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Do-It-Yourself Billion Dollar Graphics

Turn Your Words and Data Into Powerful Visuals

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ABOUT THE AUTHOR



Mike Parkinson has spearheaded multi-billion dollar projects and created thousands of graphics resulting in billions of dollars in increased revenue for his clients. He is a multi-published author and is often requested to speak at national conferences, large and small companies, and graphic industry events.

Mike started his formal design training at the Baltimore School for the Arts. After four years of fine arts education, he attended the University of Maryland Baltimore County's Digital Arts

Program. Upon graduation, he was hired as a graphic designer at a medical training company, where he was promoted to art director. Using his knowledge and understanding of visual communication, Mike has supported trial attorneys and created ad campaigns, tutorials, corporate briefings, Web portals, medical training software, and more. He was invited to become part owner of 24 Hour Company in 1999. Mike leveraged his design experience to help his partners transform the company into the industry leader. For over 20 years, Mike has helped Lockheed Martin, Dell, HP, Motorola, Raytheon, Northrop Grumman, BAE Systems, the National Security Agency and many other large and small companies and organizations succeed using visual communication.

Mike actively shares his graphic secrets with other professionals to help them realize their goals and dreams through better visual communication. In 2006, he founded Billion Dollar Graphics (www.BillionDollarGraphics.com) to offer articles, books, tools, and resources that provide tips, tricks, strategies, and best practices to non-designers and designers alike. In 2012, he launched and sold Get My Graphic to a leading learning company. Mike's goal is to empower *everyone* to use clear, compelling graphics to achieve their success.

DEDICATION

This book is dedicated to my wife, Jennifer.

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INTRODUCTION: The Power of Graphics



What we see has a profound effect on what we do, how we feel, and who we are. Through experience and experimentation, we continually increase our understanding of the visual world and how we are influenced by it. Psychologist Albert Mehrabian demonstrated that 93% of communication is nonverbal.* Studies find that the human brain deciphers image elements simultaneously, while language is decoded in a linear, sequential manner taking more time to process. Our minds react differently to visual stimuli.

Relatively speaking, in terms of communication, textual ubiquity is brand new. Thanks to millions of years of evolution, we are genetically wired to respond differently to visuals than text. For example, humans have an innate fondness for images of wide, open landscapes, which evoke an instant sense of well-being and contentment. Psychologists hypothesize that this almost universal response stems from the years our ancestors spent on the savannas in Africa.¹

People think using pictures. John Berger, media theorist, writes in his book *Ways* of Seeing (Penguin Books, 1972), "Seeing comes before words ... The child looks and recognizes before it can speak." Dr. Lynell Burmark, Ph.D. Associate at the Thornburg Center for Professional Development and writer of several books and papers on visual literacy, said, "... unless our words, concepts, ideas are hooked

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According to a study by the United States Armed Forces, 83% of what we learn is through our eyes.

^{*}Dr. Mehrabian notes that the actual percentage varies situationally but nonverbal communication carries great weight. 1. Stevenson Johnson, "Beauty and the Beastly PC, The Graphics on Your Screen Can Affect the Way You Feel—and Think," Discover Volume 25: Number 5 (May 2004): 20-21.

onto an image, they will go in one ear, sail through the brain, and go out the other ear. Words are processed by our short-term memory where we can only retain about 7 bits of information (plus or minus 2). This is why, by the way, that we have 7-digit phone numbers. Images, on the other hand, go directly into long-term memory where they are indelibly etched." Therefore, it is not surprising that it is much easier to show a circle than describe it.



a curved line with every point equal distance from the center

When it comes to quick, clear communication, visuals trump text almost every time. Presented with the following textual and visual information, are you afraid to pet this dog?





The very same visual elements that we are indelibly drawn to and so quickly absorb not only communicate data more efficiently and effectively but also affect us emotionally. For instance, research shows exposure to the color red can heighten our pulse and breathing rates.

What is your reaction to the picture on the left? How do you feel when you look at this picture? How quickly did you feel that way? Can you see how this image could be used to immediately elicit a strong emotional response and influence the viewer? If I were to textually describe this picture, your emotional reaction would not be as strong, and it would take more time for you to digest the information. J. Francis Davis, an adult educator and media education specialist, captured it well when he said, "... in our culture pictures have become tools used to elicit specific and planned emotional reactions in the people who see them." Visuals are not only excellent communicators but also quickly affect us psychologically and physiologically.

Don Norman, author of *Emotional Design*, said in a *Discover* magazine article, "Beauty and the Beastly PC: The Graphics on Your Computer Screen Can Affect the Way You Feel—and Think,"

"I started out as an engineer, and I thought that what was really important was that something worked. Appearance—how could that matter? And yet for some reason, I would still buy attractive things, even if they didn't work as well as the less attractive ones. This puzzled me. In the last two years, I've finally come to understand that it's a result of the extremely tight coupling between emotion and cognition. Emotion is about judging the world, and cognition is about understanding. They can't be separated."

