Beautiful Documents: The Beginner’s Guide to Designing Business Documents
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INTRODUCTION

As any chef will tell you, it’s all about presentation. When creating any “composition,” whether it be a gourmet meal or a business document, providing the basic product isn’t enough. The end result must look amazing.

We designed this e-book to help you create appealing documents. In it, we offer our best tips and techniques on designing documents and reports that will wow your customers, your colleagues and your bosses.

Let’s begin by looking at how to use text to make a beautiful document.
CHAPTER 1: TEXT

Fonts

Serif and Sans Serif

Every piece of text is displayed in a font—the complete assortment of type of a particular style and size. Fonts reflect the mood and tone of your document.

(NOTE: If you're sharing this e-book with your graphic designer friends, they may tell you what we're really talking about is typeface, not font — and technically they'd be correct. But these days the two terms are used interchangeably, and we call them fonts here, in part because the Windward design tool, Microsoft® Office, refers to them as fonts.)

Fonts can be classified into two main categories: serif and sans serif.

Serifs are those little lines attached to characters. If a particular font has those lines, it's called a serif font. If it doesn't, it's called sans serif.

This is typed in a serif font, Times New Roman.

This is typed in a sans serif font, Arial.

In general, serif fonts make words easier to read (readability) and sans serif fonts make individual letters easier to discern (legibility).

The Big Myth: Serifs Affect Readability on Computer Screens

Until recently, accepted practice had been:

- **For print, use a serif font**. With the exception of headlines, which are large enough that it's considered okay to use a less "readable" but more "legible" font.
- **For online, use sans serif**. Computer screens have difficulty accurately displaying serif fonts.

A variety of serif and sans serif fonts.
Jakob Nielsen, a well-respected computer usability expert, notes that with the rise of bigger, more high-definition screens, it’s time to change the guidelines. Choosing a font for readability or legibility is no longer the most important concern. Instead, you should choose a font consistent with the document’s contents. This includes looking at:

- **Tone and mood.** If the output is a serious document, you’ll want to choose a classic font with clean lines, such as *Garamond*, as opposed to a decorative font such as *Monotype Corsiva*, which mimics handwriting.

- **Branding and logos.** Is this a company document that includes a standard company logo? The rest of the document doesn’t need to use the exact font contained in the logo, but you should choose one that goes well with the logo or other elements.

For a comprehensive look at font and tones, we highly recommend you visit the Online Writing Lab (OWL) at Purdue’s [Using Fonts with Purpose](#) page.

**One Final Font Note: Money Matters**

There’s an added benefit to actively choosing a font rather than letting your system’s default values reign. If you’re producing a large amount of print documents, the right font choice could save your organization big bucks.

**Text Blocks**

The satirical publication *The Onion* got it right when it wrote *readers shudder when confronted with long blocks of text.* Long paragraphs don’t make a document – or you – sound more educated or important.

Yes, it’s okay to write one-sentence paragraphs.

Take a look at each paragraph of your current document. Each should have just one main thought. If you identify more than one, start a new paragraph.
It's amazing how a few blank lines make a document easier to read.

## Spacing between Text Elements

Did you know there are commonly accepted ratios for spacing of text elements?

Here are guidelines for:

- **Characters.** The spacing for characters within words is part of a font's built-in spacing, so you don't need to concern yourself with this. (But if you're curious about how typographers adjust this manually, check out this quick intro to kerning and letter spacing.)

- **Words.** Unless you see a compelling reason to do otherwise, align text to the left. This is easiest for the person reading the document.

- **Lines.** Most document automation interfaces automatically adjust the amount of space between lines of text. This is known as *leading*. If you have the ability to change the leading, a good rule of thumb is to set the leading to approximately 20 to 30 percent larger than the type size. For example, if you're using 10-point type, the line spacing would be 12 or 13 points.

- **Paragraphs.** Most document automation software automatically adjusts the amount of space between paragraphs. However, there is no commonly accepted rule of thumb for how much space is ideal. The important thing is to take a hard look at the final spacing, and to adjust it for optimal viewing.

## Visual Aids

We read by scanning, so use visual clues to help your readers quickly grasp the content of a document.
Visual cues can be:

- Bullets
- Numbered lists
- Bold text

Separate out key sections with subheads, such as the four main ones (Fonts, Text Blocks, Spacing and Visual Aids) you see in this chapter.

