Design Principle Sheet

Orientation

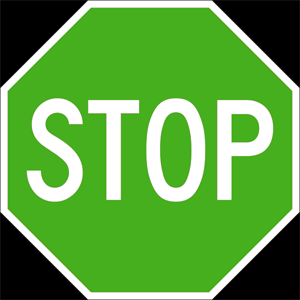
**Orientation**

*Orientation* is the "point of view" or perspective of a design. A conventional orientation may show an object or image from an expected perspective. An unconventional or non-traditional orientation might present the subject from an extreme or unusual perspective. [Lines](https://605.wikispaces.com/Line) can also suggest direction or orientation.  
  
Traditional orientations in portraiture show the subject upright and looking forward or slightly off to one side or, less often, in profile.  
    
  
Non-traditional, modern views might show the subject from an unexpected angle, or at such a close range that only a certain part of the face is seen:  
[](http://farm4.static.flickr.com/3191/2570530201_6eb623d8ec.jpg?v=0)  
  
A more non-traditional view:  


Design Principle Sheet

Color

Color is an integral part of our lives. Nature uses color to warn off potential predators, to attract pollinators, to attract mates and to show fruit is ready for eating. Anyone who drives a car in a city follows traffic rules defined by red, green and amber, no text necessary. In advertising and design, color is used to grab attention and stimulate interest in ways that would be difficult to create by any other means.  Through history color has been used to indicate status, for example nobility and royalty is associated with purple, and color has been an important source of symbolism in many countries.

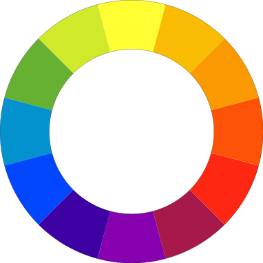


Something’s not quite right here.

So how do you go about choosing the ***right*** colors for your design? There is no single hard and fast rule, but the color wheel is a good place to get started.

**Warm and Cool**

The three traditional primary colors are red, blue and yellow. When you combine these you get the three secondary colors: orange, purple and green. When you combine each secondary color with its neighboring primary, you get the six tertiary colors: yellow-orange, yellow-green, blue-green, blue-purple, red-purple, red-orange. That’s where the color wheel comes from.



The image above shows colors arranged in the order of the spectrum: Red, orange, yellow, green, blue and purple (going anti-clockwise). Red is the warmest and blue is the coolest color. Warm tones appear in the red, orange and yellow side of the spectrum, with the cool tones appearing on the opposite side of the color wheel.

**Monochromatic Color Schemes**

The monochromatic color scheme uses variations in lightness and saturation of a **single** color. This scheme tend to look clean, elegant while producing a soothing effect. The primary color can be integrated with neutral colors such as black, white, or gray. The downside of monochromatic color schemes is that the can sometimes lack contrast and appear less vibrant than some other schemes.





Monochromatic scheme with a blue base

****

Monochromatic scheme with a red base

**Analogous Color Schemes**

The analogous color scheme uses colors that are adjacent to each other on the color wheel. One color is set as the dominant color, the other add richness. The downside again is that there can sometimes be a lack of contrast.

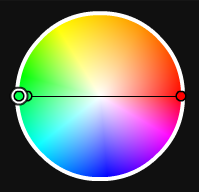




Analogous scheme with a blue base

**Complimentary Color Scheme**

The complementary color scheme is made of two colors that are opposite each other on the color wheel. This scheme is very successful for creating strong contrast and for drawing attention.

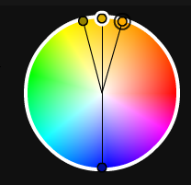
****

****

**Complementary scheme with a light green base**

**Split Complementary Scheme**

The split complementary scheme is a variation of the standard complementary scheme. Take one color on the wheel and two colors adjacent to its complementary. The advantage of this scheme over a complimentary scheme is that it can be a little more sophisticated while still keeping a strong visual contrast.





Split Complementary scheme with a light green base

**Triadic Color Schemes**

The triadic color scheme uses three colors equally spaced around the color wheel. It’s great for providing balance, richness and contrast, although not as much contrast as the complimentary scheme.





Triadic scheme with a blue base

**Tips for Using These Color Schemes**

1. Choose one color to be used in larger amounts than others. You will get a horrible mess if you try to use equal amounts of every color. Be selective about your main or base color and then use the other colors to add interest.