How many times have you heard, "I didn't believe it until I saw it." Studies show that the old saying "seeing is believing" is mostly true. Of course, we know that what we see can be manipulated, but the point is that visuals are persuasive. The Stanford Persuasive Technology Lab asked 2,440 participants how they evaluated the credibility of websites they were shown. Almost half (46.1%) said the website's design (color, graphics, layout, etc.) was the number one criterion for discerning the *credibility* of the presented material. The following are some of the captured participant comments:

"This site is more credible. I find it to be much more professional looking." — M, 38, Washington

"More pleasing graphics, higher-quality look and feel \dots " — F, 52, Tennessee

"Just looks more credible." — M, 24, New Jersey

"I know this is superficial, but the first thing that struck me is the color difference. The ... site is a soothing green (sort of like money) while the [other] site is a jarring purple." — M, 56, Virginia

The ability of visual stimuli to communicate and influence is undeniable and inescapable. Through evolution, human beings are compelled to view and disseminate visuals. Recognizing the importance of visual communication is key to your success. Allen Ginsberg, poet and author, stated, "Whoever controls the media—the images—controls the culture." As early as the late nineteenth century, advertisers, based on their collective experience, were convinced that illustrations sold goods. World War II propaganda posters were very effective at manipulating popular opinion.



"Patrick Renvoise, cofounder of SalesBrain, LLC and co-author of Neuromarketing: Is There a "Buy Button" in the Brain? Selling to the Old Brain for Instant Success, says we should rethink marketing to reflect current brain understanding. To start with, marketing should be more visual and less verbal. Areas of the brain are much older than those of language, Renvoise says. That has implications for anyone attempting to influence decision makers. 'A lot of entrepreneurs talk about their benefit or solution and don't use a strong visual metaphor,' Renvoise says. 'And it's very hard to convince people using words when their organ of decision is primarily vision."

(Mark Henricks, "Gray Matters," *Entrepreneur* [January 2005]: 70-73)



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"John Phillip Jones, a professor of advertising at Syracuse University in New York, says that the brain studies suggest that most ads need emotional appeal to get people to pay attention long enough to get in the rational selling proposition."

(Mark Henricks, "Gray Matters," *Entrepreneur* [January 2005]: 70-73) The Sunday *New York Times* published "Good as a Gun: When Cameras Define a War," an article that effectively dealt with how the images photojournalists capture have influenced world affairs. Despite the best efforts of politicians, commanders, generals, and others involved with the war efforts, it was imagery that became the catalyst for some of the most pronounced changes. Reading or hearing about a situation is very different from seeing it.

In 1986, a 3M-sponsored study at the University of Minnesota School of Management found that **presenters who use visual aids are 43% more effective in persuading audience members to take a desired course of action** than presenters who don't use visuals. The goal of the experiment was to persuade undergraduates to commit their time and money to attending time management seminars. Presenters of various skill levels participated. Researchers found that average presenters who used visual aids were as effective as more advanced presenters using no visuals. In addition, the study found that the audience *expected* the advanced presenters to include professional, quality visuals. What about you? Have you noticed the increase in visual aids during presentations? Do you prefer presentations with or without visuals?²

Human communication has existed for about 30,000 years. In the beginning of recorded history, the vast majority of what we communicated was not text based.³ Textual communication has been with us in one form or another for only 3,700 years. With the invention of tools like Gutenberg's movable type printing press in 1450, text took center stage. Graphics were too costly to include. As printing costs dropped, graphics soon resurfaced and their frequency is rising. In 1995, Charles Brumback, the chairman of the Newspaper Association of America, said, "as newspaper penetration falls ... the culture itself moves from textual to visual

^{2. (}Reworded but from) Jon Hanke, The Psychology of Presentation Visuals, www.presentations.com.

^{3.} Duncan Davies, Diana Bathurst, and Robin Bathurst, *The Telling Image The Changing Balance between Pictures and Words in a Technological Age* (Oxford: Clarendon Press, 1990).

literacy."⁴ Gunther Kress is a Professor of English and Education at the School of Education, University of London. His research confirms this changeover. As an example, Kress compares science textbooks from 1936 and 1988 showing that textbooks have progressed from a majority of text to a majority of graphics.⁵

The change isn't limited to textbooks and newspapers. Signs, maps, instructions, schematics, icons, symbols, and packaging sell products, warn of possible hazards, and give visual direction when words alone are not sufficient. Graphics are found on websites, TV shows, appliances, and computers; in vehicles and books; and at museums, malls, restaurants, and grocery stores. More and more professions that rely heavily on communication and persuasion are embracing graphics as a tool of choice. In the *Boston Globe* article, "Courtroom Graphics Come of Cyber-Age," author Sacha Pfeiffer found that "... new technologies—and a new willingness in legal circles to embrace them—have taken the use of visual images in the courtroom to a level unimaginable even a decade ago ... The result is a slow but significant shift in the way many trial lawyers, who historically have relied largely on their verbal skills to sway juries, try cases ... More prosecutors see high-tech graphics not as a luxury, but as a necessity."