TIP: Do not use underlining purely as a visual cue, such as for emphasis. The person viewing the document, even when it is in print, will expect the underlined text to link to another page.
“Beautiful” probably isn’t the first word that comes to mind when you think about tables in a document. They’re great for displaying data, but they aren’t in the same class as images or other more exciting visual elements. However, beautiful tables can enhance the look of any key document you’ve created.

Tables Versus Charts

Before you read any further, you have a key decision to make: whether to use a table or a chart to display the information. You can usually arrive at that decision quickly by asking yourself one question:

“Am I conveying many individual data points, or am I trying to show an overall trend instead?”

If it’s important that the reader see individual data points, go with a table. If not, you’ll likely want a chart.

For example, if you’re designing an invoice, you’d want a table – a list of each item with its price, quantity, etc. However, if you’re building a graphic for your sales team that shows categories a particular customer is buying, you’d generate a chart showing the most purchased category, the next most purchased, etc.

Here we’ve created a basic table of employees:

<table>
<thead>
<tr>
<th>ID</th>
<th>Last Name</th>
<th>First Name</th>
<th>Title</th>
<th>City</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Davolio</td>
<td>Nancy</td>
<td>Outside Sales Representative and Manager</td>
<td>Seattle</td>
<td>USA</td>
</tr>
<tr>
<td>2</td>
<td>Fuller</td>
<td>Andrew</td>
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<td>USA</td>
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<td>USA</td>
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<td>4</td>
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<td>USA</td>
</tr>
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</tr>
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</tr>
</tbody>
</table>
Now we have a functional table with the desired information, but no one would call it beautiful. Let’s take a look at how to make it easier on the eyes.

NOTE: We generated the examples we’ll be using throughout this book with the Microsoft add-in Windward AutoTag. The design tools we use are all available in the Microsoft Word ribbon.

Cell, Row and Column Dimension Guidelines

Unfortunately, there are no optimal dimensions. As much as we’d love to give you a formula for calculating the height and width of each cell, column and/or row, there is none. It all depends upon the data you’re including in the table. Generally, the cell with the most content will determine the height and width of the adjacent cells. Here are a couple of general guidelines:

- **The larger the cell contents, the more space you’ll want between rows.** Viewers tend to want space between lines of text to be slightly larger than the font of the text. So if the text is, say 11 points, you’ll want at least 13 points from one horizontal line to the next. And with tables, you also need to account for the size of the cell borders.

- **Let the program you’re using do as much of the work as possible.** If you can allow the table-creation tool to automatically set the dimensions according to the cell content, you lessen the risk of data that’s squished into too small an area or lost in a sea of blank space.

- **The most important guideline: Remember to view the output and then try a few adjustments.** Here’s our table after we tweaked the column sizes through trial and error:

```
<table>
<thead>
<tr>
<th>ID</th>
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</tr>
</tbody>
</table>
```
Justifying Data in Rows and Columns

Should your data be aligned to the left in a cell? The right? The center? The top? The bottom?

It depends.

**Horizontal Alignment**

In general, left-justified text is the most natural for the reader. It allows you to quickly scan a table and grasp the information the table contains. Center-justified text should be used sparingly, perhaps for elements you want to stand out from the rest, such as column headers and subheaders.

One major exception to this rule is for currency or other numbers. You'll likely want to right justify content so decimal points or base digits line up vertically in each cell, making it easy to scan and compare data.

**Vertical Alignment**

In a cell vertically center-justified text is typically the easiest to read. The major exception here is when cells in one row contain significantly different amounts of information. In our example below, the first three cells in row1 contain one line each, and the fourth cell has a longer description. In this case, top-justified text tends to be the most readable.

<table>
<thead>
<tr>
<th>ID</th>
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</table>

*Here we've aligned most of the text to the top and the left of each cell for easier scanning. The one exception is the column of numbers.*
Visual Interest

Line after line of black and white data in a table can wear down the reader, so show a little mercy by adding a few visual elements.

Color

One common technique is to add a background color to your chart. Choose two complementary colors, light enough so they don’t interfere with the text readability, and alternate colors for each row. You can add a third color to the title row of your table.

You can also use color to help best represent the data. For instance, if a chart contains numbers, you can display negative numbers in red. Or a table of worldwide employees might use various background colors to indicate regions.

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What a difference color makes! We also bolded column headers, readjusted horizontal cell size and removed vertical borders.

Borders and Subheads

Cell borders are another way to add visual interest. This is another area where there are no hard and fast rules, so experiment with the size of borders both horizontally and vertically.

Also, don’t be afraid of using subheads within a table. If a table contains a large amount of data that you can sort easily into logical groups, use subheads to allow readers to quickly jump from group to group.