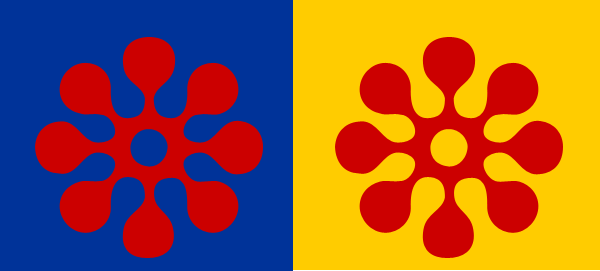
The [By The Pond](http://www.bythepond.co.uk/) site uses a lovely dark-blue grey with complimentary mustard text and highlights.

2. If the colors look too gaudy, subdue them.

3. There are several tools online for creating color schemes, my favorite is [Kuler](http://kuler.adobe.com/). It allows you to play with the colour wheel and choose the color schemes discussed here with one click.

4. \*updated\* Black, white and grey can be used in all of these color schemes. You could think of them as neutrals that can be used with any color scheme.

All colors are influenced by the colors placed around them. The symbol below is the same shade of red on the left and right, but the background color dramatically changes the look. The color scheme on the left is extremely hard on the eye, while on the right the colors work well together and have an uplifting feel.



**Inspiration from Nature**

If you’re looking for some inspiration and guidance for picking colours, turn off the computer and go outside. Mother Nature provides the best color combinations. Look at animals, plants, birds and take note of the amazing color schemes. Take photographs of them and keep them in your morgue file. Color Lovers has an excellent article on [butterfly color schemes](http://www.colourlovers.com/blog/2007/06/01/colorful-beauty-in-nature-butterflies/) and I’ve written in the past about how to [create color palettes from photographs in Photoshop](http://www.sitepoint.com/make-swatches-from-photos-in-photoshop/) and [color schemes from paintings in Kuler](http://www.sitepoint.com/how-to-create-a-color-palette-from-an-image-using-kuler/).

Things to think about when using color in your designs:

1. Are the colors in your design working well together or are they hard on the eye? Is it difficult to read the text on the background?

2. Is your design too cool or too warm for what you want to convey? You can cool down overheated designs with small hints of cool colors (and vice versa).

3. Does your design work in black and white? If it does then a bit of color experimentation can really bring your design to its full potential.

4. If you’re designing for the web (or designing apps), have you thought about [how color affects usability](https://www.sitepoint.com/how-to-boost-usability-with-intelligent-color-choices/)?

Color theory is a huge, huge topic and we’ll be back to visit it plenty more times. For now I hope this has been a helpful overview and that you’ve found the series on principles of design useful. Thanks for reading.

Design Principle Sheet

Golden Ratio

There's a common mathematical ratio found in nature that can be used to create pleasing, natural looking compositions in your design work. We call it the Golden Ratio, although it's also known as the Golden Mean, The Golden Section, or the Greek letter phi. Whether you're an illustrator, [art director](https://www.creativebloq.com/career/art-director-11121180) or graphic designer, it's well worth considering the Golden Ratio on any project.

* [The designer's guide to grid theory](https://www.creativebloq.com/web-design/grid-theory-41411345)

In this article, we'll explain what it is, how you can use it, and point to some great resources for further inspiration and study...

### What is the Golden Ratio?

Closely related to the [Fibonacci Sequence](http://en.wikipedia.org/wiki/Fibonacci_number) (which you may remember from either your school mathematics lessons or Dan Brown's novel The Da Vinci Code), the Golden Ratio describes the perfectly symmetrical relationship between two proportions.

Approximately equal to a 1:1.61 ratio, the Golden Ratio can be illustrated using a Golden Rectangle: a large rectangle consisting of a square (with sides equal in length to the shortest length of the rectangle) and a smaller rectangle.

The side lengths of a Golden Rectangle are in the Golden Ratio

If you remove this square from the rectangle, you'll be left with another, smaller Golden Rectangle. This could continue infinitely, like Fibonacci numbers – which work in reverse. (Adding a square equal to the length of the longest side of the rectangle gets you increasingly closer to a Golden Rectangle and the Golden Ratio.)