Graphic communication is more ubiquitous than ever before. Why? Because graphics do what text alone cannot do. They *quickly* affect us both cognitively and emotionally:

- Cognitively: Graphics expedite and increase our level of communication. They increase comprehension, recollection, and retention. Visual clues help us decode text and attract attention to information or direct attention increasing the likelihood that the audience will remember.⁶
- 2) Emotionally: Pictures enhance or affect emotions and attitudes.⁷ Graphics engage our imagination and heighten our creative thinking by stimulating other areas of our brain (which in turn leads to a more profound and accurate understanding of the presented material).⁸ It is no secret that emotions influence decision-making:

"(Emotions) play an essential role in decision making, perception, learning, and more ... they influence the very mechanisms of rational thinking."⁹



The motion picture industry uses storyboards or animatics to tell the story prior to filming. Actions, framing, pacing, lighting, and a host of critical details are communicated to the production crew and actors using storyboards and animatics.

^{4.} M. Fitzgerald, "NAA Leaders Disagree Over Value Cyberspace," *International Federation of Newspaper Publishers Research Association* 128(12) (1995): 48-49.

^{5. &}quot;English' at the Crossroads: Rethinking Curricula of Communication in the Context of a Turn to the Visual"
6. W.H. Levie and R. Lentz, "Effects of Text Illustrations: A Review of Research," *Educational Communications and Technology Journal* 30 (4) (1982): 195-232.

^{7.} W.H. Levie and R. Lentz, "Effects of Text Illustrations: A Review of Research," *Educational Communications and Technology Journal* 30 (4) (1982): 195-232.

^{8.} D. Bobrow and D. Norman, "Some Principles of Memory Schemata," (in D. Bobrow and A.Collins [eds.]), *Representa*tion and Understanding: Studies in Cognitive Science (New York: Academic Press, 1975): 131-149.

and D. Rumelhart, "Schemata: The Building Blocks of Cognition," (in R.J. Spiro, B.C. Bruce and W.F. Brewer [eds.]), *Theoretical Issues in Reading Comprehension* (Hillsdale, New Jersey: Lawrence Erlbaum Associate, 1980), 33-58.

^{9.} H. van Oostendorp, J. Preece and A.G. Arnold (guest editorial), "Designing Multimedia for Human Needs and Capabilities," *Interacting with Computers* Volume 12, Issue 1 (September 1999): 1-5.

QUICK NOTE

According to Dale Carnegie Training, we should use graphics to explain complicated concepts. Graphics allow the audience to follow at their own speed. Visuals accommodate all learning styles. Behavioral Psychologists agree that most of our decisions are based on intuitive judgment and emotions. Herbert A. Simon, Nobel Prize winning scholar at the Carnegie Mellon Institute in Pittsburgh, studied corporate decision-making and found that people often ignored formal decision-making models because of time constraints, incomplete information, the inability to calculate consequences, and other variables. Intuitive judgment was the process for most decisions. Neurologist Antonio Damasio studied research on patients with damaged ventromedial frontal cortices of the brain, which impaired their ability to feel but left their ability to think analytically intact. Damasio discovered that the patients were unable to make rational decisions even though their ability to reason was fully functional. He concluded that reasoning "depends, to a considerable extent, on a continual ability to experience feelings."¹⁰

Psychologists Amos Twersky and Nobel Prize winner Daniel Kahnerman demonstrated that decision-making also depended on how the problems were framed or described, which results in predictable cognitive patterns and errors in judgment. Consider the following example:

"A bat and a ball cost \$1.10 in total. The bat costs \$1 more than the ball. How much does the ball cost?"¹⁰

The question is asked in a way that clouds the correct answer. If the question were worded as follows:

A bat and a ball cost \$1.10 in total. The bat cost \$1.05. How much does the ball cost?

The answer would be obvious: 5¢. Much as phraseology influences the response to a question, how and what you show influences the audience's response.



10. Jayme A. Sokolow, "How Do Reviewers Really Evaluate Your Proposal? What the Cognitive Science of Heuristics Tells Us About Making Decisions," *Journal of the Association of Proposal Management Professionals* (Spring/Summer 2004): 34-50.

INTRODUCTION: THE POWER OF GRAPHICS

So visuals are processed faster than text, graphics quickly affect our emotions, and our emotions greatly affect our decision-making. If most of our decisions are based on relatively quick intuitional judgment and emotions, then how many decisions are influenced by visually appealing, easily digested graphics? The answer is no secret to advertisers.

