17 Dashboard Design Tips for Non-Designers
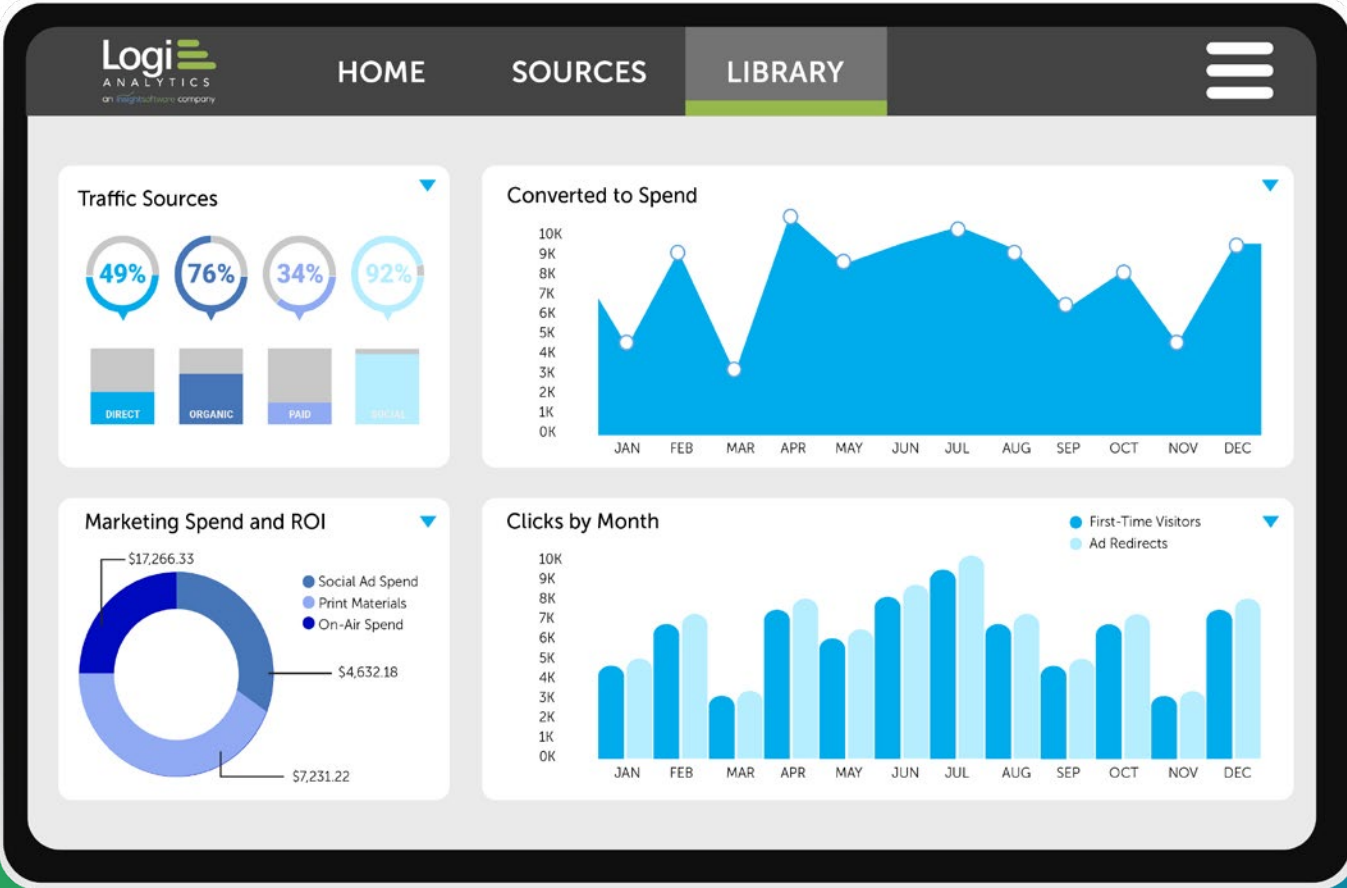
With a Few Quick Fixes, Any Application Team Can Design Visually Stunning Dashboards, Reports, and Analytics
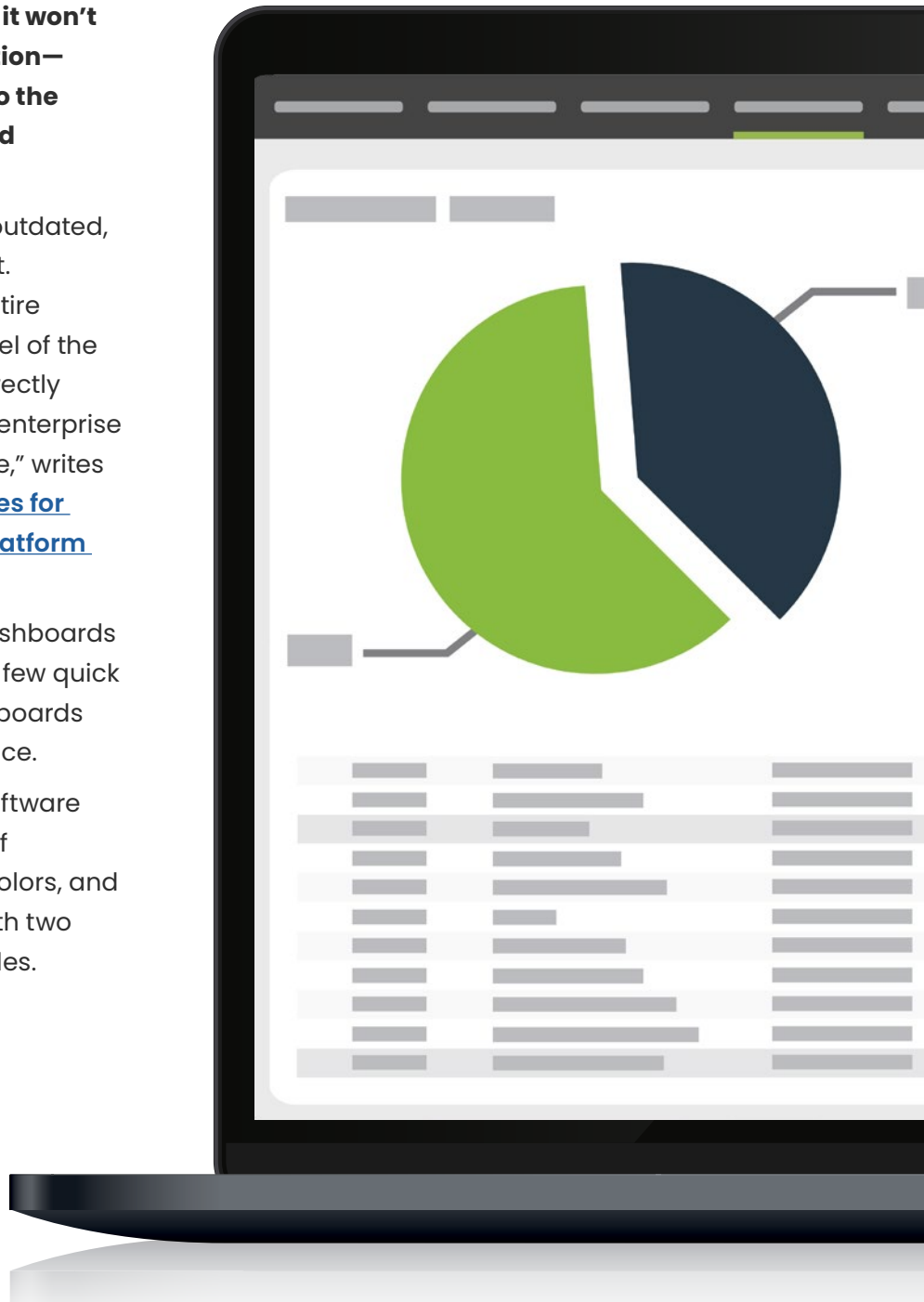
Contents