Avoid Temptation

A word of caution when it comes to visual interest: you don’t want the enhancements to interfere with the purpose of the table. Display information so that it’s easy for the reader to grasp.
This means avoid any funky shadows, shapes, textures, etc. that detract from the look of the table. The visual elements should make the table easier to read, not more difficult.

**TIP:** w3Schools.com has [a great tutorial page showing how you can improve an HTML table with CSS](https://www.w3schools.com)

### Ordering Data in a Table

Lastly, be sure to give some consideration to the data when determining how to organize it in a table. There are almost as many ways to order data as there are tables, but here are a few examples to help you think about what makes the most logical sense. This can make the document significantly more readable, and therefore more aesthetically pleasing.

**Is the data showing change over time?** If so, your readers are most likely interested in seeing the most recent data first.

**Will a reader want to search for a particular entry?** Then consider organizing the table alphabetically or by date. If chose to organize alphabetically, think about placing the appropriate column first. For example, although we call someone by their first name first and last name last, we typically search by last name, so place that column first.

**Does that table contain data showing various quantities for comparison purposes?** If so, you may want to sort the columns in ascending or descending order.

<table>
<thead>
<tr>
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</tr>
</tbody>
</table>

*Since users will likely be using this table to search for employees by last name, we sorted that column alphabetically.*

Remember at the beginning of the chapter when we asked if, in a given situation, you should create a table or a chart? Now let’s turn our attention to when the answer is the latter.
CHAPTER 3: CHARTS

Charts can be some of the most beautiful elements of a document, especially when compared to tables that are jam-packed with data.

Even if your strength is data and not document design, you can create informative, beautiful charts that wow your audience.

Before You Begin

Step away from the keyboard and ask yourself two important questions:

ONE: Am I conveying individual data points or am I trying to show an overall trend instead?

As we discussed in the previous chapter, if it’s important that the document reader see the individual data points, go with a table. If not, you’ll likely want a chart.

The illustration below shows a clear example of an instance in which you might prefer charts to tables. Here is a table showing 2014 Eurovision voting from the Azerbaijan jurors (view original post):

Can you immediately spot any trends? Probably not. However, it’s a lot easier to see with the data laid out in a chart:
The chart makes it readily apparent that the five jurors appear to show voter collusion, as evidenced by the tight grouping of the data (view the original post, written by Windward’s founder and CTO David Thielen).

**TWO: What is the purpose of my chart?**

Is it to enable the document viewer to identify one key trend? Or compare a variety of information points? Does it allow for many layers of data or just a single one? Once you’ve figured out the chart’s purpose, you’re ready to dig into designing beautiful charts.

**Choose the Correct Chart Type**

![A misleading pie chart.](image)

Take a look at the chart on the left. Notice anything odd about it?

That’s right. The values don’t add up to 100%.

This violates a basic principle of chart design, in which viewers expect pie charts to show how large a slice of one pie – what percentage of the whole – a particular data group "eats." In this case, a bar chart would have been more appropriate.

Hubspot’s fantastic guide Data Visualization 101: How to Design Charts and Graphs provides details on when to use each chart type and offers some design best practices for each.
Place Elements Appropriately

There are standard conventions for placing elements on a chart. For example:

- **Numbers along axes typically go from small to large**, or from oldest to newest in the case of dates.
- For pie charts with dozens of tiny slices, **group the tiny slices into an "other" category** so as not to overwhelm the reader with irrelevant information.
- **When labeling data points, don't show them all**; show just a few where notable events happened.

These conventions support clarity.

Check out the chart below. At first, you likely think that gun deaths in Florida went down after Florida enacted the “stand your ground” law. But look again at the Y axis, and you’ll see a different story.

For more on misleading charts, check out this excellent article, [How to Lie with Data Visualization](#).

Think Small

Data geeks – we get it. You love data and you love showing lots of facts and figures. But sometimes, you need to hold yourself back.

This is often the case with chart size. Bigger charts aren’t more impressive; they’re just bigger. With a smaller chart, the person viewing the document can pick up key information and see the chart in context with other document elements around it.

A good rule of thumb is to make the chart as large as it needs to be for the text to be legible.

Use Effects Sparingly

You’re probably using some sort of document automation software to generate your charts, which means you have some cool visual effects you can apply.

Before you choose the next effect to “spice” up your chart, remember what mama used to say: just because you can doesn’t mean you should. Bevel effects, shape outlines and trend lines may sound good in theory, but look what happens when you put them into practice. You go from this:
Remember that visual effects should enhance your numbers, not detract from them.

