

# 5 Best Practices for Creating Effective Dashboards

And 7 mistakes you don't want to make


You've been there: no matter how many reports, formal meetings, casual conversations or emailed memos, someone important inevitably claims they didn't know about some important fact or insight and says "we should have a dashboard to monitor the performance of X."

Or maybe you've been here: you've said "yes, let's have a dashboard. It will help us improve return on investment (ROI) if everyone can see how X is performing and be able to quickly respond. I'll update it weekly." Unfortunately, by week 3, you realize you're killing several hours a week integrating data from multiple sources to update a dashboard you're not sure anyone is actually using.

Yet, dashboards have been all the rage and with good reason. They can help you and your coworkers achieve a better grasp on the data—one of your most important, and often overlooked assets. You've read how they help organizations get on the same page, speed decision-making and improve ROI. They help create organizational alignment because everyone is looking at the same thing.

So dashboards can be effective. They can work. The question becomes: How can you get one to work for you?

Focus on these 5 best practices. Equally important, keep an eye on the 7 critical mistakes you don't want to make.

- 
1. Choose metrics that matter
  2. Keep it visual
  3. Make it interactive
  4. Keep it current or don't bother
  5. Make access easy

*"It's helped people get to the underlying answer much more quickly."*

—Doug Rausch, Mercer



► Hear more from Doug and others about interactive dashboards

## Choose metrics that matter

Selecting relevant metrics to include in your dashboard is critical. Above all, they must be metrics that matter and that are relevant to the job at hand. But that doesn't mean every metric should be included – far from it. You should be highly selective in determining which metrics earn a spot on your dashboard.

In order to find the right set of metrics to include, you need to consider the following:

- How does each metric contribute to those objectives?
- Do you have data, either internal or external, that can shed light on the objectives?
- Can you design a meaningful metric that measures those contributions?
- Is this metric truly necessary to contribute to the objectives?
- Can you build a systematic and on-going means of measurement?

Start with a clear understanding of your executive or team's objectives. If your organization is in growth mode, then measure new customer acquisition rates. If you're operating in a highly competitive market, then incorporate third-party market share metrics. The litmus test to use is whether or not you can clearly explain how every metric on your dashboard connects to your organization's objectives.