1 Introduction

A Dashboard Is Only as Effective as Its Design

If an application doesn't look great, it won't get used. This is true of any application— and especially true when it comes to the embedded dashboards, reports, and analytics in your application.

If your embedded dashboards look outdated, your users will abandon your product. Even worse, they may decide your entire application feels off. "The look and feel of the embedded analytics solution can directly impact the impression of the overall enterprise application and customer experience," writes Gartner in their report, **5 Best Practices for Choosing an Embedded Analytics Platform Provider**.

Are your application's embedded dashboards and reports due for a refresh? With a few quick fixes, you can transform clunky dashboards into a sleek, modern analytics interface.

In this ebook, the experts at insightsoftware outline easy fixes for the four pillars of dashboard design: content, layout, colors, and fonts. Then we bring it all together with two before-and-after dashboard examples.

2 Content Tips

Simplify What You Show and How You Show It

When faced with a text-heavy document, how many times do you have to read it to understand the meaning? If you're like most people, you may end up skimming the content or not reading it at all.

The same holds true for analytics dashboards. If you include too much content or present that content in an overly complex design, your end users may not bother using your analytics at all.

How do you present the right content in the right way? Remember: Less is more.

Quick Fixes for Content

Tip 1: Only Show Relevant Information

Consider the information your end users truly need, and reduce the analytics down to a few key ideas. If you're designing a dashboard for a sales team, for example, don't include visualizations on marketing campaign channels. Placing sales and marketing metrics on the same page will only confuse users with information they don't really need.
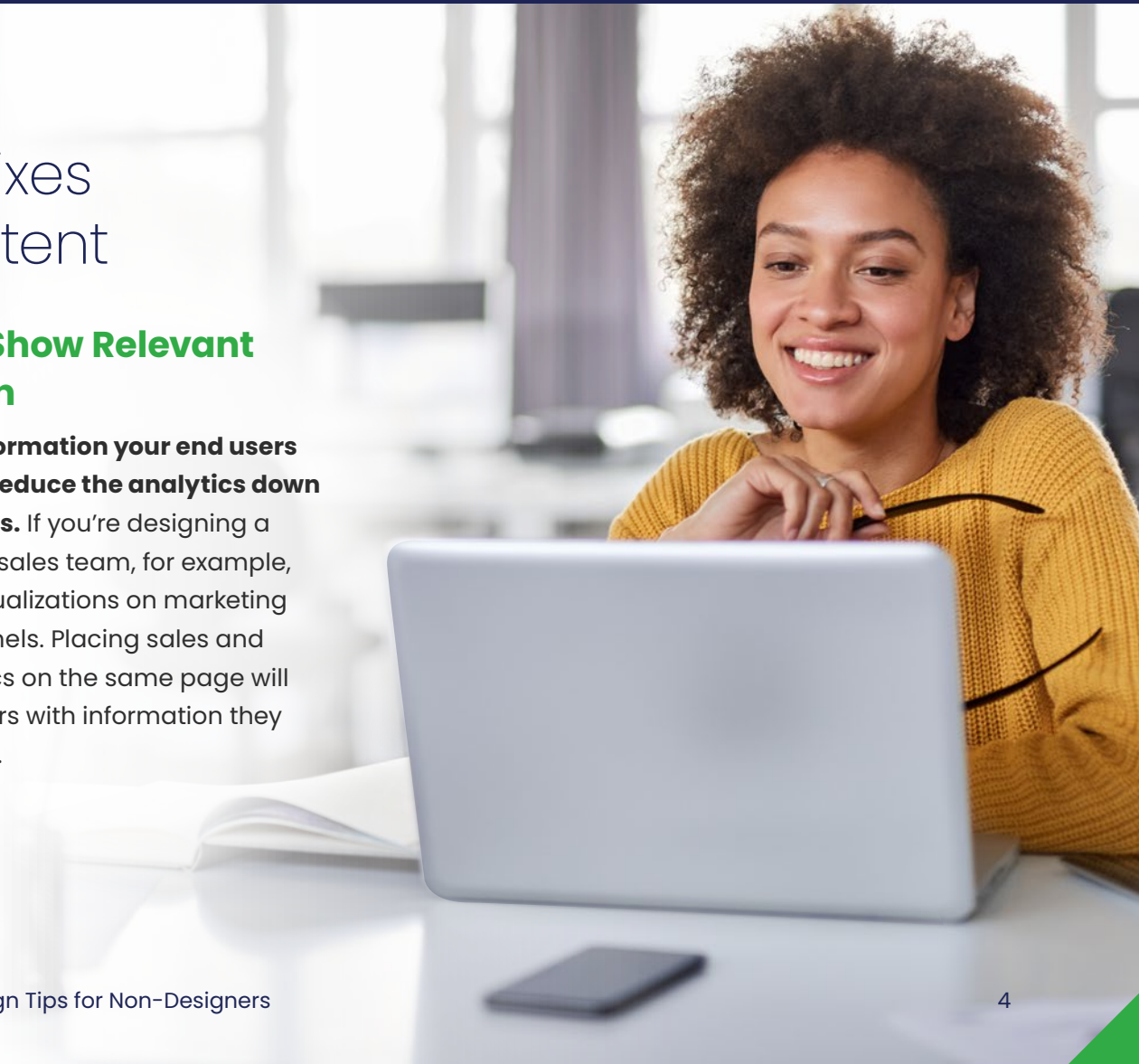
Tip 2: Choose the Right Visualizations for Your Data