Highlight Key Data

A chart, just like a paragraph, should focus on one main idea. If that idea can be conveyed in one sentence, great. If not, use visual cues to highlight key information. (See what we just did there?)

For instance, you can add “weight” (aka thickness) to a set of data points in a line graph when you want to call out a particular series, such as we do in the chart below:
Pay Close Attention to Color

There are millions of colors out there, which means either:

A. You have zillions of wonderful possibilities to create (for you glass-half-full types), or

B. You have zillions of ways to screw it up (for you glass-half-empty types).

Fortunately, there are several principles to help guide your color choices. Here are three key ones:

1. Conventional color combinations. Data can immediately convey information based solely on color choice. When used together, green means go, yellow means slow and red means stop. Red and black ink, when used with numbers/currency is another chart convention (But remember that those with color blindness may have difficulty with certain combinations, especially red/green, so use helpful cues such as text.).

2. Predetermined color combinations. The software you are using to create your chart likely offers a range of options you can choose from. Spend a couple minutes trying a few out for size, and if they all look the same to you, ask a colleague for a second opinion.

3. Company logos. Your marketing department paid very close attention to colors and color combinations when creating your company logo. Take advantage of that knowledge by using those colors, when appropriate, in your charts to reinforce your brand.

By now, you may be asking yourself where you should place these awesome charts in your documents. Let’s move on to document layout.
CHAPTER 4: LAYOUT

The right layout does more than make the output beautiful; it also makes the data and information contained within much easier to grasp.

Document Margins

Yes, you need margins. They help focus the reader on the document’s content and make clean, readable documents.

Unfortunately, no mathematical formula can tell you exactly what size your document margins should be. Entire chapters lay out rules on book page margins, but there’s no corollary for documents that we know of.

Still, there are some accepted guidelines, and you will find them as close as the word processing program on your desktop.

For standard 8.5 x 11 inch documents, the output will look great with Microsoft Word’s default values of 1” margins for top, bottom, left and right.

We prefer this to Microsoft Excel’s default values of 1” for top and bottom and 0.75” for left and right, because multiple elements on a page can make a document look too busy; a wider margin helps make the content it contains easier to view.

Intersect Education
SCORE REPORT

Examinee Name: Jane Doe
Date of Expiration: 3/27/2010
Examinee ID: 12345
Grad. 12
Date of Birth: 2/19/1987
Home Languages: English
Gender: Female
Handedness: Left
Hair: Light Brown
Eye: White
Examiner Name: Tim Tezzer
Test Administered: WAIS-IV (4/30/2009)
Age at Testing: 22 years 2 months
Retest? No
WAIS-IV Comments: Examiner notes and/or comments would go here.

Composite Score Summary

<table>
<thead>
<tr>
<th>Scale</th>
<th>Sum of Standard Scores</th>
<th>Composite Score</th>
<th>Percentile Rank</th>
<th>95% Confidence Interval</th>
<th>Qualitative Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intellectual Compensation</td>
<td>85</td>
<td>110</td>
<td>85</td>
<td>100-110</td>
<td>Superior</td>
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<tr>
<td>Perceptual Reasoning</td>
<td>75</td>
<td>125</td>
<td>65</td>
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<tr>
<td>Working Memory</td>
<td>70</td>
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<td>70</td>
<td>105-118</td>
<td>High Average</td>
</tr>
<tr>
<td>Processing Speed</td>
<td>60</td>
<td>122</td>
<td>60</td>
<td>115-128</td>
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<tr>
<td>Full Scale</td>
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<td>78</td>
<td>117</td>
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<td>112-121</td>
<td>High Average</td>
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</tbody>
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Confidence intervals are based on the Derrill Average SDM. Values reported in the SDM column are based on the examinee’s age. The SDM is an optional composite summary score that is less sensitive to the influence of working memory and processing speed. Because working memory and processing speed are vital in a comprehensive evaluation of cognitive ability, it should be noted that the SDM does not have the breadth of normative coverage as the FSIQ.

An example of how adequate document margins allow the reader to focus on key content.
Three notable exceptions to these guidelines:

1. **Documents** with elements that need more space. If you have content that you’re trying to fit on a single page – such as a table or chart — you may want to shrink the margins. We recommend that you keep them close to at least 0.5 inches, however.

2. **Onscreen documents.** If you know your document will be viewed onscreen and not printed, you can sometimes safely shrink the horizontal margins a bit, to around 0.75 inches.