Billions of dollars are spent annually to find the right imagery to sell a product, service, or idea. The U.S. military spent \$598 million in 2003 on advertising to increase "brand identity" and meet their annual recruitment goals. Nike spent \$269 million in 2001 on its image to sell more products. Anheuser-Busch spent \$440 million to promote its products in 2001. Pepsi budgeted over \$1 billion in 2001 on its image. Not to be outdone, Coca-Cola budgeted \$1.4 billion for its image in the same year. The food industry spent over \$12 billion on advertising and image in 2010 (over \$4 billion of that was spent by fast food restaurants). Graphics help create "brand identity." Visuals paint the picture of who the advertiser is, what they stand for, and how the audience may benefit. Graphics sell because of their ability to influence. How you use graphics greatly affects how you and your business are perceived.

Study after study, experiment after experiment has proven graphics have immense influence over the audience's perception of the subject matter and, by association, the presenter (the person, place, or thing most associated with the graphic) because of these neurological and evolutionary factors. The audience's understanding of the presented material, opinion of the presented material and the presenter, and their emotional state are crucial factors in any decision they will make. Without a doubt, **graphics greatly influence an audience's decisions.** Whoever properly wields this intelligence has a powerful advantage over their competition.

Larry Tracy, who now trains corporate executives to make oral presentations for government contracts, headed the Pentagon's top briefing team and worked for years with the Department of State. He was aware that graphics were so influential in the government's decision to purchase goods and services that bad buying decisions were made based on the quality of the visuals in the presented materials. This has in turn led to the government, at times, putting constraints on presented graphics by requiring black and white submissions or even requiring that no graphics be used in a presentation to reduce the likelihood of highquality, polished graphics unfairly persuading evaluators.

I spent many years analyzing how the proposal industry works (an industry that focuses on the submission of written and oral presentations to secure work that will increase or maintain a company's revenue). I found that the priority of graphic development increases as award value rises. This industry understands the influence that graphics have on their audience. It is common knowledge to companies like Northrop Grumman, Raytheon, Boeing, and Lockheed Martin that graphics are an essential part of winning new government business. In fact, it



According to studies performed at the Wharton School at the University of Pennsylvania, the University of Minnesota Management Information Systems Research Center, and 3M:

- People agree more with a position when presented with visuals.
- People will pay closer attention and react more positively when visuals are used.
- The quality of a meeting is increased by the use of visuals.



"'Fifteen years ago, companies competed on price. Today it's quality. Tomorrow it's design.'—Bob Hayes, professor emeritus at Harvard Business School"

(Tom Peters, *Design* [DK Publishing, Inc., 2005]) is not uncommon, when exceptional graphics are used, for government evaluators to commend the presenter on their use of graphics.

Flags, eagles, and other symbols of patriotism are often included on proposal covers simply because of the positive emotional influence patriotic imagery has on government evaluators. Part of the cover's goal is to instantly establish that the presenter is a supportive, trustworthy, reliable patriot. As a result, the government evaluator is more likely to be in a positive, agreeable state of mind when reading the proposal. As stated earlier, emotions influence the very mechanisms of rational thinking, so if the evaluator's mood is elevated by the visuals, the more likely he or she is to agree with the presenter.



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Although infrequently, proposals have been won and lost because of covers. A well-designed cover that focuses on the customer's benefits or addresses key issues plays a substantial role in the final decision. I am not saying that graphic communication is better than text. The combination of graphics and words has a communicative power that neither singularly possesses.

"Pictures interact with text to produce levels of comprehension and memory that can exceed what is produced by text alone."¹¹

Without graphics, an idea may be lost in a sea of words. Without words, a graphic may be lost to ambiguity. Robert E. Horn, an award-winning scholar at Stanford University's Center for the Study of Language and Information, said, "When words and visual elements are closely entwined, we create something new and we augment our communal intelligence ... visual language has the potential for increasing 'human bandwidth'—the capacity to take in, comprehend, and more efficiently synthesize large amounts of new information."

Our communication paradigm is evolving.

^{11.} J.R. Levin, A Transfer of Appropriate Processing Perspective of Pictures in Prose, (in H.Mandl and J.R. Levin [eds.]) *Knowledge Acquisition from Text and Prose* (Amsterdam: ElsevierScience Publishers, 1989).

CHAPTER 1: The Lifecycle of a Successful Graphic

There are two tiers of communication for all graphics: **Surface** (**Cognitive**) and **Subsurface** (**Emotional**).

SURFACE (COGNITIVE)

Surface communication is the cognitive process surrounding reading, understanding, and/or learning from the information presented. In other words, it is the graphic's ability to communicate information that is consistent with your primary objective, such as selling a product or service.