Application teams can choose from a variety of different chart and graph types to display data. But not all data visualizations will work for every dataset.

Here are some common data visualization types and the best datasets for each:

> **Tabular formats** are best used when exact numbers must be known. Numbers are presented in rows and columns, and may contain summary information. This format is not conducive to finding trends or comparing sets of data. Tabular charts make it hard to analyze sets of numbers, and the presentation becomes unwieldy with larger datasets.

> **Line charts** are best to show continuous data and trends over time. Line charts are set against a common scale; you can also add a trend line or goal line to show performance against a set benchmark.

> **Bar charts** are best used when showing comparisons between categories. The bars can be plotted either horizontally or vertically.

> **Horizontal bar charts** often show rank comparisons, usually with the largest bar at on top. Vertical bar charts or column charts are often used to show multiple dimensions on a chart or a cross-tabular chart.

> **Pie charts** are best used to compare a percentage of the whole. Pie charts make it easy to understand the relative importance of values, but when there are more than five sections it can become difficult to compare the results.

◢ Content Tips

Tip 3: Hide Some Content

Every piece of information doesn't need to appear on your dashboard all at once. Don't be afraid to let users drill down into some data points.

Utilize icons, pop-up windows, sliding trays, and other expandable areas to show longer blocks of text as users dive deeper, instead of displaying everything from the main page.

Selectively showing content has the added bonus of speeding up load times—and as any developer knows, poor performance is a killer for application engagement.
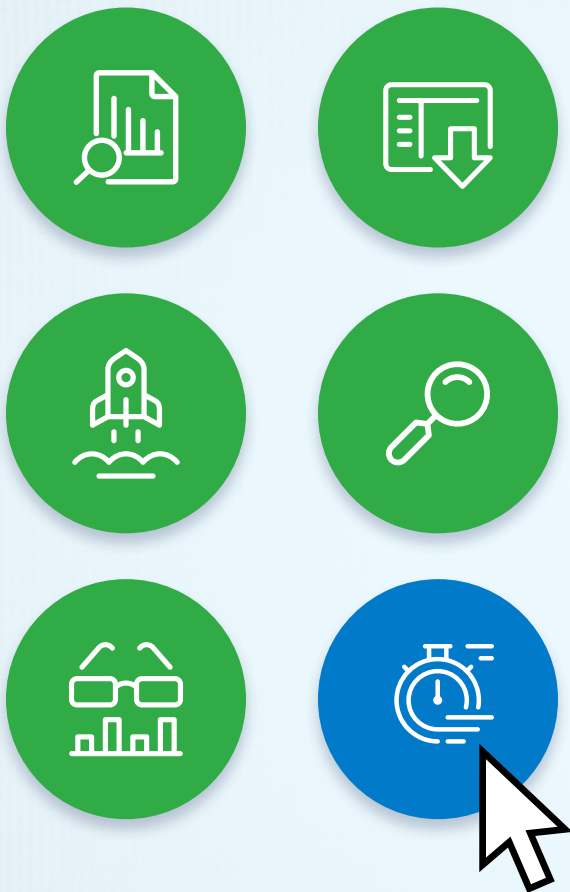
Tip 4: Use Iconography

Content isn't limited to data and charts. To support a great user experience, application teams are using icons in the navigation panes and in reports.