In the Fibonacci Sequence (0, 1, 1, 2, 3, 5, 8, 13, ...) each term is the sum of the previous two, and the ratio becomes increasingly closer to the Golden Ratio

Plotting the relationships in scale provides us with a spiral that can be seen in nature

### Golden Ratio in use

It's believed that the Golden Ratio has been in use for at least 4,000 years in human art and design. However, it may be even longer than that – some people argue that the Ancient Egyptians used the principle to build the pyramids.

* [10 iconic examples of brutalist architecture](https://www.creativebloq.com/features/10-iconic-examples-of-brutalist-architecture)

In more contemporary times, the Golden Ratio can be observed in music, art, and design all around you. By applying a similar working methodology you can bring the same design sensibilities to your own work. Let's take a look at a couple of examples to inspire you.

ADVERTISING

### Greek architecture

Ancient Greek architecture uses the Golden Ratio to determine pleasing dimensions

Ancient Greek architecture used the Golden Ratio to determine pleasing dimensional relationships between the width of a building and its height, the size of the portico and even the position of the columns supporting the structure.

The final result is a building that feels entirely in proportion. The neo-classical architecture movement reused these principles too.

### The Last Supper

Leonardo da Vinci made extensive use of the Golden Ratio

Leonardo da Vinci, like many other artists throughout the ages, made extensive use of the Golden Ratio to create pleasing compositions.

In The Last Supper, the figures are arranged in the lower two thirds (the larger of the two parts of the Golden Ratio), and the position of Jesus is perfectly plotted by arranging golden rectangles across the canvas.

### Nature

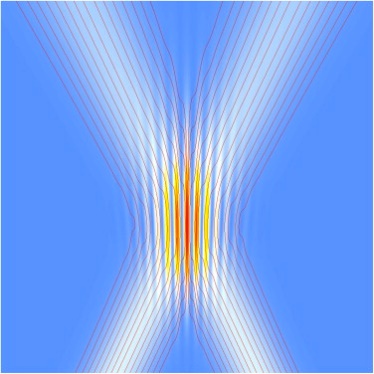
There are also numerous examples of the Golden Ratio in nature – you can observe it all around you. Flowers, sea shells, pineapples and even honeycombs all exhibit the same principle ratio in their makeup.

Design Principle Sheet

Interference Effects

# [**Principles of Design #46 – Interference Effects**](https://www.doctordisruption.com/design/principles-of-design-46-interference-effects/)

Nov 25 2012

[](https://www.doctordisruption.com/wp-content/uploads/2012/11/1-s2.0-S0003491611001837-gr1.jpg)

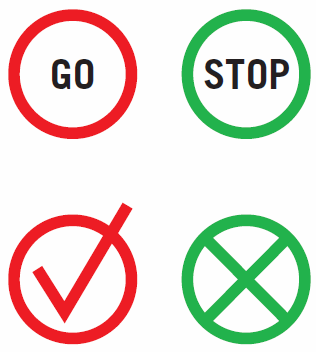
Interference effects are the name given to the slowing of mental processing (with diminished accuracy) when there are competing mental processes. They occur when two or more perceptual or cognitive processes are in conflict, reflecting the multiple systems used by the brain to process information independently of one another. The outputs of these systems are communicated to working memory for interpretation when there are relevant goals. When they are congruent. interpretation is quick and performance is optimal, but when they are incongruent interference occurs and additional processing and time is needed to resolve the conflict, leading to a negative impact on performance.

[](https://www.doctordisruption.com/wp-content/uploads/2012/11/stroop-effect.jpg)

Reading the words aloud is much easier than naming the colours as the mental process for reading is more practiced and automatic

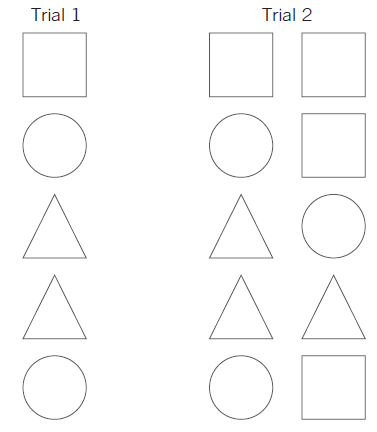
Interference effects are the basis of all implicit tests, and one of the explanations for verbal overshadowing (the decline in accuracy of identification of criminals following requests for descriptions). There are a number of different interference effects which have been researched:

Stroop interference is the effect of an irrelevant aspect of a stimulus triggering a mental process that then interferes with more relevant processes. In the classic stroop test, the time it takes to name the colour of a word is greater when the meaning and colour of the words conflict, or in more recent applications when the emotional salience of a word conflicts with the current state of the test subject.