All visuals communicate information:

- A logo communicates the presenter's identity or information about a presenter's product or service.
- A photograph communicates the styling of a new car or the look of a new jacket.
- A book cover communicates the subject matter of a book.
- Assembly instructions communicate how to put a bookshelf together.
- A process diagram conveys the review process of an evaluation committee or an overview of how binary code is processed.

SUBSURFACE (EMOTIONAL)

Subsurface communication is the subconscious effect a graphic and its content has on our emotional state—our state of mind.

Many visuals are designed to affect us emotionally. According to independent research, everything we see elicits an emotional response that affects our state of mind—whether we realize it or not. Many graphics harness this aspect of human perception in an effort to influence and motivate the audience. For example, pictures of beautiful people sell us handbags, images of starving children plead with us to donate money, patriotic pictures instill trust and influence us to join the military, even the use of the color red quickens our pulse and influences our mood.

Surface and subsurface communication are tightly linked. Each affects the other. All surface and subsurface data interact to form a cohesive picture of the



Using visuals

- ... improves learning
- ... takes up to 62% less time to explain complex ideas
- ... improves retention up to 86%

(Based on my research.)



Jin Woo Kim, professor at Yonsei University, and Jae Yun Moon, assistant professor at Hong Kong University of Science and Technology, found that manipulating visual design factors could induce a target emotion such as trustworthiness.

(J. Kim and J.Y. Moon, "Designing Towards Emotional Usability in Customer Interfaces—Trustworthiness of Cyber-banking System Interfaces," *Interacting with Computers* Volume 10: Issue 1 [March 1998]: 1-29) presenter and their offerings to the audience. Assuming no other input, these elements combine to create the audience's lasting impression of the presenter and ultimately results in a final judgment.

In the world of visual communication there are two principal needs:

- 1) Communicate information
- 2) Influence or motivate the audience

Aside from those graphics used for pure statistical analysis of empirical data, almost all graphics are influencing the audience to agree with the presenter and arrive at an intended conclusion. It is the intent of the conceptualizer that determines the extent to which subsurface communication is utilized to achieve the primary objective.

A successful graphic should answer the audience's questions. It should answer the audience's who, what, where, when, why, and/or how questions. Since *everything* we see elicits an emotional response that affects our state of mind, the graphic will also communicate other, less identifiable, subsurface ideas such as the credibility, competency, professionalism, reliability, creativity, and strength of the presenter. Your goal is to elicit emotions in the audience that support the author's and presenter's goals.

THE LIFECYCLE OF A SUCCESSFUL GRAPHIC Conceptualization Supports Primary Objective 1 2 3 4 5 6 2 Tiers of Know the primary objective, Develop the visual and Render (or direct the Other related input is The intended end result is Communication: audience, questions you need to answer to achieve textual messages that support the primary rendering of) the graphic. congruent with the achieved Surface (Cognitive): visual's messages and Information is the primary objective, and supports the graphic's objective communicated. subject matter. primary objective Subsurface (Emotional): Emotions are influenced trust hin

The following process helps guarantee a successful graphic:

STEP 1—KNOW THE P.A.Q.S. Know the primary objective, audience, questions to which the audience wants answered to achieve the primary objective, and subject matter. Knowing your audience is key. Know their buzzwords, their likes, and their dislikes. Know exactly what you want to say and why it matters to your audience.

STEP 2—CONCEPTUALIZE YOUR GRAPHIC. Use the four methods, thirteen design techniques, and twelve techniques for affecting emotions found later in this book to quickly turn any idea into a clear, communicative, compelling visual.

STEP 3—RENDER YOUR GRAPHIC (or direct the rendering of your graphic). Be sure your image is rendered the *right* way. Your graphic should be clean, concise, aesthetically appealing, error free, and rendered in a style faithful to the subject matter and your audience. (You will learn the secrets in Chapters 3 and 4.)

When it is time to present your visual, your graphic has only one other hurdle to jump before accomplishing its primary objective: outside influences. Unfortunately, there are other less controllable and accountable elements that determine audience acceptance. An example is a technical glitch like the loss of power or a computer malfunction. Your graphic's success is contingent upon the audience's

- perception (factual or not) of the presenter, the material, and the environment
- biases
- life experience
- open mindedness
- intelligence
- comfort
- state of mind

Consider the following two scenarios:

Scenario 1: A professionally designed, factually accurate PowerPoint presentation contains your graphic. Unfortunately, the oral presenter is disheveled and dressed inappropriately, wearing a t-shirt, shorts, and sneakers. The presenter's appearance distracts the audience from the material. Whether your graphic is perceived as credible and factual is now in question.

Scenario 2: Due to past experience, the audience is biased against the presenter. They may have experienced poor customer service or once owned a defective product made by the presenter's company. Acceptance may not occur.

The court system is a perfect example of an industry that mitigates the potential risk of outside influences. Attorneys, aware of the damage preexisting prejudices may have, prepare special questions to weed out jurors who may cost them the win. For high profile cases, chosen jurors are often sequestered to avoid the likelihood that outside influences will affect their decisions.