Icons are typically small graphic images, sometimes accompanied by a one- or two-word description. They help users easily navigate analytics, understand exactly what they're looking at, and quickly discern what action to take—enabling users to work more efficiently.

You don't have to create icons from scratch. Graphics libraries such as Font Awesome make it easy to add scalable vector graphics (SVG) to your application. Font Awesome is a free font and CSS framework full of SVG icons that you can scale and customize—so if you resize them, they don't lose or stretch pixels and you won't see a change in picture quality.
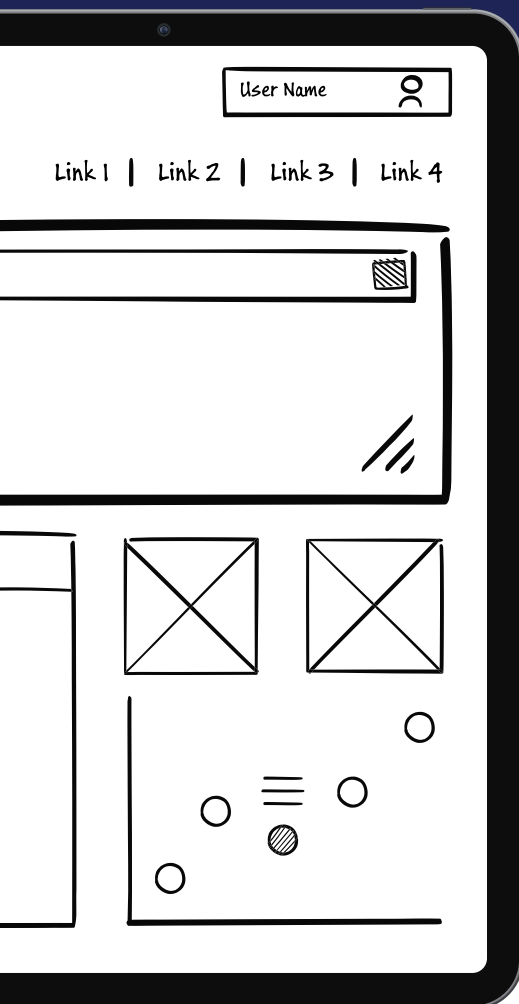
3 Layout Tips

Organize Content to Clearly Convey Information

Limiting the amount of content and data you're presenting is just the foundation of a visually effective dashboard.

Now let's consider ways to lay out that content in an easily understandable format. Layout is where user interface (UI) design really starts to kick in.

Laying out your embedded dashboards may seem simple. After all, it's just a handful of charts and graphs, right? But UI designers have full-time jobs for a reason. Determining where to put every element of your embedded analytics is an important undertaking that can make or break the success of your dashboards.

Quick Fixes for Layout

Tip 5: Start With a Wireframe

Don't just dive in and start laying out your data in the dashboard. Use sketches and mockups to plan your dashboard UI and give the final dashboard a clear, organized look and feel. A wireframe also reduces the number of iterative cycles you'll have to go through as you refine your dashboard or report.

You can create a wireframe the analog way, with pencil and paper or on a dry erase board. Or you can use a digital wireframe tool such as Balsamiq (our top choice), Axure, SwordSoft, or Adobe Illustrator. The wireframe shown here was created in 60 seconds in Balsamiq, a rapid web application mockup tool that lets you build wireframes quickly.

Layout Tips

Tip 6: Consider Element Sizes

For the most part, your embedded dashboards and reports should stick to uniform sizing to reduce distractions. However, uniform sizing doesn't mean every single element should be the same size.

Use size and position strategically to create a visual hierarchy and highlight important information. For instance, if a dashboard or report contains eight charts, but one of those visualizations is more important for most of your audience than the others, consider placing it up front in a larger size than the others.

The above dashboard demonstrates consistent sizing across elements and uses a grid layout to clearly present information.

◢ **Layout Tips**

Tip 7: Use a Grid

Starting with a grid layout may seem like cheating, but in fact grids provide a natural visual framework that helps end users make sense of information.

Also group similar data with each other. Every dashboard should tell a story: So as your users navigate the dashboard from the top down, they should see related information all in one place.

50%

68%

Tip 8: Embrace White Space

Negative space (also called white space) is a crucial element of dashboard design. But it may seem paradoxical: How can you afford to leave space blank when you're trying to convey lots of important information on one analytics report?

In reality, white space is important for every embedded dashboard. It increases readability and breaks up blocks of information. Adding padding between objects also makes the application easier to use on small screens as your dashboard is sized down for mobile devices. CSS properties such as margin and padding can even accentuate an element's importance.

In a dashboard, for instance, surrounding a particular metric or chart with more negative space makes it stand out to the user.

4 Color Tips

Choose an Effective, Deliberate Palette

In data visualizations, the role of color is not just aesthetic. Color can also convey meaning. Dashboard colors can immediately draw your users' eyes to critical information, identify relationships, or highlight potential issues before they become big problems.

Often, the task of choosing dashboard colors is left up to developers who may not feel comfortable making design choices on their own. Fortunately, it's not as difficult as it may seem.
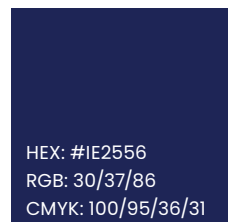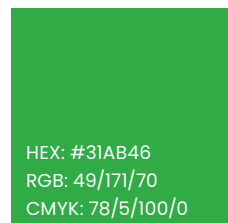
Quick Fixes for Color

Tip 9: Start With Your Brand

Dashboard colors not only need to match the look and feel of your existing application, but also match your overall branding.