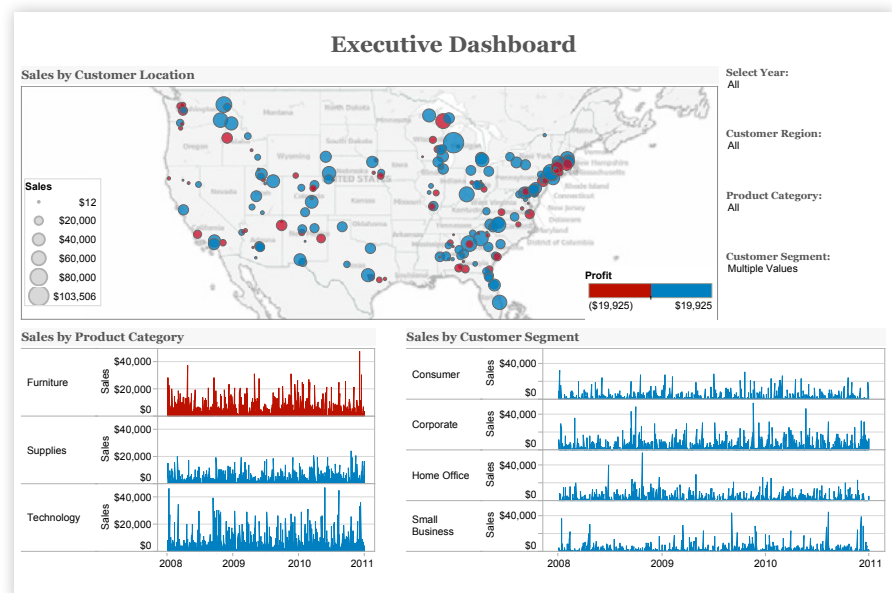


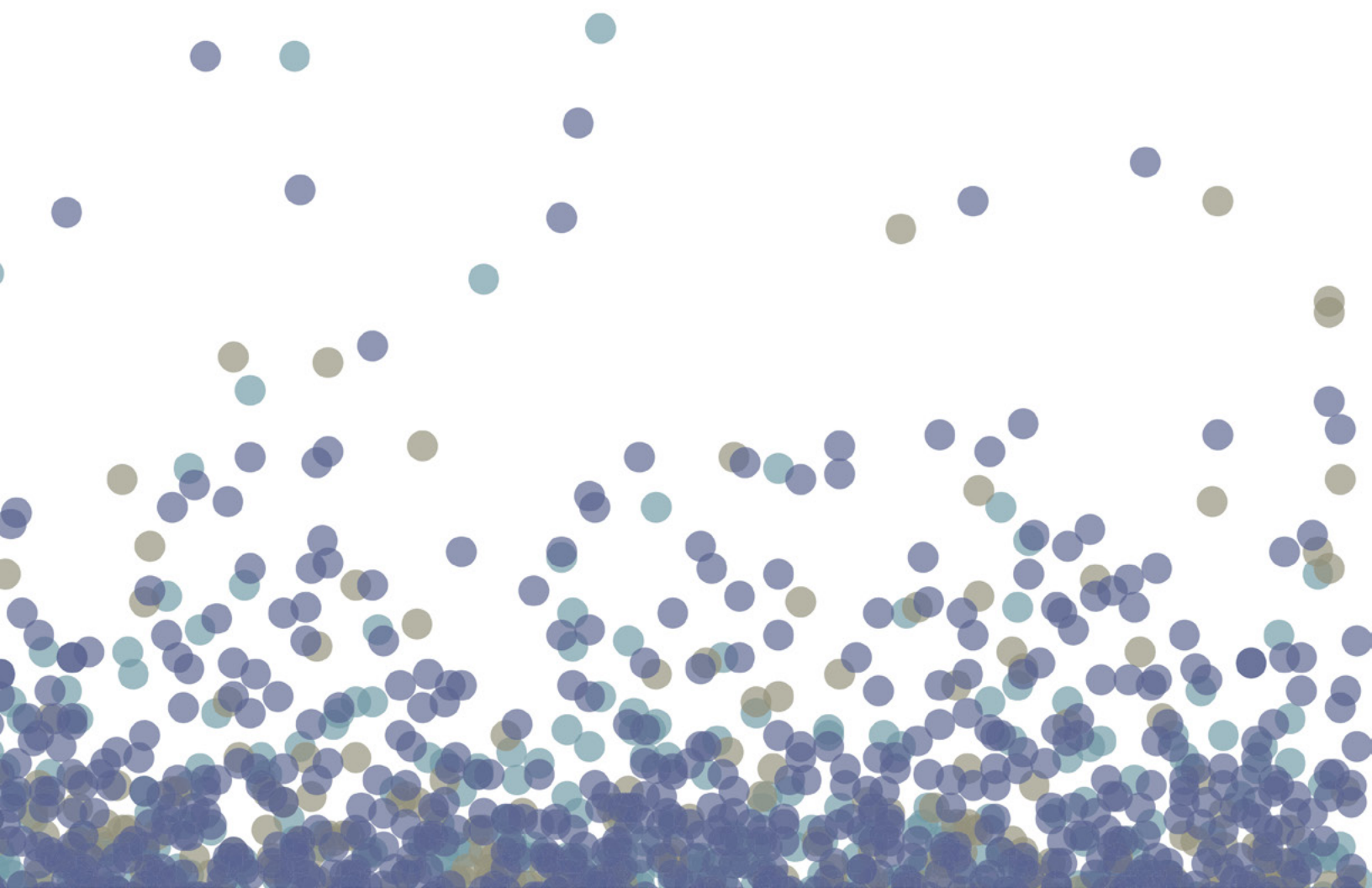
Figure 1: Executive Dashboards Reveal Performance Strengths, Weaknesses

Combining regional, product category and key performance indicators in the same view allows executives to get a comprehensive picture of where their business stands. Explore this dashboard by selecting different Years, Regions or Categories to answer questions that arise from the initial view. [Click to see live visualization](#)



The fact that you can actually build a dashboard immediately based on somebody's request and make it actionable, is something that's lights-out. We've never been able to do that before at our company.