Controllable elements (data accuracy, spelling, room temperature) as well as outside influences (unintended associations, unexpected technical glitches) can determine whether or not your graphic is given the positive attention it requires to succeed. For this reason, take into account as many variables as possible



"Speak, not so that you may be understood, but so that you cannot be misunderstood."

(Quintilian)

during the creation and presentation of your graphic. The goal is that everything associated with your graphic is congruent with its primary objective.

It is not necessary for one person to perform all of the steps involved to create a successful graphic. The entire process can be collaborative. For example, one person may have customer insight, another may be a subject matter expert, while others may hold the remaining pieces of the puzzle. Together they may possess the necessary knowledge to produce a successful graphic.

Your visual depictions are limited only by your (or your group's) imagination and the audience's understanding of the visual representation you choose. Be creative and have fun.

Chapter 2: Step 1—Know the P.A.Q.S.



First, know what you wish to accomplish. What is your PRIMARY OBJECTIVE (P)? In a perfect world, what would the audience do or think after viewing your graphic?

Second, know your AUDIENCE (A). Know who they are, what they want to see, and why they should care. Learn what your audience truly desires. Your target audience is the sole reason why you are creating your visual. Tailor your graphic to your target audience. Make sure your audience can see themselves in your graphic. Connect with their world.

Third, know (and answer) the QUESTIONS (Q) to which your audience needs answers so that your graphic can achieve its primary objective. Put yourself in their shoes. What would you want to know to move forward? What is it about your graphic that helps your audience? Make it obvious. Highlight your features, benefits, and discriminators. Focus on the audience's wants and needs.

Fourth, know the SUBJECT MATTER (S). How could you answer the audience's questions without an understanding of the presented topic? The more you understand your subject matter, the more likely your graphic will be successful.

Knowing your P.A.Q.S. is vital to the success of your graphic. Finding this information is 50% of the conceptualization process. Without it, you are conceptualizing in the dark.

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Legendary philosopher Harry Overstreet wrote in Influencing Human Behavior, "Action springs out of what we fundamentally desire."

🤶 QUICK NOTE

When conceptualizing, there is no need to draw like Michelangelo. Simply sketch basic images and label them as needed to explain what each element is. Here are some examples:



THE PRIMARY OBJECTIVE

Know the primary objective of your graphic. The primary objective is the goal or the conclusion at which your audience arrives after viewing your graphic. It is the purpose for which you created your graphic. Your goal may be to simply share information, sell a product or service, explain quantum physics, or help someone navigate the streets of the city as easily as possible. Every graphic has a primary objective.

Your primary objective determines your content. For example, the objective of your graphic might be to convince your audience that a new process for employee orientation is better than the old process. This objective would govern what information you include in your visual.

To establish the primary objective you need to understand the purpose your graphic serves. Essentially, ask yourself, "So what? Why does your audience care?" Once you determine its purpose, there are two possible paths you can choose when developing your graphic:

- 1) **Communicate information.** (Your goal is to explain or clarify *only*. Influencing your audience is not the focus.)
- 2) **Influence or motivate.** (Includes the explanation or clarification needed to persuade your audience.)

Communicate Information

If your goal is to communicate information, your primary objective is to share facts that educate your audience. The following are examples of primary objectives that explain or clarify and the associated graphic.



PRIMARY OBJECTIVE (COMMUNICATE INFORMATION): Communicate aggregate traffic volume in Washington, D.C.







PRIMARY OBJECTIVE (COMMUNICATE INFORMATION): Explain the structure of the human eye.





PRIMARY OBJECTIVE (COMMUNICATE INFORMATION): Explain the roles and responsibilities of four different companies working together.





PRIMARY OBJECTIVE (COMMUNICATE INFORMATION): Explain the problem resolution process.

When appropriate, add a discriminator to your primary objective. A discriminator is defined as a function, feature, or characteristic that differentiates one product, service, or idea from another. A discriminator helps ensure your audience chooses you or your solution.

QUICK NOTE

Use "benefits boxes" or "takeaways" on your pages or slides to list the benefits of your ideas. Do not assume your audience knows the reasons why your new "six sigma process" will benefit them. Make it obvious. Spell it out. Prioritize the benefits. The best-case scenario is to tie the benefit to a portion of an image since words are processed by our shortterm memory and images go directly into our long-term memory.

Influence or Motivate

If your goal is to influence or motivate, **your primary objective must include a benefit and how the benefit will be accomplished.** (The "how" can be a discriminator when appropriate.) In business, it is *often* the case that the goal is to persuade. Most authors of graphics fall prey to misunderstanding the true purpose of their graphic. They forget to see it from their audience's perspective. The following example shows how to turn a bad primary objective into an excellent primary objective where the goal is to influence.