Start your color scheme research with your company's existing brand. Find your company colors defined in a standard profile: CMYK (cyan, magenta, yellow, black); RGB (red, green, blue); or HEX (hexadecimal). Profiles provide color values in percentages, so a specific palette can be recreated in various applications.

Identify your brand's dominant color (usually the one that pops out in your logo). Use that as your accent color to focus attention on the most important information in your embedded dashboards. Then choose secondary dashboard colors that complement the accent color (see Fix #2).

Just take care to not stray too far from your brand palette.

HEX: #31AB46
RGB: 49/171/70
CMYK: 78/5/100/0

HEX: #007AC9
RGB: 0/122/201
CMYK: 84/47/0/0

HEX: #IE2556
RGB: 30/37/86
CMYK: 100/95/36/31

Color Tips

Tip 10: Get Help From Free Color Tools

Choosing colors that go together can be challenging, especially for non-designers. A number of online tools can help. For instance, the [Adobe Color Wheel](#) is a free library that lets you browse thousands of color combinations and create your own color schemes. With coordinated color palettes, the color wheel will help you create a complete color scheme. You can also play around with different color algorithms, so you're not tied to one palette.

Another tool that can help in the color scheme process is **[Paletton](#)**, which features a live colorizer you can use to try out your color choices within your own projects.

As you determine your color palette, keep in mind that different devices may display the same color value differently. Test your dashboard colors on a variety of devices and screen sizes to ensure the colors you select are consistent across most screens.

Also consider using subtle patterns rather than flat colors. Patterns will add interest and depth to your dashboards. Just be sure to keep them simple and spare, to not overwhelm the users with too much visual interest. Try using **[Toptal Subtle Patterns](#)**, which gives you a sampling of free patterns.
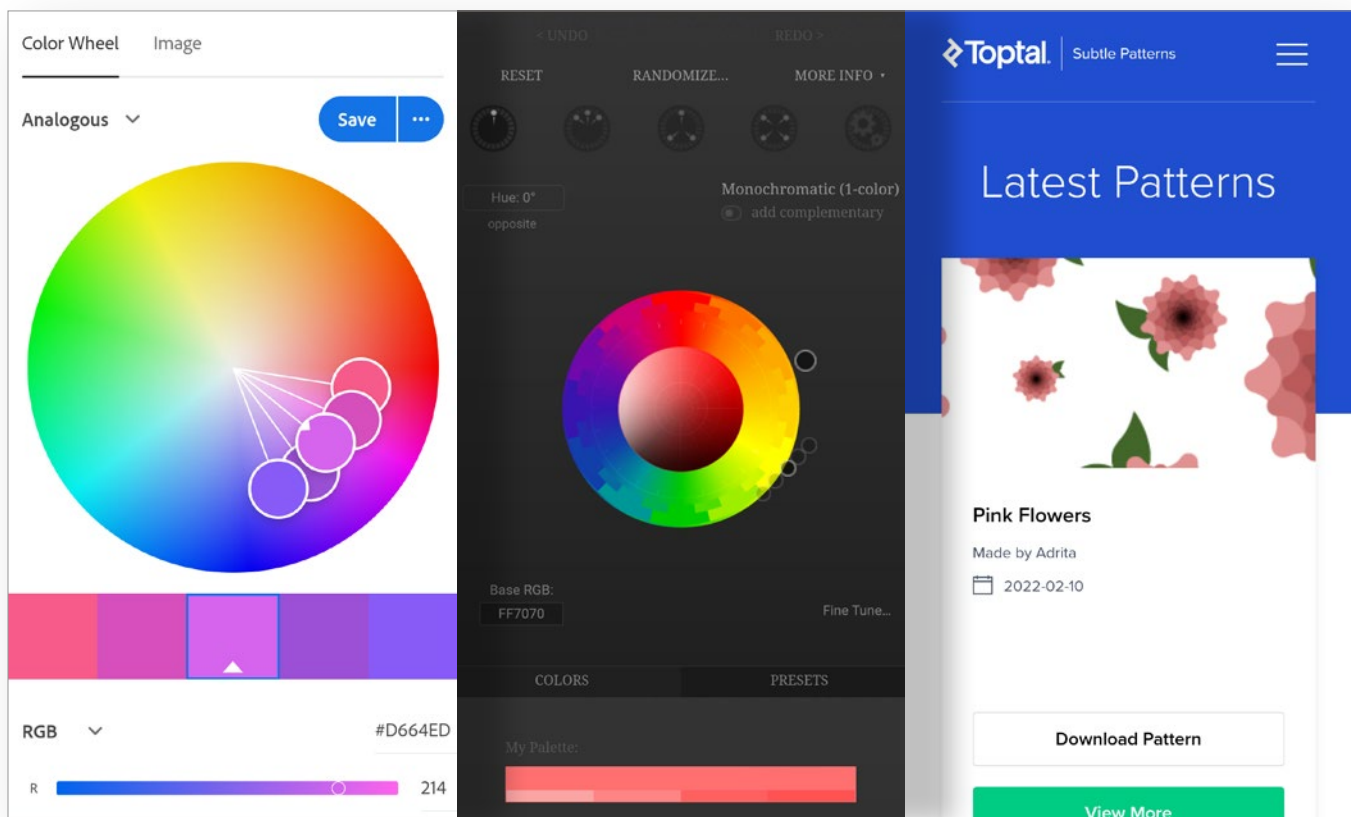
From left to right; Adobe Color Wheel, Paletton, Toptal Subtel Patterns

◣ **Color Tips**

Tip 11: Less Is More

Overusing color is the most common mistake application teams make when designing dashboards and reports. Too much color clutters your message. But too few could cause users to lose interest.