*-Mark Machac, Pricing Strategy Manager, Service Corporation International*



*“It took 90% less time to accomplish something in Tableau than it did in Excel.”*

—Jim Stachura, Aelera



► Hear what Erwan Simon at Areva Renewable Energy has to say about how Tableau to pulls everything together.

## 2.

### Keep it visual

Dashboards are meant to be fast and easy to read. Number-based tables are not fast or easy to read. This is a case where a picture really is worth a thousand words.

The human brain processes numbers and images as discrete “chunks” of information. As a result, reports and tables filled with numbers are difficult and time consuming to process. However, a single chart or graph can be comprehended almost immediately.

When people are given the chance to see data as a picture versus a table, they focus on what your dashboard is saying. This is the underlying reason why your dashboard should emphasize “visualizing” data in charts and graphs vs. overloading it with tables.

Dashboards that include bar graphs, line graphs, heat maps, and scatterplots are popular and impactful because they are clear and people know how to read them. So while it’s tempting to show off your depth of charting skills, keep it simple on dashboards that will be used by many.

When designing your dashboard, embrace the use of colors, shapes, lines, thicknesses, degrees of shading, and other treatments that leverage visual perception. Things to avoid include overly cute widgets, 3D graphic treatments, and distracting color schemes.

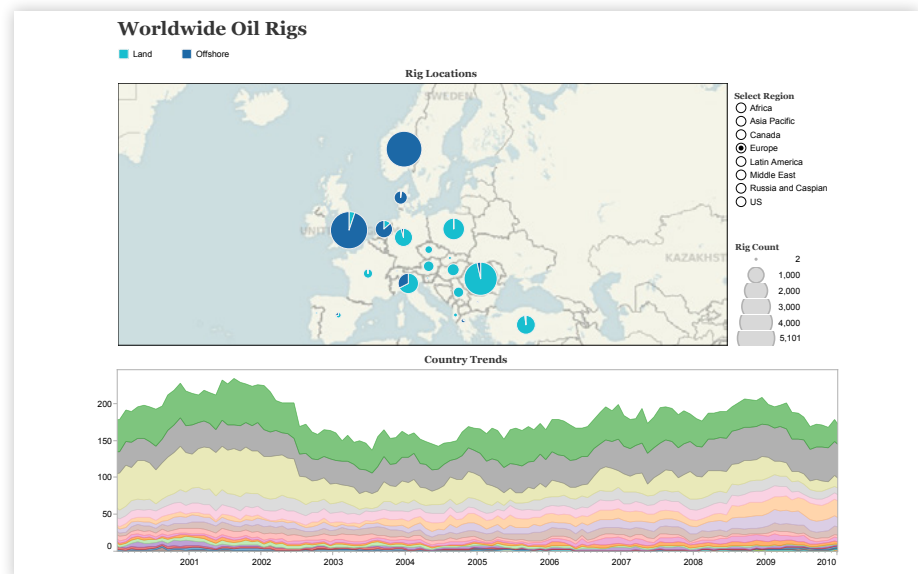


Figure 2. Meaningful insight at a glance

With one look, this dashboard provides information about where oil rigs exist and the rate at which they’re increasing. Select this dashboard, choose a region of interest, and see how quickly you understand key trends in those areas. [Click to see live visualization](#)

### 3.

#### Make it interactive

Your dashboard has relevant metrics and is visually engaging – you’ve got everyone looking at the same page. But once they’re on the same page, viewers will have unique questions about what they see. Create your dashboard so that individual viewers can interact with it to get the answers they seek.

Interactive dashboards enable your audience to perform basic analytical tasks, such as filtering views, adjusting parameters, and drilling down to examine underlying data – all with intuitive selections on the dashboard. Providing this interactivity equips your viewers to go from the big picture to insight about how they can use the data to make better decisions in a matter of 1-2 clicks.

