

10 Best Practices for Building Effective Dashboards

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When a dashboard is done right, people wonder how they ever lived without it.

Why? A well-designed dashboard is a launch point for your analytics. Armed with the same powerful collection of information, your business makes faster decisions **based on a single source of truth.**

A great dashboard's message and metrics are clear, color enhances meaning, and every bit of information you need is at your fingertips. So how do you build dashboards that live up to this promise and that are just right for your organization?

It really comes down to three things: thoughtful planning, informed design, and a critical eye for what stays and what goes.



Thoughtful Planning

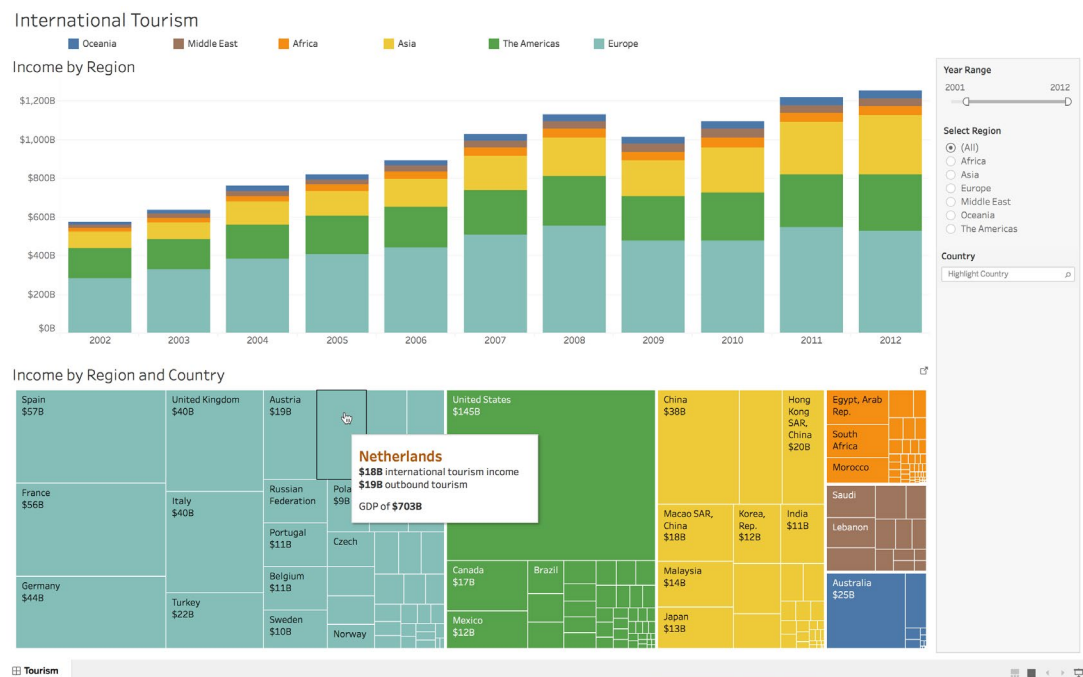
1. Know your audience

The best dashboards just work for their intended audience. That doesn't happen by accident. Ask yourself, who am I designing this for? Is it a busy salesperson with 15 seconds to spare for key performance indicators, or is it a team reviewing quarterly dashboards over several hours?

In addition to knowing who you're trying to reach, it's important to know their level of expertise with the subject matter and data. Which kinds of cues and labeling will they need or not need?

You may realize that you have several messages or questions. Remember that you can always create more dashboards. The best approach is to start simple.

A financial team tasked with reviewing high-level information about international tourism income could easily use this dashboard.



