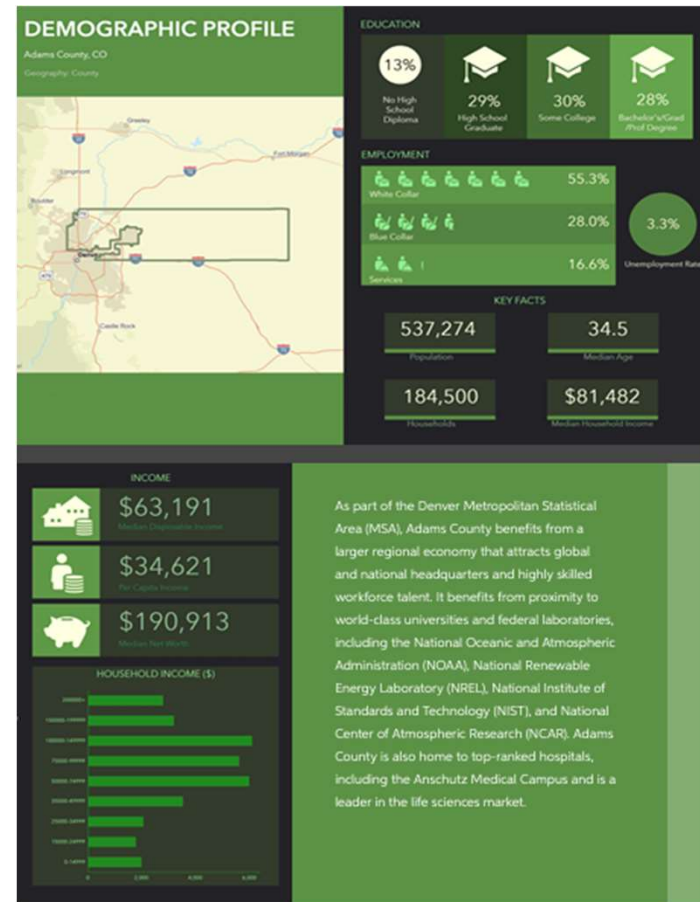
Information to Include

- Major accomplishments
- Incentives executed
- Development projects
- Success stories
- Key data and stats
- What is coming next
- Contact information



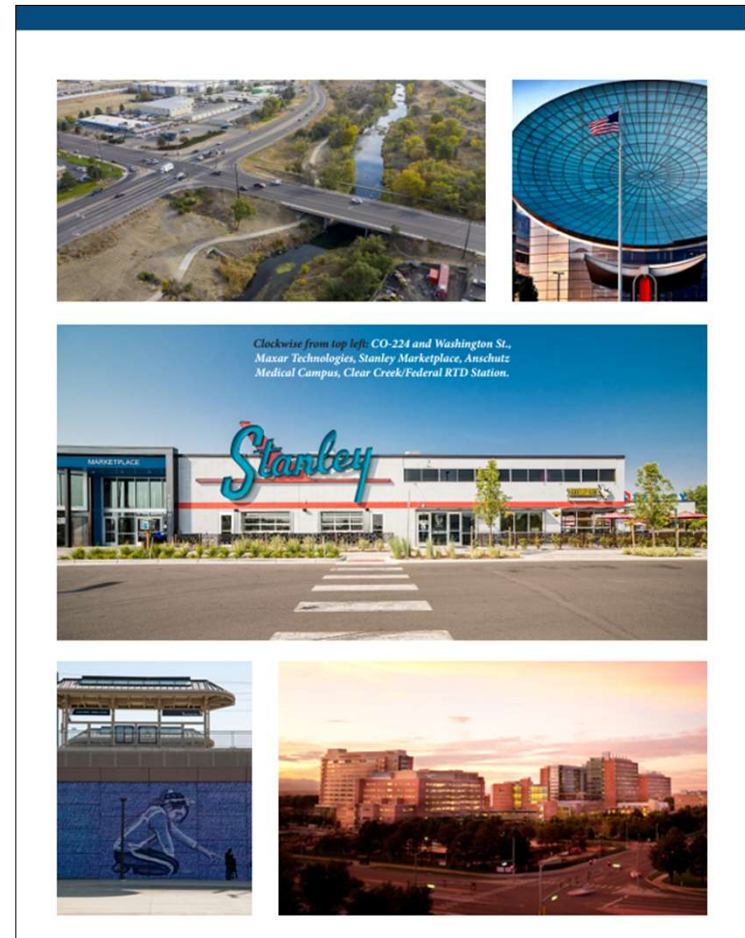
Tips and Tricks

- Get “inspired” by other reports
 - Even if not ED reports
- Use tools that tell the story for you >>
- Collect your information throughout the year
 - Weekly/monthly/quarterly reports
 - Social media
 - Newsletters/media releases
- Stretch the story – Prost example