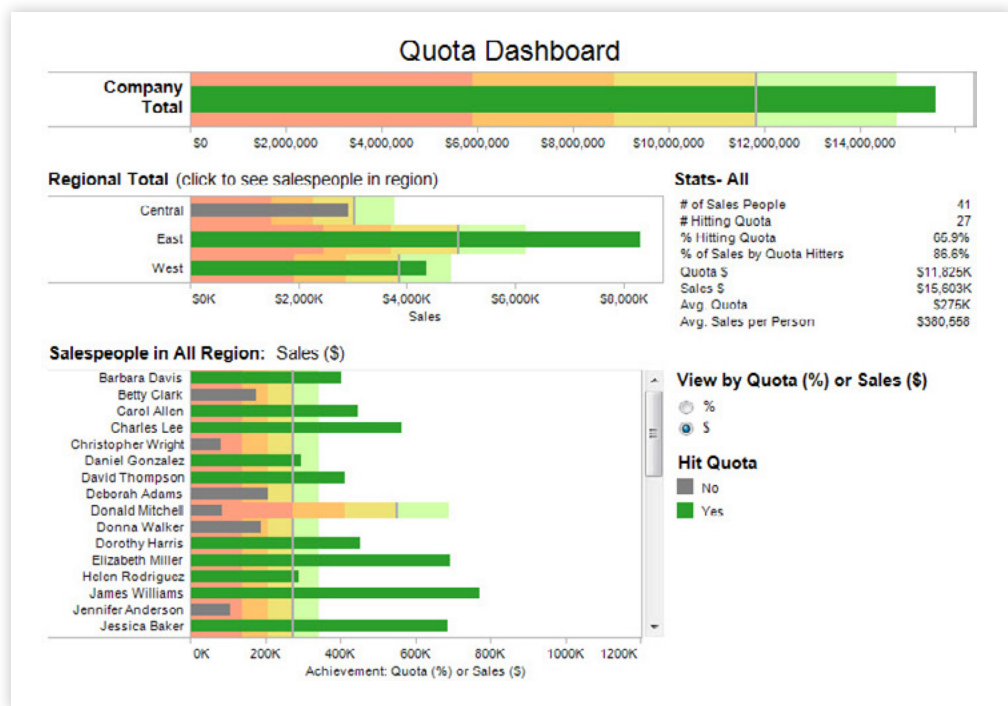


Figure 3: Quota Dashboard Reveals Who's Getting the Job Done

Sales teams have long been measured on whether or not they make their numbers. This dashboard quickly reveals who's underachieving and who is hitting their numbers out of the park, equipping managers to drill down into regional and individual performance trends to get the story behind the top line numbers. [Click to view live visualization](#)

## 4.

### Keep it current or don't bother

Make sure that the data underlying your dashboard is up-to-date and that your selected metrics reflect current business challenges.

Data can be from this quarter, this week, this hour—whatever the right timeline is for your business. Stale data can lend a false sense of confidence to decisions. You think you're making fact-based decisions, but the data is no longer representative of or relevant to your current situation.

Over time, key metrics can shift as well. In one year, the number of new customers might matter most. But the following year, the focus may shift to customer satisfaction, product profitability, or quarter-to-quarter revenue growth. Keep your eye on whether or not the metrics in your dashboard are still relevant and make sure to update when needed.

## 5.

### Make access easy

This one is critical. It doesn't matter if you've mastered the list above, no one will use your dashboard if they can't get to it. Browser-based distribution is ideal – especially if your dashboards can pull current data and adhere to security. Make it easy for people to select a link and go right to the dashboard – whether they're at their desk or with mobile devices.

Alternatives include posting files on websites, Wiki's, or blogs. File-based distribution will present data synchronization issues (i.e., people reading old versions) and security may be more cumbersome, but at least you can develop good habits about the importance of dashboards and collaboration.

As you get your dashboard off the ground, test your distribution plan and get feedback. Like any successful project, the key is good testing. As you gain experience and learn what people are using, you can enhance the actual dashboard as well as your distribution approach.



# 7 Mistakes to avoid

The flip side of these five best practice dashboard recommendations is a list of seven mistakes to avoid. Your dashboard should help your organization make better data-centric decisions. Falling into one of these traps will move you away from – not towards – these goals.

## 1. Starting off with too much complexity

It's easy to get overly ambitious and want to provide highly detailed, real-time dashboards covering every business challenge and offering users lots of drill-down options. Don't spend weeks or months coming up with a "perfect" dashboard. Instead, work in short cycles of prototype, test, and adjust.