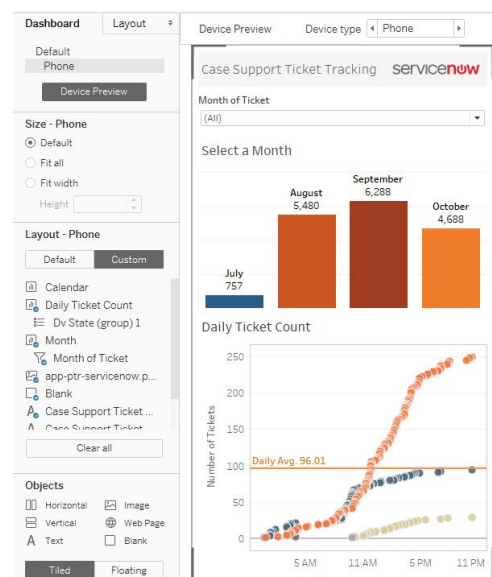
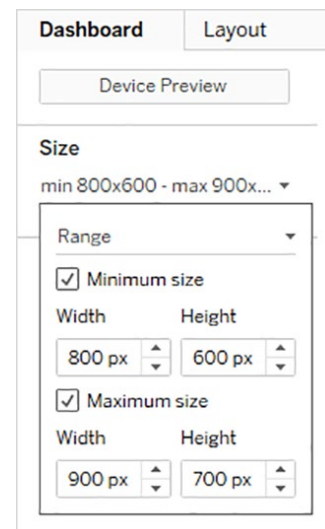
2. Consider display size

If you build a dashboard for a desktop monitor, but your viewers are looking at it on their phones, you're probably not going to have a very satisfied audience. Do some research up front to know which devices your audience uses to view dashboards.

The place to set size for your dashboard is on the left Dashboard pane, under **Size**.

If your audience will be looking at your dashboard on a wide range of devices, you have a couple choices.

- **Automatic sizing:** You can set **Size** to **Automatic**. This makes Tableau automatically adapt the overall dimensions of the dashboard based on browser window size. This is a good approach if your dashboard has few views and the views are very simple and scale well.
- **Precision sizing:** You can use the **Range** sizing feature, which provides you with two predictable “break points” for your dashboard.



You can also use Device Designer, which lets you create layouts for specific screen sizes, including phone and tablet all using the same dashboard.

Device Designer gives you a high degree of control over how things will look and, unlike **Range**, it allows you to use views and objects in different layouts. See [Create Dashboard Device Layouts](#) in the Tableau Help for more details.

3. Plan for fast load times

The most gorgeous dashboard in the world won't have much impact if it takes too long to load. People are busy and long waits are frustrating.

Filtering is a common culprit for slow load times. Although they're effective in restricting the amount of data being analyzed, they also impact query performance. For example, **Exclude** filters tend to be slower than **Keep Only** filters. This is because **Exclude** filters load all of the data for a dimension instead of just what you want to keep. See [Filter Your Data Carefully](#) in the Tableau Help for more details. Knowing Tableau's [Order of Operations](#) can also shave time off your load times.