Aim to use six or fewer colors in your data visualizations. Any more, and it becomes difficult for users to see the differences. Natural colors are generally better than bright or bold colors. Too many bold colors will make

it hard for users to process information because nothing stands out as a priority. Reserve bright or dark colors to highlight outliers or important calls to action.

Also remember that each color in a data visualization should serve a purpose. Use different dashboard colors only when you're communicating different things.

So, if you're using two colors on a chart, they should always represent two different concepts.

Tip 12: Account For Associated Meanings

Many colors have associated meanings that can work for or against you. For example, black is often associated with sophistication and elegance—just imagine a black limousine. White is associated with clean design and a calm disposition—imagine an Apple store. However, red usually indicates danger or error, so you need to limit it to negative connotations.

Colors are key to getting your message across—and the right ones can help you communicate meaning to your audience without using extra labels and indicators in your dashboards. For example, you might use red for danger or financial loss, and green for positive feelings or financial gain.

Remember: As long as you can answer the question, "What purpose does this color serve, and will it serve it effectively?" then your use of color is entirely appropriate.
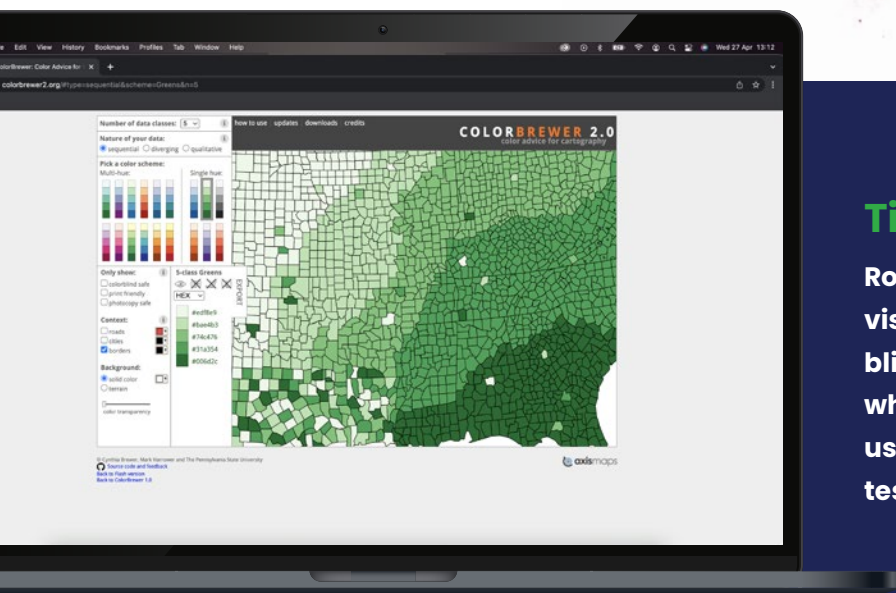
Tip 13: Test for Colorblindness

Roughly one in 20 people have a color vision deficiency. We suggest using a color blindness checker such as <u>Color Brewer</u>, which allows you to choose color schemes using pre-selected color sets that have been tested for color blindness and contrast.

5 Font Tips

Style Text Treatments for Visual Interest and Clarity

For your application's dashboards to tell a clear story, you need to create a visual hierarchy with every design element. This includes fonts. Clean, organized dashboards use a strategic mix of font styles, sizes, and treatments—with the key word being "strategic."

Without a strategy, your font choices will quickly get out of control. Every header, label, and pop-up window should be consistent and cohesive.

Quick Fixes for Fonts

Tip 14: Limit Typeface, Styles, and Sizes

As with nearly everything in dashboard design, less is more when it comes to fonts. To ensure your dashboard looks clean and organized, limit the font typefaces, styles, and sizes you're using:

> **Typefaces:** For digital fonts, the word "typeface" is often used interchangeably with terms like "font," "font family," and "font type," although historically they refer to different things. Typeface refers to a certain design created by a typographer. For example, Times New Roman, Arial, and Caslon are all different typefaces.

> **Sizes:** Font size refers to the weight, height, and width of a particular typeface.

> **Styles:** The style of a font refers to whether it is bold, italicized, underlined, or even in a particular color.

Mix regular and bold or color fonts for visual interest, with one caveat: Use color or weight—not both—to emphasize text.

The key to any font choice is consistency. Choose a limited number of typefaces, sizes, and styles, and make sure you're using them consistently throughout your embedded dashboards and reports.

◢ Font Tips

Tip 15: Consider Text and Background Colors

It's important to choose text and background colors that complement each other. Color adds another dimension to your text, whether for good or bad.

For example, using dark text on a dark background will make your application's dashboard illegible. By the same token, using bright green text on an orange background will look jarring and strain the eye. Use light- colored fonts on darker backgrounds, and darker fonts on light backgrounds. The goal here is less about adding visual interest and more about improving legibility.