[](https://www.doctordisruption.com/wp-content/uploads/2012/11/1.gif)

For those who have learned that red means stop and green means go, the incongruence in this image creates interference

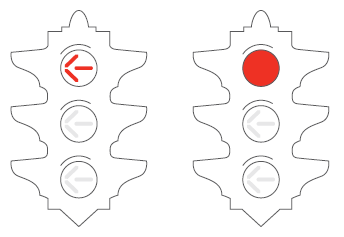
Garner interference occurs when an irrelevant variation of a stimulus triggers mental interference in more relevant stimulus processing, such as when the time take to name shapes is greater when they are placed next to other shapes which change between presentations.

[](https://www.doctordisruption.com/wp-content/uploads/2012/11/3.gif)

Naming the column of shapes which stand alone is easier and quicker than naming either of the columns located together

Proactive interference is when existing memories interfere with learning, as happens, for example, when learning a new language many errors are due to the application of native language grammar to the new language.

Retroactive interference happens when learning interferes with existing memories, as when learning a new phone number, phone numbers already in memory can suffer interference.

[](https://www.doctordisruption.com/wp-content/uploads/2012/11/1a.gif)

If you have learned that a traffic arrow means go, then a red arrow in a new traffic light can create very dangerous interference and confusion

For designers, the lesson is to prevent interference by avoiding designs that create conflicting mental processes. The most common are conflicting colour combinations or the close proximity of conflicting information (two icons will blend or group if they are placed too close together, so make sure that they are congruent if this is part of the design). Similarly, if a door sign says push, a door handle might imply ‘pull’ and conflict.

Designers can minimise interference effects on learning by mixing the modes and channels of instruction and making sure learning time is broken up with frequent rest periods.

Design Principle Sheet

Alignment

## Design Principles: Alignment

Graphic design is about more than just placing text and elements and [**choosing typefaces**](https://blog.thepapermillstore.com/dos-donts-choosing-typeface) and [**color palettes**](https://blog.thepapermillstore.com/spring-summer-2015-showcase/). Like any field, there are best practices and principles you can (and should!) follow to make sure you put forth your best work every time.

There are eight graphic design principles that can help improve your designs, and we’ll talk about each one in turn. These principles aren’t even limited to graphic design – keeping them in mind can even help improve your scrapbook pages and homemade cards! For now, let’s focus on a simple one: alignment.

## What is Alignment?

Alignment refers to placing text and other design elements on a page so they line up. It helps to create order, organize your elements, create visual connections, and improve the readability of your design.

Alignment is largely invisible – chances are, you don’t look at a design and think “wow! That poster is really well aligned!”, but you’d certainly notice if that poster had poor alignment. Think about it like you think about the alignment of your car wheels – when they’re properly aligned you enjoy a smooth ride, but you definitely notice when your car starts pulling to one side.

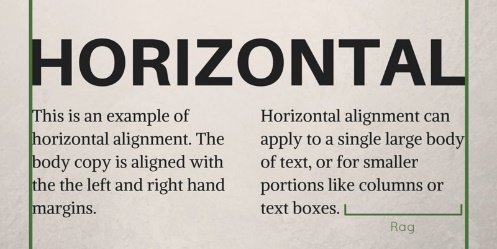
## Types of Alignment

There are several types of alignment, and the type you use will ultimately depend on your design.

Here are some of the most common formats:

### **Horizontal Alignment**

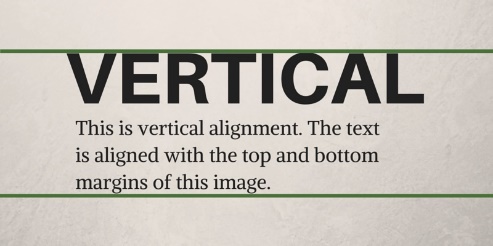
If something is horizontally aligned, that means that either the left or right (or both!) margins are equal. Horizontal alignment can apply across an entire page or in columns.