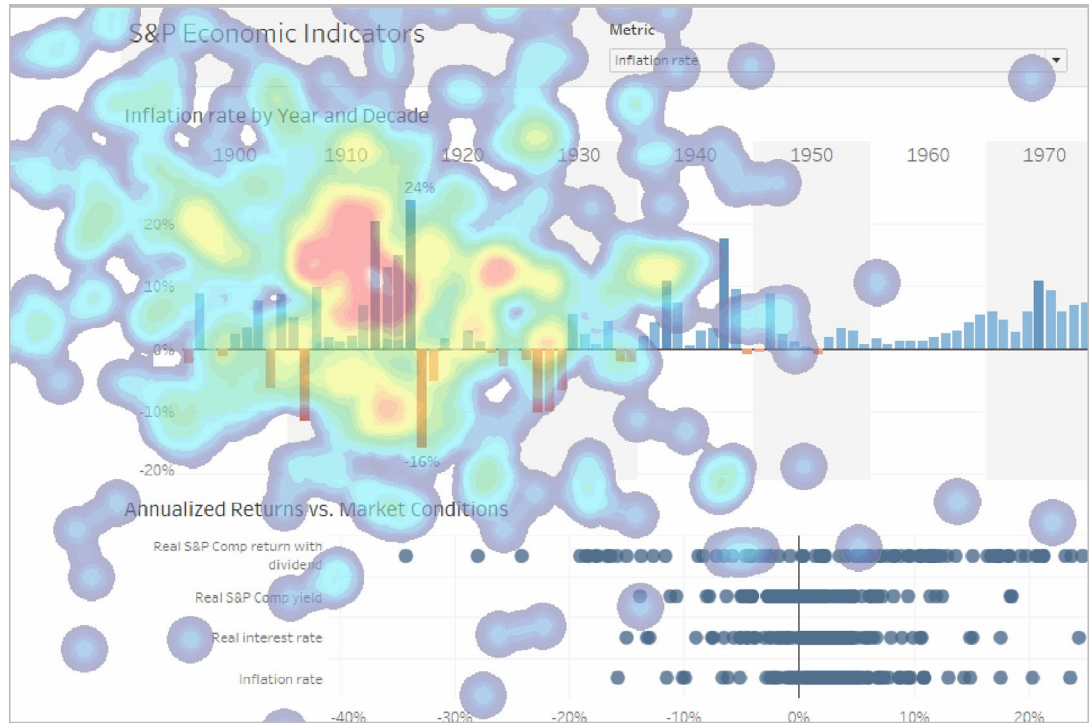
Pro Tip: Some of the most critical decisions you make as an author begin before you even create your first view, in the data preparation stage. Take a moment to familiarize yourself with the data you're working with. See [Know Your Data at the Database Level](#) and [Test Your Data and Use Extracts](#) in the Tableau Help for tips on what to look for and smart ways to work with your data.

Informed Design

4. Leverage the sweet spot

In the digital world, most people looking at content instinctively start their scanning in the upper left hand corner of the screen. This eye tracking heat map shows one typical scanning pattern:

For more on this, check out our whitepaper on eye-tracking.

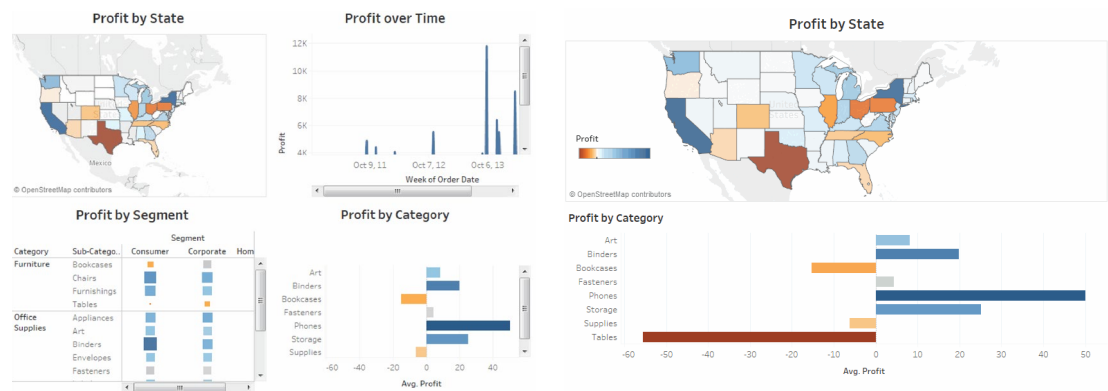


Once you know your dashboard's main purpose, leverage this known sweet spot by placing your most important view in the upper-left corner of your dashboard.