## 2. Using metrics no one understands

The way you show and label metrics might make sense to you, but are they meaningful to others? Your metrics can be so familiar to you that you don't take the step to validate them with others. Make sure your metrics not only support the objectives of the dashboard, but make sense to the audience that will encounter it.

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

Resist the temptation to make your dashboard too flashy or over-designed, with gauge-like graphics and widgets. As pretty as those may seem, they get in the way with your dashboard's objective: rapidly and easily informing your audience. Keep your dashboard simple in its visual appeal.

## 4. Waiting for complex technology and big business intelligence deployment projects

Traditional business intelligence (BI) implementations often take much longer than originally anticipated. Waiting for a traditional BI project to materialize may mean months or years of delay. Use applications that help you build and distribute dashboards quickly.

## 5. Underestimating the need to maintain the dashboard

Rolling out a dashboard is not a once-and-done exercise. If you don't check in with your audience to validate the metrics are relevant and the data is updated, it won't get used. Make sure you're validating the usefulness of your dashboard on a regular basis.





## 6. Failing to match metrics to the goal

Dashboards are stronger when they connect to larger objectives. Don't fall into the trap of creating dashboards that don't reflect how key metrics within your department impact the success of the organization as a whole.

## 7. Using ineffective, poorly designed graphs and charts

Take care in how you design your graphs and charts. For example, 3-D charts don't increase viewer comprehension. Garish colors can interfere with interpretation. Using a pie chart is often ineffective, especially if more than six values are represented. Check out "recommended resources" for designing good visualizations.

Dashboards lead to powerful insights

Dashboards help because they show relevant, current information showing how you are performing with respect to overall goals. Keep in mind these five best practices to create successful dashboards:

- Choose metrics that matter
- Keep it visual
- Make it interactive
- Keep it current or don't bother
- Make access easy

If you're already creating dashboards, take note of these five best practices and evaluate how your efforts measure up. Also, check to be sure you're not getting caught in any of the seven mistakes to avoid.

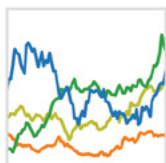
If you haven't yet started a dashboard to help achieve your corporate objectives, get started today. Seeing your data as key metrics on a dashboard will help you march towards meeting your goals.

Tableau lets you create fast, impactful dashboards

Tableau makes it easy for you to create and share dashboards quickly and effectively. In a matter of minutes you can connect to nearly any data source, use an intuitive interface to analyze your data visually, then drag-and-drop to create dashboards. No programming expertise is required. Watch our 14-minute "Getting Started" video, download our full-featured free trial, and start making your own dashboards. You can share your dashboard with a link to make it easy for your audience to view from their computer or a mobile device.

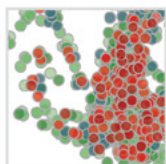
## About Tableau

Tableau Software helps people see and understand data. Tableau helps anyone quickly analyze, visualize and share information. More than 19,000 customer accounts get rapid results with Tableau in the office and on-the-go. And tens of thousands of people use Tableau Public to share data in their blogs and websites. See how Tableau can help you by downloading the free trial at [www.tableausoftware.com/trial](http://www.tableausoftware.com/trial).



## Additional Resources

[Download Free Trial](#)



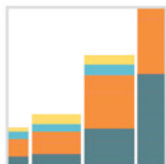
## Related Literature

[Information Dashboard Design and Show Me the Numbers by Stephen Few](#)

[Books and articles by Edward Tufte](#)

[Juice Analytics's writings on good analytic design](#)

[Presentation Zen's writings on good presentation techniques](#)



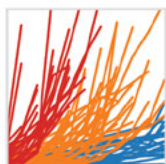
## Related Whitepapers

[Telling Great Stories with Data, Tableau Software](#)

[Tableau Visual Guidebook, Tableau Software](#)

[Which Chart or Graph is Right for You, Tableau Software](#)

[See All Whitepapers](#)



## Explore Other Resources

- [Product Demo](#)
- [Training & Tutorials](#)
- [Community & Support](#)
- [Customer Stories](#)
- [Solutions](#)