More Tips and Tricks

- Use free platforms to help with design
 - Canva (design)
 - Piktochart (infographics)
 - Blendicons (icons)
- Have your partners/businesses submit photos
- Repurpose your content
 - Social media
 - Speeches
 - Outreach



Profile Example

Who is your audience?

- External audience/site selectors

What information are you trying to convey?

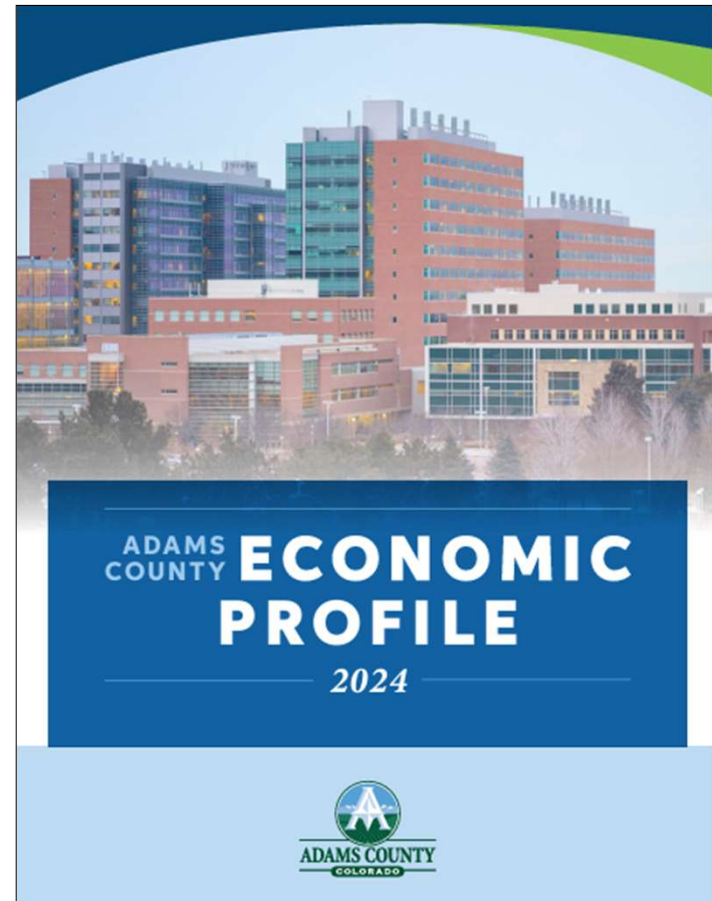
- Data, demographics, differentiators

Format?

- Digital pdf and printed booklet

Frequency?