5. Limit the number of views & colors

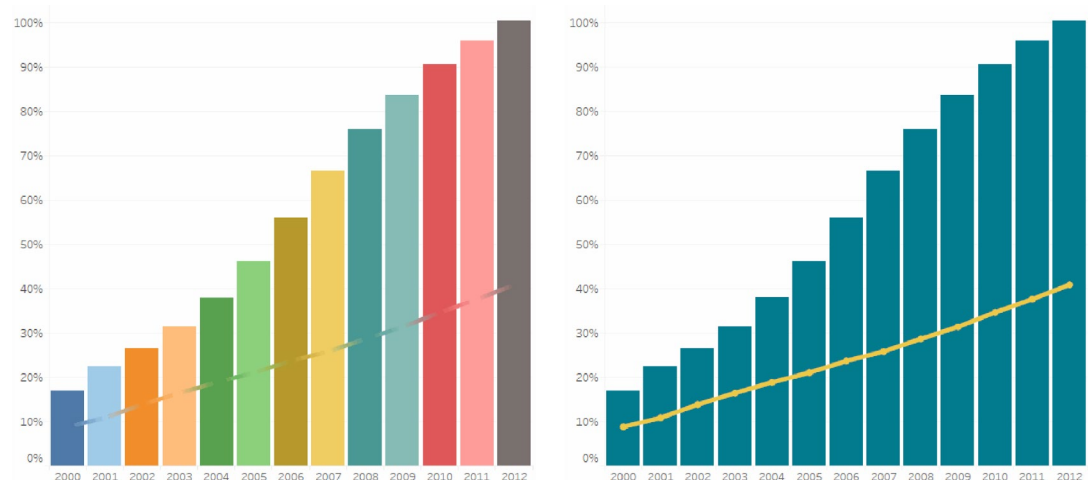
It's easy to get excited and want to cram your dashboard with every relevant view. But if you add too many, you'll sacrifice the big picture. In general, stick to two or three views. If you find that the scope needs to grow beyond that, create more dashboards (or use [stories](#))!

Here's a before-and-after for a dashboard about profitability by state. Just the essentials are kept on the makeover dashboard on the right.



Just like you can have too many views, you can also have too many colors. Color used correctly enhances analysis. Too many colors creates visual overload for your audience, slowing analysis and sometimes preventing it.

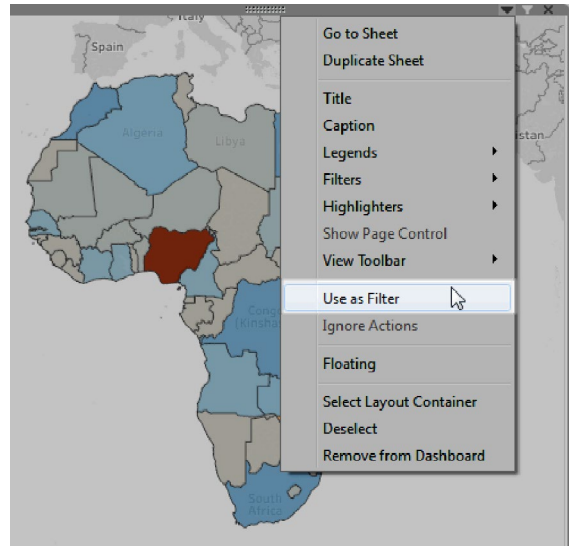
In this view, the trend line for internet usage is completely lost on the left because there is not enough contrast. The simpler approach on the right makes the trend line pop.



6. Add interactivity to encourage exploration

The power of dashboards lies in the author's ability to queue up specific views for side-by-side analysis. Filters super-charge that analysis and engage your audience.

