

A quick guide for better data visualizations

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# Good enough to great

In today's world, successful decision-making has everything to do with turning data insights into action. And because the goal of data visualization is impact, not numbers, here are five ways to take your visualizations from good to great.

# Charts

Don't get boxed in with chart wizards or just-add-data pre-fab visuals. For great data visualizations, one size does not fit all. Ask yourself: what different kind of visualizations will tell the most truthful story, and best answer the questions at hand?

**Charts** · Color · Size · Text · Dashboard layout · Conclusion

# Comparing categories

Bar charts are best utilized when you have a single measure, and want to compare categories.





# Checking progress

Bullet charts, reference lines, bands, and distributions focus attention on targets.



# Distribution

Histograms and box plots show where your data is clustered, and can compare categories.





# Regional analysis

Visualize data on geographical maps to answer locational specific questions, or aid geographical exploration, not just because it looks nice.





# Custom shapes

Use subject matter shapes to tell a more compelling story.



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# Make it great with custom shapes

GOOD

This visualization shows the number of records for different endangered species listed in Africa, but the animals themselves are lost in the story.



# Make it great with custom shapes

GREAT

By adding custom shapes to the same data, this visualization suddenly brings the endangered species to life.



## See this dashboard in action on Tableau Public.

# Color

Color is one of the most powerful aesthetic features because it's an attention-grabber. It's the first thing we notice, and it can immediately highlight specific insights or identify outliers. The data, not personal favorites or brand colors, should drive the use of color to make a point.



### $Charts \cdot Color \cdot Size \cdot Text \cdot Dashboard layout \cdot Conclusion$

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# Differentiation

Don't use similar colors, or too many colors. Don't re-use colors for different dimensions or measures on the same dashboard.





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# Measurable

Does the color scale match my data? Does the color move from light to dark, or is it stepped to best represent what you're measuring?



# Relatable

## Semantically-resonant colors help people process information faster. So use yellow to depict bananas, red to represent heat.





# Make it great with color

GOOD

This dashboard contains data from 100 observations of global surface temperatures (°C) around the world from 1961– 1990. While these visualizations are accurate, the color red represents cooler temperatures, and doesn't resonate with the information the data is trying to portray.



# Make it great with color

Swapping in semanticallyresonant colors to the same dashboard really heats things up. With a little extra thought into color choices and pallets, the data points now tell the story they were meant to tell—and faster.

GREAT



## See this dashboard in action on Tableau Public.

# Size

The bigger the object, the bolder it looks. Bold shapes and colors might work well with bar charts and area charts, but they may also look gaudy and garish when used in a different chart, like a treemap. Use size to draw emphasis to your key message, not obscure it.

### Charts $\cdot$ Color $\cdot$ Size $\cdot$ Text $\cdot$ Dashboard layout $\cdot$ Conclusion

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# Line and bar charts

If the difference between data points is very minimal or very great, size may not always be a good encoding tool, as the visuals may become hard to read.





# Map charts

Mark size should be based on the range of values on the map.



# Make it great with size

GOOD

This visualization shows San Francisco Airbnb listing data on a map. Because all of the listings are the same size and color, even with filters, it's hard to differentiate the value between the listings at a glance.



# Make it great with size

By pairing color and size with appropriate data measures, this AirBnB visualization just became easier to navigate, and a lot more valuable. Now people can quickly see neighborhood and square footage differentiation, allowing them to make better decisions with their money.

GREAT



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## See this dashboard in action on Tableau Public.

## Text

## Readability is essential.

Make the most important information stand out.



## $\texttt{Charts} \cdot \texttt{Color} \cdot \texttt{Size} \cdot \textbf{Text} \cdot \texttt{Dashboard} \ \texttt{layout} \cdot \texttt{Conclusion}$

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# Titles

Keep them short, but powerful. Convey the point, message or story in the fewest words possible.



# Labels

Find the sweet spot. Too many mark labels can be very distracting. Try labeling the most recent mark, or min/max. Save additional and more detailed information for tooltips.



# Make it great with text

GOOD

This data visualization will show you which Beatle wrote what song. This bar chart is pretty good, but because there's a lot of text, the names of the albums get cut off immediately taking away from the purpose and the fun of this visualization.



# Make it great with text

Because readability is this dashboard's first priority, we rearranged the bar chart so that the labels are complete. We also added hover highlighting for extra clarity.

GREAT



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## See this dashboard in action on Tableau Public.

# Dashboard layout

Your dashboard's purpose is to help guide the reader's eye through more than one visualization, tell the story of each insight, and reveal how they're connected.

The more you employ better dashboard design, your users will discover what's happening, why and what's most important. Take into account how you're guiding their eyes across the dashboard. Are you showing the user where to look next?

Charts • Color • Size • Text • Dashboard layout • Conclusion

# Guide the user

Don't leave people high and dry without guidance on how to use a visualization. Try swapping a filter title with explicit language directions about how to navigate.





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# Rule of three

Don't make a lot of important information compete for attention. Most of the time, more than three visualizations on one dashboard is too many.



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# Tell a story

If you need more than one dashboard, or are preparing for a presentation, connect the different visualizations with story points. Tell the narrative of your data with visuals that build on each other, highlight specific insights, and provide additional context, all in one seamless presentation. It sure beats cutting and pasting static images into a power point.

	Global population and	A few countries spend	Mobile phone usage	Large economic gaps	Europe continues to	High GDP correlat
	birth rate are	more than 14% GDP	grows much faster	exist between	be the most popular	with ease of busin
$\leq$	imbalanced.	on health care.	than internet usage.	countries.	tourist destination.	with edge of oddin



# Make it great with story points

GOOD

This dashboard shows global growth and development indicators, but it has four visualizations crammed into a single place.



# Make it great with story points

GREAT

This is a collection of dashboards about global growth and development, arranged in a sequence; each individual view is called a story point.



## See this dashboard in action on Tableau Public.

These story points allow for indicators and insights to be explored in depth for each visualization in a more organized way. Click on the dashboard to see story points in action.



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# Conclusion

Great visualizations will not only help you understand more about your data, they'll offer faster, more meaningful answers, and even inspire others to ask and answer new questions.

### Charts $\cdot$ Color $\cdot$ Size $\cdot$ Text $\cdot$ Dashboard layout $\cdot$ Conclusion

# Viz of the Day

Get inspired every day with one new and amazing data visualization, delivered right to your inbox. Subscribe to Viz of the Day to learn more about visualization best practices.



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# About Tableau

Tableau helps people see and understand their data. Expressive visualization enables people to go beyond static charts to quickly analyze, interact with, and share massive amounts of information with each other. With a seamless experience from the PC to the iPad, ask and answer deeper questions, no programming skills required.

Start your free trial today.