BAD PRIMARY OBJECTIVE (INFLUENCE OR MOTIVATE): Show our new network's architecture.

Ask yourself, "So what? What does your audience *really* want from your solution?" Let's say your audience wants to lower their cost, increase their network's speed, and eliminate network downtime. Your primary objective must show how these benefits will be achieved through the solution you present. Your primary objective must have a benefit and explain the how. Think of your primary objective as the "takeaway" or conclusion.

GOOD PRIMARY OBJECTIVE (INFLUENCE OR MOTIVATE): Lower cost, increased speed, and greater uptime are ensured through our three-step network approach.

Notice that the revised primary objective places the benefits *first*, which gives your audience a reason to care. Next, the primary objective briefly explains how the benefits will be achieved. (Your graphic must further explain the how.)

The resulting graphics from these two primary objectives are dramatically different.



BAD PRIMARY OBJECTIVE (INFLUENCE OR MOTIVATE): Show our new network's architecture.



GOOD PRIMARY OBJECTIVE (INFLUENCE OR MOTIVATE): Lower cost, increased speed, and greater uptime are ensured through our three-step network approach.

If your goal is to influence or motivate, focus on the benefit of your idea, product, or service to your audience. Do not be vague. Every company says their solution is better, faster, cheaper, and offers more value than the alternative. Be specific. Link a feature with the benefit to your audience, so they will care (e.g., our computer uses the new X20 processor, which is 100% faster, so you can get your work done twice as fast).

People don't buy features, they buy the resulting benefits of those features. Imagine walking into a car dealership and the salesperson exclaims, "Wow, you picked the best day to buy a new Honda Accord. We just added the 323i engine!" You shrug and ask, "What is the deal with the 323i engine?" He replies, "The 323i engine gets 75 miles per gallon and accelerates from 0-60 miles per hour in 3.2 seconds." *Now* you care about the 323i engine. You are interested because he linked a feature to a benefit.

Your audience takes notice and begins to care if they know and understand the benefits. If you can save your audience time and money, fulfill a pressing need, or reduce hassle and make their lives easier, show it in your graphic. The more your target audience cares, the more attention is given to the graphic and the more likely it is that your graphic succeeds. The audience will not care about your product or service if the focus is not on them and their wants and needs. If you can show that your quick service will save them 30% or \$140,000 per year over their current service, then they will listen and care. Solve their problem. Show the benefits that they will enjoy. Help them become enthusiastic about the subject and the prospect of having, using, or implementing it. If the benefit is not blindingly obvious, make it crystal clear.

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The simpler the primary objective, the more powerful the graphic. Adding more benefits dilutes any one benefit. For example, it is more memorable to say that your solution lowers cost rather than lowers cost and risk and increases speed.



Graphic titles (the text that names and explains your graphic) or presentation "takeaways" (the text that sums up your slide) is your primary objective. Your graphic must prove or support that statement. STEP 1—P.A.Q.

In the next graphic, the ONGO Quality Council uses engineering, testing, and integration to guarantee continual improvement.



So what? If the primary objective of this graphic is to show what elements come together into one seamless process to guarantee continual improvement, it is acceptable as is. On the other hand, what if the primary objective is to show how the ONGO Quality Council's process benefits the audience?





ONGO uality Council

Continual

Improvement

hegration

inc

E



Now the graphic addresses why the process should matter to the audience. It shows that the ONGO Quality Council uses engineering, testing, and integration to guarantee continual improvement, which results in lower risk, increased quality assurance, and a happy client. The following graphics communicate the benefits of a solution to positively influence the audience.





PRIMARY OBJECTIVE (INFLUENCE OR MOTIVATE): A winning team is the result of eight critical elements.





PRIMARY OBJECTIVE (INFLUENCE OR MOTIVATE): Communicate with anyone, anywhere using our solution.



Before and After Graphic

CHAPTER 6: GRAPHIC TYPES

BRIDGE GRAPHIC

A graphic metaphor depicting the connection or transition between two actions, concepts, or entities.



CONVEYOR BELT GRAPHIC

A graphic metaphor that depicts a repeatable linear process.



CROSS SECTION DIAGRAM

A graphic where an entity or depiction of a concept is cut in half so the different layers that make up the whole can be viewed and individually defined.



CUTAWAY DIAGRAM

This graphic is similar to a cross section diagram where you can see the inner workings or mechanics of an entity or depiction of a concept viewed through a missing or transparent portion of the outermost layer.



DASHBOARD GRAPHIC

A graphic that presents multiple metrics—potentially using multiple graphic types—in one consolidated format. (Think of you car's dashboard.)







FUNNEL GRAPHIC

A graphic metaphor showing the passing of elements through a conduit (the funnel) resulting in the effective allocation, consolidation, and/or organization of those elements.



GAUGE GRAPHIC

A graphic metaphor using readouts and measurement tools to depict data for analysis.