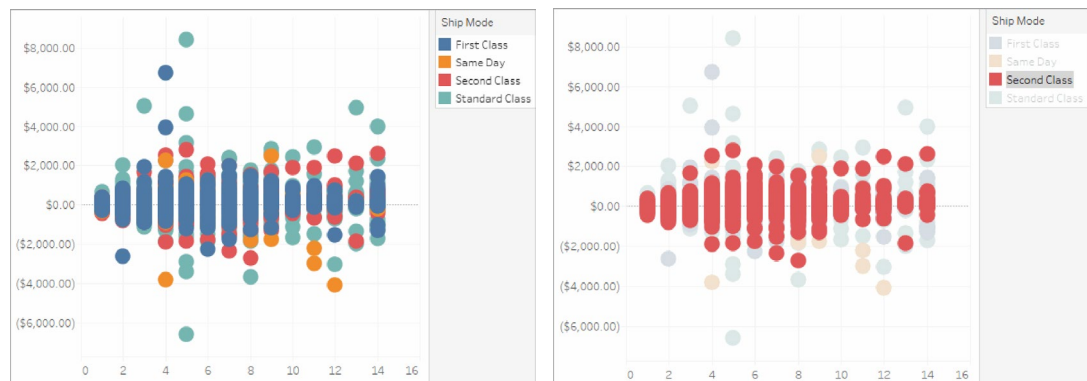
For example, you can have one view—your most important one—act as a filter on the other views in the dashboard. To do this, select **Use as Filter** from the view's shortcut menu.



You can also display filter cards for different types of data. For example, show filters as multi-select check boxes, single select radio buttons, drop-down lists, etc. You can include a search box, and edit the title of your filter to give your viewers clear instructions for interacting with the data.

Highlighting is another powerful feature you can leverage. When highlighting is turned on, a selection in one view highlights related data in the other views.

For more information about highlighting, see [Highlight Actions](#) in the Online Help.



7. Format from largest to smallest

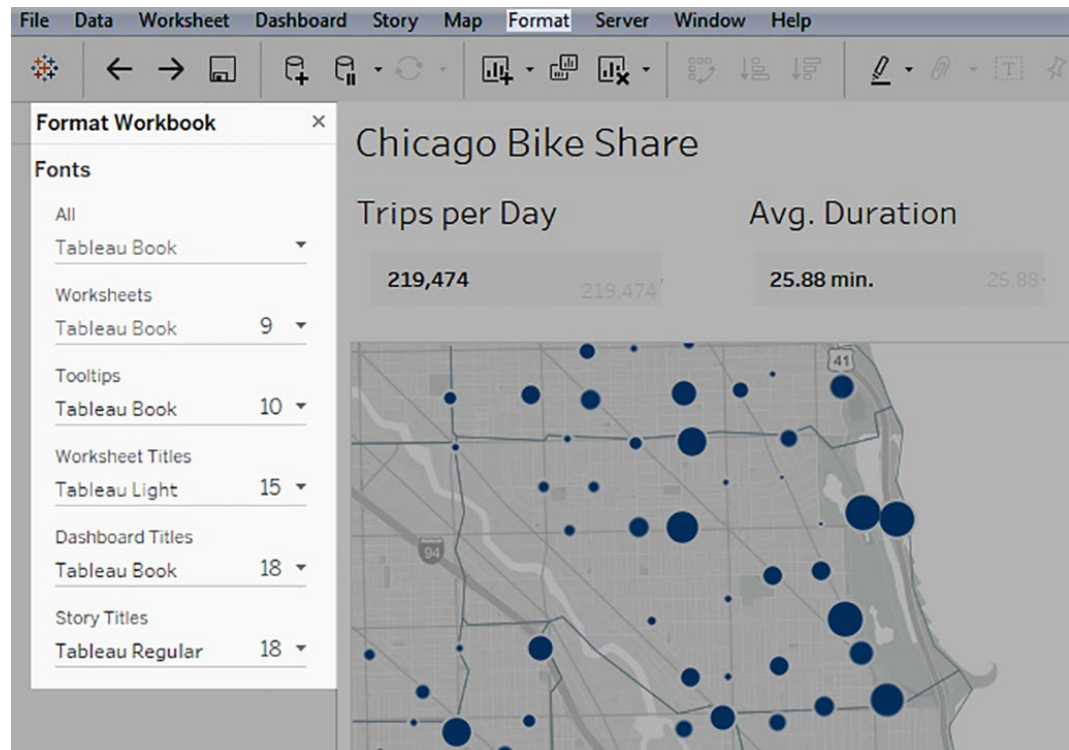
As you change the look and feel of your work, use a “largest to smallest” workflow. This will help you work quickly and keep you from accidentally overwriting your changes.