3. **Bound documents.** If you’re compiling multiple pages into a bound (stapled, VeloBind, etc.) document, you’ll probably want to use more margin space for the inside margins so that binding doesn’t obscure the elements. The spacing will depend upon the type of binding, but it will likely be between 1.25 and 2 inches.

Lay Out Individual Elements Properly

One of the biggest mistakes we see in document layout is when individual elements break in awkward places. A document loses continuity when one row of a table is placed on the next page, when a paragraph of text has a hyphen on nearly every line, or when a caption is on a different page from the image it describes.

Your template software likely has some built-in tools, so take advantage of them to eliminate these problems. These tools may include:

- **Keep Lines Together.** This tool allows you to keep lines of a paragraph together on a page or in a column.
- **Keep With Next.** This is useful for keeping paragraphs or other items together on a page or in a column.
- **Widow/Orphan.** Use this to ensure that if a paragraph breaks across a page or column, at least two lines will be kept together at the beginning and the end.
- **Hyphenation.** Choose whether to allow hyphenation at all or only in some instances. Some software even lets you dictate how many lines in a paragraph are allowed to have hyphens.
• **Allow Row to Break Across Pages.** Control where a table is divided and prevent it from breaking across pages by configuring this command.

• **Header Row Repeat.** If a table absolutely must break across a page, use this tool to give context to data on the subsequent page.

• **Hard Page Breaks.** You can insert a hard page break just before an item to ensure its placement at the top of a page. This may help keep a longer item all together on one page.

You can set these tools to apply globally across your document, but that won’t guarantee you the best layout. Make sure to tweak the output afterward. For example, if your document has a chart followed by a table, you might shrink the chart slightly so that the table does not break across two pages.

**NOTE:** The names above are the names of the tools in Microsoft Office; your template-design software may give different names to these tools.

### Accurately Space and Align Elements with One Another

Remember earlier when we said you don’t have to be a graphic designer to create beautiful layouts? That’s true, but alignment and spacing of elements is one area where many of us struggle with layout. Graphic designers have extensive training and experience in learning what looks best on a page, and you won’t be an expert after simply reading this eBook.

But take heart; you can fool just about anyone by employing a couple of techniques.

#### Technique #1: Use white space to increase comprehension.

Study after study has shown that adequate space between and among elements leads to the reader’s increased comprehension. Just like with margins, there’s no exact mathematical formula for determining “adequate” space, although we have seen a [credible project](#) that suggests a page should be about 50% type and 50% white space.

This project is referring mainly to text-heavy pages instead of pages with charts, tables and other visual elements, however, so you’ll need to experiment to find the best layout for your documents.

**TIP:** When in doubt, follow this rule: err on the side of adding white space.
Technique #2: Deliberately align elements to increase page balance.

Take a look at your document automation software to see what sort of grids and guides it offers. Some programs let you extend element borders (even invisible ones) to the edge of the document so you can more easily line up multiple elements.

You may also be able to place the elements on a grid. This allows you to align center points or borders, and you can use the grid to ensure balanced spacing among three or more elements.

If you don’t have access to grids or guides, no worries. You can create borderless tables to contain elements and then align the items using table properties.

Make the Report Skim-able

The bad news: Despite all your hard work, few people will actually read your document.

The good news: They will skim it instead.

Skimming lets readers jump to the parts that interest them AND it helps them get an understanding of the overall document before they decide which portions to go back and scrutinize.

We’ve already spent a little time on how to use visual aids when working with text blocks, and the same principles apply to making the overall layout “skim-able.”

Some tools you can use:

- Headlines
- Subheads
- Bullets
- Numbered lists
Get Rid of Unnecessary Distractions

When laying out a document, include the elements that need to be included and don’t include the elements that don’t need to be included.

Sounds simple, right?

It’s simple in principle, but in practice it’s tempting to spice up a document by adding background images and other distracting elements. Just as we talked about using effects sparingly when creating charts, the same is true for the overall document.

And while you’re at it, don’t forget to turn off grid lines in your final output.

Use Conditional Visibility When Appropriate

Here’s one layout technique that, when done right, your document recipient may not even be aware you’ve used.

Conditional visibility is when items in a document display only under certain conditions. These can be user-driven, such as when a user chooses to drill down to see more detail, or content-driven, when certain content displays only under certain conditions.

An example of this from one of our own customers is that of South Sound 911, a public safety organization in Pierce County, Washington. Police officers use Windward software when filling out incident reports. If a section doesn’t apply to a particular incident, the officer leaves it blank and the section does not appear on the final document. This cuts down on paper waste and is much easier on the person viewing the report.