**[](https://blog.thepapermillstore.com/wp-content/uploads/2015/06/Horizontal-Alignment.jpg)**

Horizontally aligned items can be flush with the left or right margins. Just remember to keep an eye on “rag” (the white space left at the end of a left justified line of text) – too much rag can create a sense of visual misalignment and hinder the readability and visual appeal of your design.

### **Vertical Alignment**

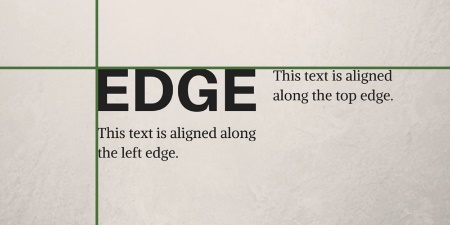
In vertical alignment, your text or other design elements are lined up with the top and/or bottom margins of the page.

**[](https://blog.thepapermillstore.com/wp-content/uploads/2015/06/Vertical-Alignment.jpg)**

Like horizontal alignment, vertical alignment can apply to the whole page or portions of it.

### **Edge Alignment**

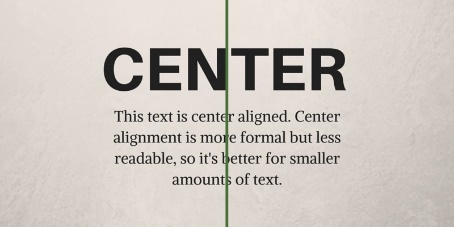
Edge alignment occurs when your text and design elements are lined up with each other’s top, bottom, or side edges.

**[](https://blog.thepapermillstore.com/wp-content/uploads/2015/06/Edge-Alignment.jpg)**

Unlike horizontal or vertical alignment, edge alignment isn’t affected by the page margin.

### **Center Alignment**

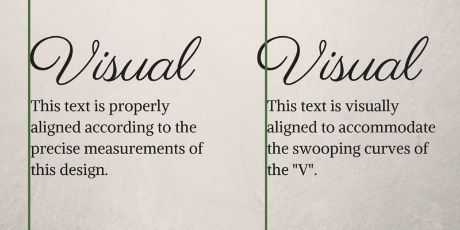
Center alignment is exactly what it sounds like – your elements are aligned along a central axis.

**[](https://blog.thepapermillstore.com/wp-content/uploads/2015/06/Center-Alignment.jpg)**

Center alignment is a little more formal, which is why you often see it on things like wedding invitations. Center alignment isn’t ideal for large bodies of text because it’s also less readable; each line of text starts in a different place, so your eye doesn’t follow the words as easily or naturally.

### **Visual/Optical Alignment**

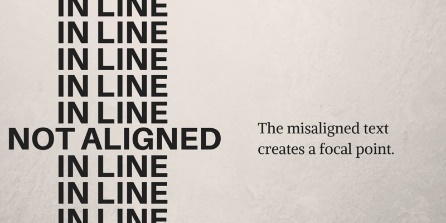
Sometimes, an element can be properly aligned based on measurements, but it appears misaligned because of the design of the specific element. This is particularly common with rounded elements like circular shapes or large, curly letters.

**[](https://blog.thepapermillstore.com/wp-content/uploads/2015/06/Visual-Alignment.jpg)**

Visual or optical alignment occurs when something looks properly aligned, but may not necessarily be properly aligned according to the precise measurements of your design. Alignment is all about the visual, so if something appears misaligned, don’t be afraid to move it to where it looks like it should be.

## Breaking Alignment

Picasso had it right attitude: “Learn the rules like a pro, so you can break them like an artist”. After all, what good are the rules if you can’t break them once in awhile? Alignment helps make your design look more organized and professional, but if your design benefits from breaking or using a different type of alignment, go for it!

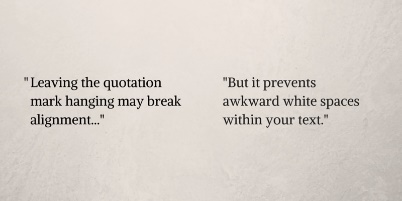
**[](https://blog.thepapermillstore.com/wp-content/uploads/2015/06/Breaking-Alignment.jpg)**

Breaking alignment for a specific element can help create a focal point and draw attention to a particular aspect of your design. It can also help create contrast (another principle we’ll talk about later).