From a formatting perspective, the hierarchy of a dashboard looks like this:

1. Theme
2. Workbook
3. Worksheet
4. View parts

Start by confirming that you’re using the right theme (Tableau’s latest and greatest is always called Default). Choose one by going to **Format > Workbook Theme**.

The next step is to format at the workbook level. Here, you optimize every font and title in your entire workbook:



Finally, move on to the worksheet level, then save formatting the individual parts of a view for last.

For tips on how to quickly give your dashboard a new look, including how to use your own custom fonts and colors, check out [Rebrand a Dashboard](#) in the Tableau Help.

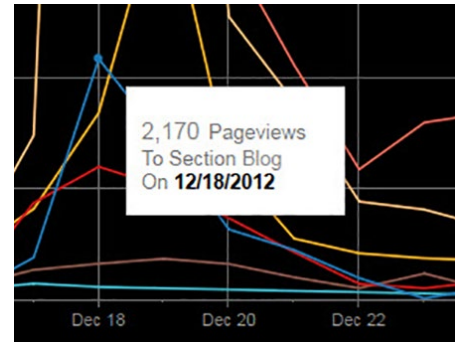
Refining Your Dashboard

8. Leverage tooltips, the story within your story

Once you're done with your main design work, take a look at your tooltips. They're a fantastic opportunity to reinforce the story you're trying to tell with your dashboard.

Tableau populates a view's tooltips automatically, but you can easily customize them by clicking **Worksheet > Tooltip**.

For example, here's a sub-par tooltip for website page views:

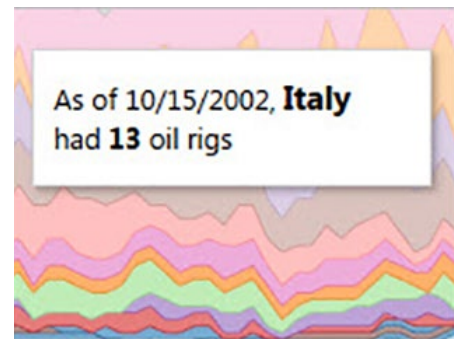


Just like you want to put your most important view in the upper left of your dashboard, you want the most important element of your tooltip to be at the top.

Here's the same tooltip, reworked:



Pro Tip: Some people also use tooltips to tell a mini story. For example, here's a tooltip about oil rigs:

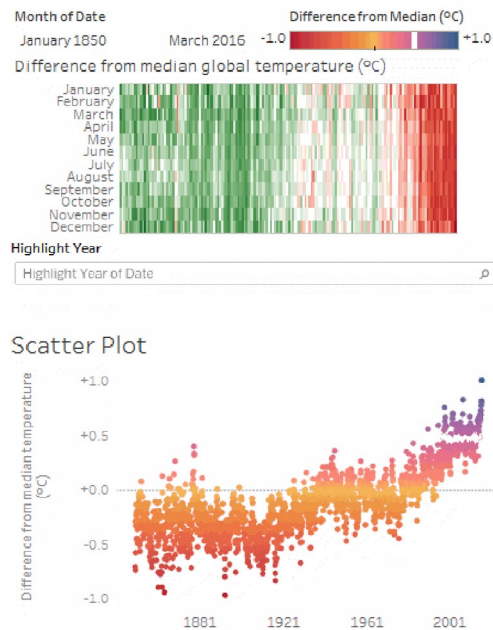


If you take this approach, make sure your syntax makes sense for all the data in your view. For example, you don't want a tooltip phrase that reads "As of 10/15/2002, **Italy** had 13 oil rigs."