Chaotic color pairing which will be jarring for the user

Light text on a dark background creating greater contrast and improved legibility
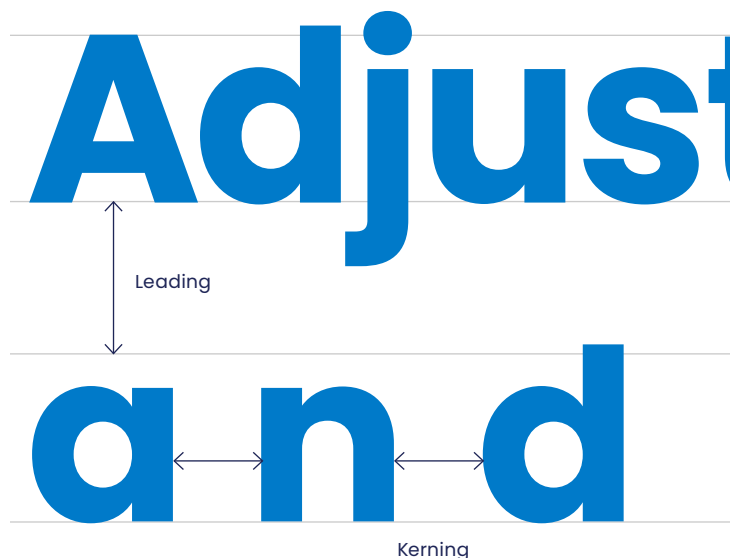
Tip 16: Adjust Leading and Kerning

Small adjustments to leading and kerning can vastly improve the legibility and clarity of your dashboard text.

Leading determines how much space is between vertical lines of text (think of single- and double-spaced documents). Leave enough space so each line is legible, and remember to accommodate for any long descender letters like "g" or "p." The general rule is the leading should be 20 percent greater than the font size.

Kerning determines the amount of space between individual letters horizontally. Always keep spacing proportional and uniform between letters. If your letters are spaced too close together or even too far apart, the text will become difficult to read.

Color Tips

Tip 17: Use Free Tools for Custom Fonts

Choosing fonts for an embedded dashboard and report can feel like a daunting task if you're not a professional designer. Application teams can leverage free online font libraries to get there faster.

Font Awesome is a library of dozens of different types of fonts and scalable vector graphic (SVG) icons. Google Fonts is an interactive directory of free and hosted app programming interfaces for web fonts. It enables you to customize weights, styles, etc. and then integrate the fonts right into your CSS. Another useful tool is FontPair.co, which will help you pair Google Fonts together if you decide to go with more than one typeface.

From left to right; Font Awesome, Google Fonts, FontPair.co

6 Bringing It All Together

Before & After Dashboard Examples

We've covered the four pillars of dashboard design and best practices for each. But what does all this mean in practice? By applying even just a few pieces of advice to actual dashboards, we can transform simple charts into stunning data visualizations and reports that will keep users coming back.
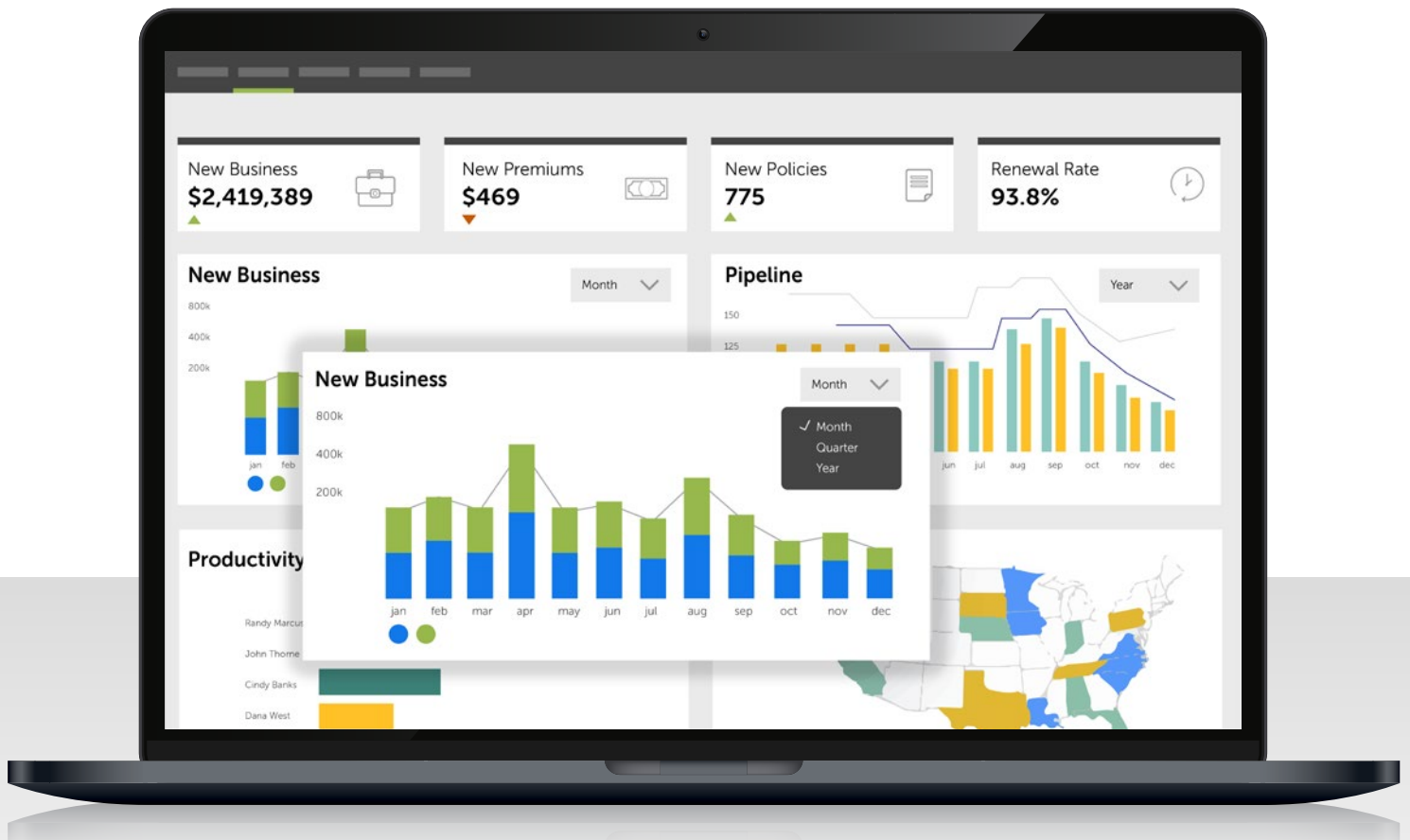
From Gross to Gorgeous