## Alignment Tips

Alignment may seem straightforward, but there are a few things you should keep in mind:

1. **Poor alignment can be worse than no alignment at all.** Check out[**these examples**](http://desktoppub.about.com/od/alignment/ss/alignment.htm) and you’ll understand exactly why. It’s like putting raisins in your cookies – sometimes, it’s better to have no cookies at all (sorry if you actually like raisins in your cookies).
2. **Consider your content.** Left horizontal alignment is the most common for a reason – because that’s how we read. If you have a large amount of text left alignment is the way to go, but if you only have a little bit of text (say a business card, invitation, or flyer), you could try using right or center alignment instead.
3. **Use a grid.** Most design tools or software allow you to enable grid overlays, and some can even snap your elements onto your grid. However, visual alignment is more important than precise alignment, so if something looks off, don’t be afraid to forget the grid.
4. **If your text includes a quotation mark, let it hang.**

**[](https://blog.thepapermillstore.com/wp-content/uploads/2015/06/Hanging-Quotation-Mark-Alignment.jpg)**

Aligning or nesting your quotation marks along the same edge leaves an awkward white space within your text, while letting it hang will improve optical flow and readability.

## The Bottom Line

Properly aligning your design is an easy way to make your project look more polished and professional, but breaking alignment when it’s appropriate can help create a focal point and demonstrate your creative genius. It’s all about understanding your project, its content, and your client, and creating a design that suits their needs.

Don’t worry too much about staying inside the lines! How your design looks and feels is what’s important, and sometimes that means breaking alignment or prioritizing visual alignment over precise measurements.

Design Principle Sheet

Propositional Density

 Strictly speaking, propositional density refers to information flow from a design and is the ratio of “information” conveyed by a design per unit element of that design. High propositional density is associated with designs that are more interesting, stimulating and memorable. For example, double entrendres, puns and other jokes are usually funny because they convey multiple possible interpretations and meanings.

In design, there are two types of proposition, surface propositions that make up the perceptible elements of a design and deep propositions that are the underlying (and sometimes hidden) meanings that are conveyed by the surface propositions. In mathematical terms, it can be estimated by dividing the number of deep propositions (meanings) by the number of surface propositions (design elements). We suggest you to contact [logoorbit – custom logo design](https://www.logoorbit.com/) and let them advice you on the logo that best suits you company.

[](https://www.doctordisruption.com/wp-content/uploads/2015/12/fedex_logo.jpg)

For example, the WWF and FedEx logos have relatively higher propositional density than many other logos and are more interesting and engaging because of this (e.g., the hidden arrow in the FedEx logo). Another example is the modern Apple logo.

[](https://www.doctordisruption.com/wp-content/uploads/2015/12/Official_Apple_Logo_2013_Pictures_5_HD_Wallpapers.png)

The surface propositions of this logo are the body of the apple, top leaf and missing chunk (so really only three elements). However, the meanings conveyed by these (the deep propositions) include references to a healthy fruit, the tree of knowledge, Sir Isaac Newton’s “aha” moment (which was the basis of the very first Apple logo), “an apple a day keeps the doctor away”, teacher’s pet and the ordinariness/every day nature of an apple (compared with the complexity of technology where sometimes you need extra help from [androidface.com](http://www.androidface.com/) experts). These deeply layered meanings make the logo engaging to look at and easy to remember.

One of the most frequently cited recent examples of high propositional density (discussed by Lidwell, Holden & Butler) is the logo from Barack Obama’s 2008 campaign.

[](https://www.doctordisruption.com/wp-content/uploads/2015/12/PropositionalDensity.jpg)

The surface elements of this design are the blue circle and the red and white lines that cut across it. However these relatively simple elements convey very rich meanings (deep propositions) that reference stability (the circle), Obama (the “O”), unity, a landscape as well as the American flag and patriotism (the red and white lines), the sun rising and hope (the centre of the circle), the sky (the blue) and many more.

Propositional density is an important design consideration and one that adds interest, engagement and memorability to a design, as well as keeping semioticians in a job. Maximising the number of deep propositions in a design will always make it more interesting as long as the meanings are complementary and do not contradict each other (which leads to confusion).

The more richly layered are the meanings of even a simple design, the more successful it will be. The same applies to brands. As I argue in Brand esSense the more connected and layered the meanings that a brand conveys, the more strongly will it resonate with customers and the richer the mental connections will be making it more likely to be “top of mind”.