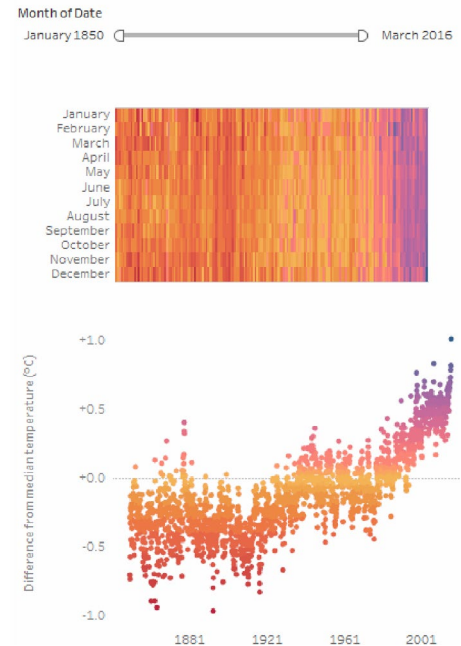
9. Eliminate clutter

Take a step back and consider your dashboard from the perspective of someone who's never seen it. Every element should serve a purpose. If a title, legend, or axis label isn't necessary, chuck it!

Ensure you have no more than two color palettes in a single dashboard; ideally, just one palette if your data is quantitative, meaning it's expressing a range.



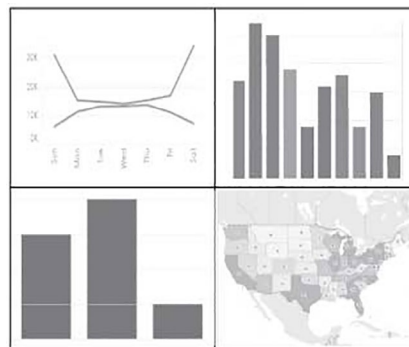
Before



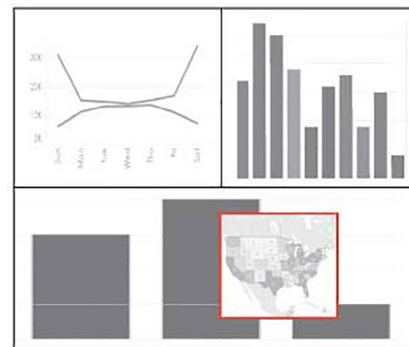
After

Pro Tip: If your dashboard needs more white space, consider a floating layout. If you go this route, give your dashboard a specific, fixed size so that the item that's floated stays put. If your dashboard's size changes (for example, because you used **Automatic** sizing), sometimes the floated item will be where you want it, sometimes not.

See [Resize and Lay Out Your Dashboard](#) for other tips on sizing.