Let's start with a drastic before-and-after makeover. Notice that the "gorgeous" analytics dashboard on the right isn't necessarily complex. It's just an attractive dashboard that lays information out in a clear, cohesive way.

Before: Gross

> The color palette looks like it was never thought out We're using standard rainbow colors with no real rhyme or reason.

> Three-dimensional charts like these may have looked good 10 years ago, but now they look dated.

> The 3D elements also make the charts harder to read. The line graph almost looks like a reversed Nike symbol.

After: Gorgeous

> The color choice is more thought-out with professional, branded colors. Overall, it's more subdued.

> The metrics are laid out in a grid formation, with a clear visual hierarchy.

> The fonts are consistent and pop where necessary. For example, the first line of the dashboard highlights top-level information that's clearly important.

> We still see some bar charts, but we also have a map element and a D3 data visualization. Different types of data visualizations are conveying different types of information.

Bringing It All Together

From Good to Better

Dashboard makeovers don't always have to be drastic. A few subtle UI changes can give analytics a more modern look and feel.
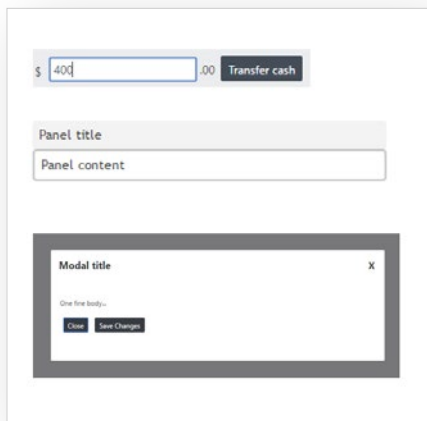
Before: Good

> The buttons here are technically fine: They get the job done. But they feel under-designed.

> The style is disjointed: The top section with the currency input doesn't look connected to the bottom section for content.

> Fonts are tiny.

> Some borders are rounded, while others are squared off.

> The lack of color gives an overall dull, flat impression.

> The modal dialog box at the bottom has a lot of unnecessary white space. The buttons are technically visible, but they're easy to miss on the left side.
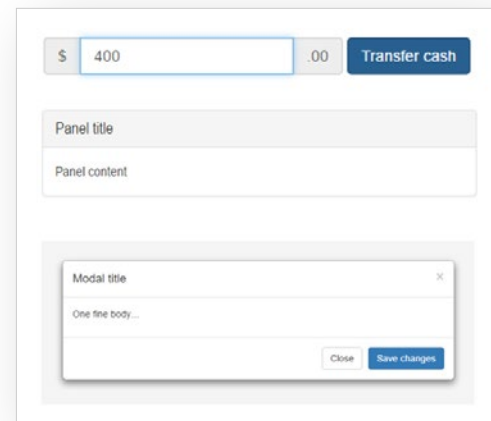
After: Better

> To update UI components, we recommend using Bootstrap, a web application framework with prebuilt UI components. This update took just a few seconds using Bootstrap.

> We corrected the amount of white space by adding some to the top two sections, and reducing it in the modal dialog box.

> Fonts are more legible, with bigger and bolder styles.

> Rounded corners and drop shadows make everything look more attractive and cohesive.

> The top currency input button is now much clearer. And the buttons in the modal dialog are now right aligned, which is where users naturally look for controls.

7 Conclusion

Whether You Refresh or Redesign, Small Changes Can Make a Big Difference

Not ready to completely redesign your embedded dashboards and reports? No problem. Nearly every best practice and example we've outlined here will work on its own or as part of a small refresh.

Dashboard design quick fixes can really up the "wow factor" of your dashboards. You may end up refreshing some colors or swapping out some fonts, but for the most part your data visualizations will stay intact. Start by making a few small changes to your application's dashboards and reports. You'll see how subtle adjustments can add up to a more modern analytics experience.

Additional Resources

> **The Definitive Guide to Dashboard Design**

> **7+ Graphics Libraries to Enhance Your Embedded Analytics**

> **Art of Dashboard Design – 7 Fundamentals to Master**

> **A Product Manager's Checklist for Dashboard Design**

Logi Embedded Analytics:
Purpose-Built for Software Teams

Product teams need intuitive analytics and data visualization capabilities in their applications, purpose-built for every users' unique role and skills. Logi's embedded analytics solutions, by insightsoftware, empower you to design and deploy analytics into the fabric of your organization and products. These analytics integrate with your existing workflows and security models providing a seamless experience where anyone can analyze data, share insights, and make informed decisions.

Learn more at **insightsoftware.com/logi-analytics/**

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