Create a Master Template

Lastly, if your template-design tool allows you to create some type of master slide or master template, be sure to take advantage of it when possible. You can set some of the layout properties once (such as margins and footers) and apply them to the entire document, giving it a cohesive, polished look.

Using images is another way to add polish to a document, which leads us to our next chapter.
CHAPTER 5: IMAGES

Images: the quickest and easiest way to add beauty to a document.

We’re not talking about charts or tables, although those also add visual appeal. We’re talking about logos, screen shots, and photos. They’re often colorful, informative, and always wise to consider.

The idea of using images in your report or document may not thrill you, especially if you consider yourself a “data” or “just-the-facts” kind of person. But we encourage you to use images because they:

- Enhance the look of your final documents
- Convey information quickly
- Improve information processing

A Simple Image Example

Before we get into the what, how, and where of including document images, let’s look at the “why.”

Consider two nearly identical reports:

The small addition of a clean and simple image in the header captures the user’s eye and makes the document more beautiful. Images in your document do not have to be mind-blowing to be effective.

Another benefit of using images is that they can entice your readers to pay closer attention to the content. The Nielsen Norman Group, experts in eye-tracking studies, found that people “pay closer attention to photos and other images that contain relevant information.”
Finding Images

If you (or your marketing team) already have images at your disposal, great. You probably don’t have to look far to find company logos, product photos, screenshots, employee and office photos, and images of events relevant to the document’s content.

You can also find and easily download images from the Internet, but a couple words of caution:

- **Keep your images real.** Not all images add to a report or document; some can detract from its impact. The aforementioned study found that users ignore “big, feel-good” images and stock photos of models.

- **Pay attention to copyright.** It exists for a reason: to protect the person who created the image. Just because you can right-click and grab an image from the Internet doesn’t mean you should. Instead, consider purchasing images from a site such as iStock or Shutterstock or using images from Flickr, which clearly spells out the copyright of each work via a Creative Commons license.

Storing Images

When it comes to images in documents, the most important decision you’ll make is WHERE to store them.

**Embedded Document Images**

One option is to embed the images into the document. A copy of the image is stored in the document, so it is always available. The bad news is that it’s always available – even when you don’t want it to be.

**Best Use Case**

For example, suppose you’re generating hundreds of different documents that display your company logo. If the logo changes, you have to go into each individual document and change it. Plus, this increases the size of the document definition, which may be cumbersome.

**Images Stored in a Database**

That’s why it’s often preferable to store the images elsewhere. One option is to store them in your database. This limits the size of the document definition, allows you to change an image once and have the change replicated across all documents, and lets you keep records together.

*If you do store images in a database, you may decide to store them as BLOBs, or Binary Large Objects. You can use Windward to to insert BLOBs stored in a database into your report.*

An Oracle building shaped like a database. Photo Credit: Hakan Dahlstrom, Creative Commons License
Best Use Case

For example, we see customers use this process for keeping track of defects on an assembly line. The customer needs to associate a defect with a time and put it in a final document, so they maintain a separate file system with the images for ease-of-use purposes but store them in a BLOB in order to allow the document process to be fully automated.

But images stored in databases work best when they are not too big. As they get larger in size, queries slow down, performance degrades and images take up much more space than text. Migrating to another database platform or even the same platform but a different version becomes more difficult if images are handled differently in the target platform or version.

Images Stored in a File System

Therefore, you should strongly consider a third option: store images on a file server. File systems are great for storing images because you can easily back them up, update and manipulate the images, and move them to a bigger hard drive if you need more disk space.

For more on the database vs. file server debate, check out this great conversation on StackExchange: What are the best tips for storing images in a database?

And remember, if your images are stored anywhere other than in the template, be careful how you reference them. You’ll need to give as much of a complete path to the image as possible.

That’s why it’s great if your image is stored on the Web; you can simply give the HTTP address, and it will always be available to your document.

TIP: Generating an Excel spreadsheet with images? See “Insert picture into Excel cell” on Stack Overflow.

Sizing Images

Obviously, images don’t do much good in a document if they’re blurry or much too small, so let’s talk for a second about resolution. Here are a couple general guidelines:

• If the document is printed, images should be at least 300 dots per inch (dpi).
• If the document is online, you can get away with a much lower dpi, such as 72 dpi.