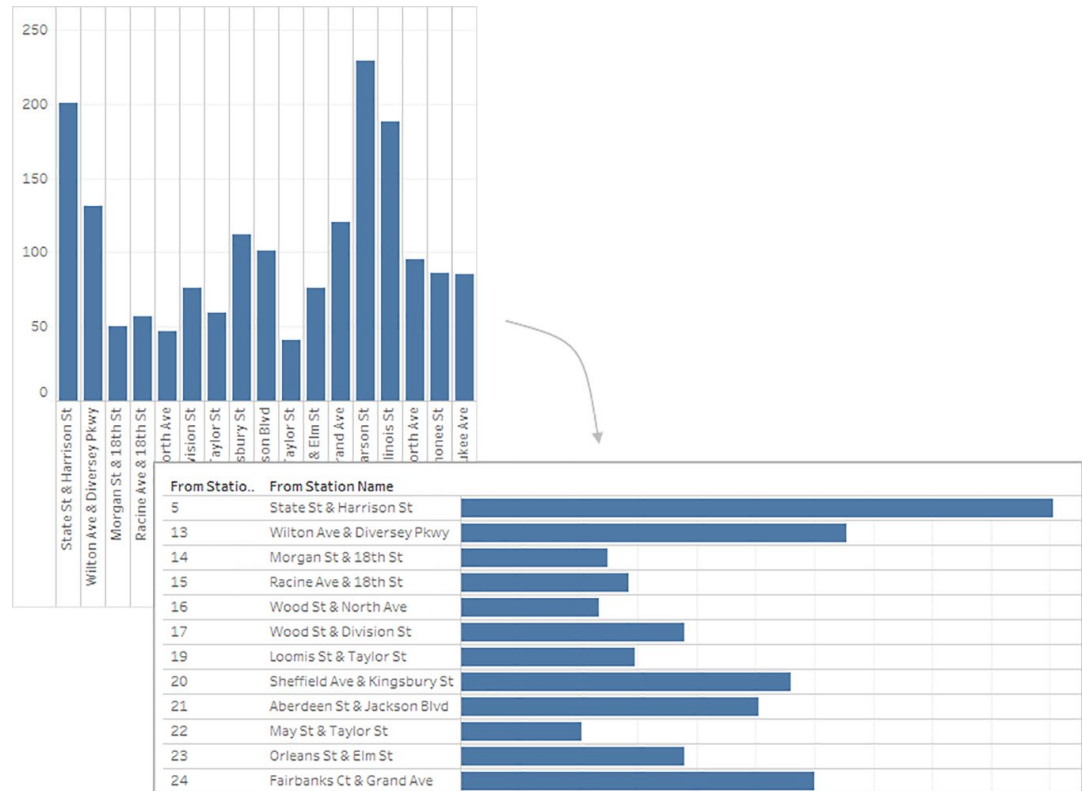
Tiled Layout



Floating Layout

10. Test your dashboard

As part of your final testing, make sure that **labels** are oriented so that they can be easily read:



Take a look at all the **titles** in your dashboard – are they using parallel construction and is everything capitalized consistently? For example, in a dashboard about volunteer work, if you name one view “Track Donations,” name another “Find Your Donation” – not “Donation Finder.”

Finally, as you get your dashboard off the ground, don’t forget to walk your users’ walk. As with any successful project, good **testing** is key. As you learn how your dashboard’s being received, you can enhance and update it.

Refining Your Dashboard

Now that we've outlined best practices for dashboards, here is a quick list of some common mistakes to avoid:

1. Trying to answer too many questions with a single dashboard

It's easy to get overly ambitious and want to provide highly detailed, real-time dashboards that cover every business challenge and offer users lots of drill-down options. You're not doing your viewers any favors unless you keep the scope of your dashboard tight—and remember, you can create new dashboards with a single click.

2. Using metrics no one understands

The metrics you use and how you label them may make sense to you, but will others know what they are? Make sure you're in touch with your audience's level of expertise. It's a good idea to show a prototype to one of your users and catch this sort of mistake early in your design process.

3. Cluttering the dashboard with low-value graphics and widgets

Resist the temptation to make your dashboard flashy or use gauge-like graphics and widgets. As addicting as it is to customize dashboards, unnecessary objects get in the way of your dashboard's objective, which is to quickly inform your audience. Keep your dashboard simple.

4. Not viewing your dashboard as your users will

Taking the time to view your dashboard as your audience will, on whichever devices they'll be using, can highlight things you need to adjust or tweak. Testing always pays off.

5. Forgetting to check in with your audience

Rolling out a dashboard is not a once-and-done exercise. Be sure to check in with your audience on how the dashboard is working, or not working for them. If the metrics and questions you present in your dashboard aren't relevant or if they get out of date, your audience won't use it.

With thoughtful planning, informed design, and a bit of refining work, your dashboards will deliver. Well-planned dashboards will allow both business leaders and knowledge workers alike to ask and answer questions in real-time, turn insight into action and inspire true innovation.

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