- Annual profile

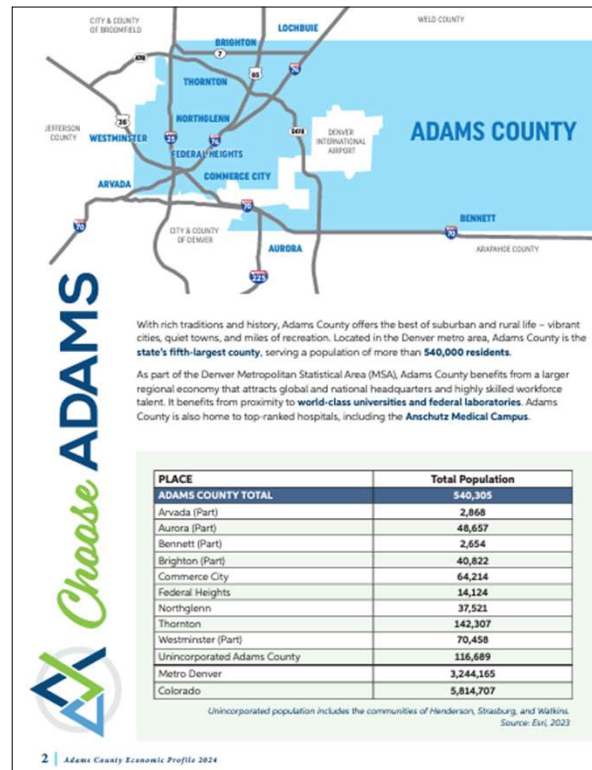


ADAMS COUNTY
COLORADO

Profile Example

Consider your audience

- External audience/site selectors
- Maps
- Comparative data
- Calling out differentiators



STRATEGIC LOCATION
Adams County is a nexus in the region's transportation network, with I-25, I-70, I-76, I-270, and E-470, along with other state highways and regional arterials, all intersecting in the county. Adams County surrounds **Denver International Airport (DEN)**, the **third busiest airport in the world in 2023**. Adams County also features **Class I and Class III rail lines**, making it a regional and national destination for trade, transportation, and employment.

YOUNG AND AFFORDABLE
In addition to its convenient location, Adams County is the **most affordable county in the Denver metro area**. The relatively lower cost of housing is attracting a younger population, creating a vibrant community and steadily growing workforce. Additionally, Adams County has nine school districts, all of which include **career and technical education (CTE)** and STEM-related programs.

BUSINESS-FRIENDLY ENVIRONMENT
Companies in Adams County enjoy a pro-business environment with designated areas established to encourage investment and development, including **enterprise zones, opportunity zones, and foreign trade zones**. We offer in-house project support, **streamlined permitting, and an expedient review process**. We can layer county tax incentives on top of state or local incentives where applicable and share a strong commitment to regional partnership.

DIVERSE AND GROWING COMMUNITY
Adams County is one of the fastest-growing counties in Colorado. With an **annual growth rate of 3.8%**, the county is projected to grow into the **third-largest county in the Denver Council of Regional Governments (DRCOG) with a population of 722,807 by 2040**. Adams County's vision is to be the most innovative and inclusive county in America for all families and businesses.

ADAMS ADVANTAGES

Adams County Economic Profile 2024 | 3



Resources (cont.)

🏠 Data Visualisation Guide

Home

- DESIGN PRINCIPLES
- DATA STORYTELLING
- PITFALLS
- DATAVIZ IN PRACTICE
- CHART TYPES
- ACCESSIBILITY
- GRAMMAR OF GRAPHICS

Data Visualisation

A Comprehensive Guide to Unlocking Your Data's Potential

This guide leads you through 7 important topics linked to data visualisation and is ordered in growing complexity. It starts with five topics for beginner and advanced users, followed by two topics for experienced users.

There are 3 ways to explore it: use the thematic links below, search for your topic of interest, or navigate by following the sequence of pages.



Suggested topics

Explore the topics and subtopics of the guide through the table of content, or get started with some suggested topics.

- Colour
- Typography
- Storytelling
- Text annotations
- Pitfalls in statistics
- Pitfalls in dataviz: chart types
- Data visualisation tools
- Data file formats
- A deep dive into line charts
- Visualising distributions
- Introduction to accessibility
- HTML 101
- Grammar of Graphics: introduction
- Grammar of Graphics in practice



Search

Find the data visualisation topic you are looking for by using the search bar below.

Try for example "Line charts", "Fonts", "Tools", "Colours", "Annotations" or any other term related to data visualisation.

Dashboards

Attribute	Snapshot	Monitoring
Data	Static (point in time such as census count)	Fluctuating (updates intermittently or regularly)
Viewing Frequency	Once	Often
Purpose	Information Explanation Persuasion Analysis	Information Status Performance Progress Analysis
Style	Colors can be used to support branding or storytelling. This type of dashboard can be embedded to add context	A muted color scheme that reserves bold colors for highlighting data of interest or concern on both maps and charts works best

Books

Darrell Huff - How to Lie with Statistics

Edward Tufte – The Visual Display of Quantitative Information

Podcast

<https://dataviztoday.com/>

EDCC Knowledge Vault



What did we not cover

Maps
Inclusive Design
Accessibility
AI