Also, when possible, use vector images instead of non-vectored ones. Vector images, such as EPS (Encapsulated PostScript) or AI (Adobe Illustrator), scale much better in the output and typically give you a better resolution. If your company has an art or creative department, they may be able to help you out with this.
Positioning Images

When working with a dynamic document automation solution, positioning becomes crucial. You don’t want to end up with images pushed off the page or in another funky spot.

So at first glance, “pixel-perfect,” absolute positioning, where you place an image at a specific point on the document, sounds great. When the image is in a header or footer, where you can be certain the object will appear, it’s often your best option.

But as your document expands and you get a waterfall effect, images in the body of the document can end up in places you don’t expect – or want.

That’s why we recommend you use relative positioning for most images. Here you use some part of the image (top, bottom, left or right) to align the image with a specific element or point on a page.

Another consideration with images is that you may want to keep another item – specifically, a caption – with them. How you do this will depend upon your document automation solution.

(This is another reason we advocate for avoiding tools like Crystal Reports, because they don’t include the critical “keep together” or “keep with next” command.)

Windward, for instance, allows you to keep images with captions, and you can use borderless tables to position the images relative to other elements.

Final Image Tips

Before we move on to discuss colors, we leave you with a couple tips:

Tip #1: Use non-traditional images. Basic shapes, stylized text, etc. are also images. Keep in mind that images don’t have to be big and colorful to add beauty to your document.

Tip #2: Follow your brand guide. If your company has a brand guide, it likely has a section on using colors that “match” your brand. A simple change to an image — such as editing the color of an icon in the document — can tie the entire document together beautifully.
CHAPTER 6: COLORS

There's no rule that says your business report or document has to be boring in order to be professional. Using color is a fairly simple and quick technique that will give your documents the brilliance they deserve.

Where to Use Color

First, keep in mind that you don't need to go overboard. Just a touch of color here or there can add needed finesse to your output.

Fact #1: It's getting easier to build software...but harder to sell it.

However you define yourself — software provider, solution developer or OEM — there's no denying that:

- Companies with SaaS and mobile tools are upending established software businesses,
- The Internet is boosting the exposure of lower-quality challengers in your space, and
- Advances in development tools and languages mean smart competitors are not only quicker to market but are copycatting many of your coolest features.

A document displaying touches of color.

Colors and Their Meanings

Check out the colors in this search engine optimization (SEO) reporting document:
It’s no coincidence that the designer chose red for warnings, amber for items that need attention, and green for acceptable practices, because most of the world associates these colors with the lights on the ubiquitous traffic signal. As any kindergartner will happily tell you, red means stop, yellow means caution, and green means go.

When using colors in a document, think about how to best represent the data through commonly associated colors. Along with the red/yellow/green example above, you might consider, say, red for losses in a financial report.

Less well-known are business color associations, but they can be just as powerful. Color psychologists – yes, folks make entire careers out of this – have studied the effects of specific colors and how to best use them in business. Did you know that blue represents financial security and stability? We recommend “Your Brand’s True Colors” in Entrepreneur magazine for more info.

Tips for Color Combinations

One of the biggest objections we hear from customers is “I can't use colors in my documents because it’s too difficult to get the color combinations right.” Here is some guidance to help you navigate this obstacle:

1. **Use colors consistently throughout a document.** Ask yourself if a particular color is being used to represent more than one thing in a single document. For example, did you use green to represent a competitor’s market share in an internal document? Check to make sure you don’t use that same green for text emphasizing recommended courses of action for your company.

2. **Monochromes are your friend.** You know those paint color sample strips on display in home improvement stores? They often are “monochromatic,” or colors of the same hue but with different tints, tones, and shades.

   Monochromatic colors are great for indicating intensity – think shades on a weather map representing temperature – and for alternating row background colors in a table, among other things.

   *NOTE: Windward customers can find many monochromatic options for charts and tables right within Microsoft Office.*

3. **Emphasize your company colors.** Your hard-working marketing team has researched colors that combine well and represent your brand. You can use these colors with confidence and get the added benefit of some subliminal messaging. (Did you notice that this paper includes blue heading text and green bullets that match the blue and green of the Windward logo?)

4. **Be understated.** Please, don't confuse “color” with “colorful.” Bright yellows, pinks and oranges have their place, but perhaps not in your document. Adding color via muted tones can make your point without overwhelming the viewer.
5. Use logical and readable combinations. If you’re using colored text on colored backgrounds, keep in mind that the lighter the background and the darker the text, the better the contrast. This will make your document easier to read. The chart’s background colors in this About.com “Contrasting Foreground and Background Colors” article are fairly dark, but it’s a good general guide to readable color combinations:

![Color and Print Table]

**Color and Print**

If your document will be printed instead of read on screen, remember that color can get expensive. You may want to cut down on that cost by using fewer colors in your document. One recommendation is to use colors that work well in various shades, such as darker and lighter blue, to give you more flexibility in design.

Also, keep in mind that the color you see on the screen is not the exact color you will see in print. Part of the reason is that your monitor may distort colors. Another factor is that computer applications such as Microsoft Office use RGB (red, green, blue) to describe colors, but printing presses use CMYK (cyan, magenta, yellow, black) instead. There’s a great explanation of RGB vs. CMYK colors on the Printernational website.

You may also run into the case of print designers referring to Pantone colors, which they use for ink printing. These don’t match exactly match RGB or CMYK indexes. If you’re planning to print and are working with a designer, you may want to check on the color index they’re using and whether or not Pantone equivalents need to be estimated.

**Final Notes on Color**

Lastly, one piece of advice: Don’t rely solely on color to convey information.
No matter how clear and consistent your document colors are, some readers are bound to ignore or misinterpret them. About 8-10% of the U.S. male population has some form of color blindness, so these readers may not be able to see the colors. Older readers tend to struggle with pale blue. Even those with “perfect” eyesight may be viewing your document as a black and white photocopy.

So our final recommendation is to use text and shapes to give context to any color information.

Text, tables, charts, layout, images, color – it seems like there's a lot you need to take into account when creating a stylish document. We have just one final item to add to the list: navigation.
CHAPTER 7: NAVIGATION

Navigation is the final touch that can turn your informative document into a beautiful one. A beautiful document is more likely to be shared, remembered, and can be the cause of wild praise for the creator (that’s you!).

Subheads/Section Titles

We mentioned this concept in our earlier chapter on text, but it’s so important that it’s worth mentioning again:

**We read by scanning, so use visual clues to help your readers quickly grasp the layout content of a document.**

This means separating out key sections with subheads or section titles, such as the four main ones (Subheads, Tables of Contents, Page Numbers and Appendices) you see in this chapter. You allow readers to quickly get a sense of the entire document and to easily navigate to the data or sections that most interest them.

You can also use other “signposts” throughout your document, such as **bold text, italics, • bullets** and the like to make key information stand out.

### Tables of Contents

Tables of contents are for books and not business documents, right?

Actually, we’re big fans of tables of contents when used in appropriate cases. When your document is on the longer side, or the reader might want to skim to see what it contains a table of contents is recommended.

Our developers did this in Windward’s sample report “United States Travel Warnings,” which displays live data from the federal government.
The sample template’s table of contents allows readers to instantly grasp which countries have alerts at any point in time and pinpoint the alerts that may directly affect them.

A table of contents is especially useful when the document is viewed online and the reader can click on each listing to jump directly to the content.

TIP: If you’re designing your report in Microsoft Word, you can use subheads (Heading 1, Heading 2, Heading 3) to automatically generate a table of contents, and you can change how “deep” the table of contents goes.

Page Numbers

It’s easy to overlook including page numbers when designing your document, but in some situations they can greatly improve your document.

Consider using page numbers for long documents, especially if the document is to be printed and shared in a large group meeting.

This way everyone can easily be on the same page – literally – when discussing the document.

Appendices (and a Note on Footnotes)

You’ve worked hard to collect meaningful data, but sometimes the best place for your data isn’t actually in the document or report; it’s in an appendix.

If that massive data table is more likely to overwhelm than to inform, look at placing it in an appendix and summarizing its contents within the main document body.

Appendices are also great places for supporting information that is too large for a footnote, and for information that is outside the scope of the document but still useful.
YOUR DOCUMENT DESIGN TOOLBOX

We hope you’ve found these tips useful. As you apply them, remember to let your template creation software do as much of the work for you as possible.

If you find that your current document automation software makes for a clunky design experience, we invite you to see how easy it is to design dynamic documents in Windward.

At Windward Studios we believe that reporting and document automation should be simple—not overly complex, tedious and technical. Your document deserves to look as impressive as the information they contain.

Windward creates software applications that simplify how businesses design and generate professional documents. Windward provides a unique experience using Microsoft Office to format and edit document templates, and the sophisticated engine pulls data from multiple sources and merges that data into those documents. It’s a hassle-free experience that can actually make generating documents fun.

Improve Your Software Product’s Reporting and Document Generation

Download a free trial of Windward's products or schedule a live demonstration.