GLOSSARY

Aesthetics – A set of principles regarding the nature and appreciation of beauty. The study of aesthetics increased the validity of many critical judgments concerning art. The established aesthetic principles create a shared vocabulary and understanding for the objective evaluation of beauty.

Analogy (visual) – A graphic depiction of an action, concept, or entity that augments (having a logical relevance to that which is augmented) another action, concept, or entity making a comparison in an effort to improve communication. A visual analogy compares a variety of attributes. It is often used to form logical arguments: if two different things are similar in one way, they might be similar in other ways as well.

Area Chart – A graphic that depicts continuous quantitative data usually over time and uses filled areas to communicate amounts, time frames, or values.

Assembly Method – A process for conceptualizing graphics by capturing important chunks of information and assembling them (like building blocks) in a way that better communicates their relationships or interactions.

Author – The graphic's content creator. The person(s) who is the source of the information contained in the graphic. Often the author directs the creation of the graphic.

Balance (visual) – Balance is achieved when the visual "weight" of both halves of a graphic is similar giving a sense of equilibrium.

Bar Chart – A graphic that depicts the changes in quantitative data using "bars," where the size of each bar represents the proportional value of the quantitative data.

Before and After Graphic – A graphic that compares the "as is" or "before" state to the "to be" or "after" state.

Bridge Graphic – A graphic metaphor depicting the connection or transition between two actions, concepts, or entities.

Bubble Chart – A graphic that uses circles or spheres to show ranges of quantitative data. It can also illustrate the uncertainty of predicted value.

Building Blocks – A graphic that interconnects data to illustrate how elements work together to create a larger unit.

Calendar – A table showing years (or a year), months, weeks, and days.

Candlestick Chart – A chart traditionally used to analyze values and sales of stocks, bonds, commodities, etc. Price is shown in the vertical axis and time in the horizontal axis.

Chunking – Breaking content into bite-sized chunks that can then be reassembled to show an overview of the content presented.

Circle Charts – A family of graphics that display quantitative data using a circular format and includes radar graphs, sector graphs, circle column graphs, and many similarly shaped graphics.

Collage – A graphic that is composed of juxtaposed images.

Conceptualization – The process of creating a design or design plan. Effective conceptualization requires research and visualization.

Conveyor Belt Graphic – A graphic metaphor that depicts a repeatable linear process.

Cross Section Diagram – A graphic where an entity or depiction of a concept is cut in half so the different layers that make up the whole can be viewed and individually defined.

Cutaway Diagram – This graphic is similar to a cross section diagram where you can see the inner workings or mechanics of an entity or depiction of a concept viewed through a missing or transparent portion of the outermost layer.

Dashboard Graphic – A graphic that presents multiple metrics (potentially using multiple graphic types) in one consolidated format. (Think of a car's dashboard.)

Design Techniques – Ways of illustrating concepts.

Discriminator – A function, feature, or characteristic that differentiates one product, service, or idea from another.

Dome Graphic – A graphic that looks like a "snow globe" illustrating the containment of elements. (The dome graphic is especially good at communicating protection/security.)

Earned Value Management System (EVMS) Chart – A risk probability schedule graphic. Used to show how potential changes in a budget at different milestones can have a ripple effect on costs later in the process.

Exploded Diagram – A graphic showing the disassembled parts of an entity or concept placed in a manner that indicates their relative positions when reassembled.

Floor Plan – A graphic depicting the layout of a room(s) or level(s) in a building.

Flow Chart – See Process Diagram.

Funnel Graphic – A graphic metaphor showing the passing of elements through a conduit (the funnel) resulting in the effective allocation, consolidation, and/or organization of those elements.

Gantt Chart – A bar chart representing time and activity used for planning, tracking, and controlling schedules.

Gauge Graphic – A graphic metaphor using readouts and measurement tools to depict data for analysis.

Gear Graphic – A graphic metaphor depicting how parts work together and often illustrates processes and interoperability.

Highlighting – Using contrasting colors, shades, sizes, and visual complexity to draw attention to an element in a graphic.
Icon – A representational graphic element that is visually analogous with an action, concept, or entity.

Illustration – A visual representation that is used to make the subject more appealing or easier to understand.

Information Graphic – Any graphic that clarifies and/or explains.

Line Chart – A graphic showing the changes in quantitative data using lines, where the position of a line represents the proportional value of the data.

Literal Method – A process for conceptualizing graphics by showing exactly what is described or stated as a way to clarify, explain, or support a claim.

Looping Graphic – A graphic that depicts a repeating process or event.

Map Graphic – A graphic showing a region of physical space: a continent, country, city, office building, etc.

Matrix – See Table.

Metaphor (visual) – A graphic depiction of an action, concept, or entity that replaces (having the same applicable characteristics as that which is replaced) another action, concept, or entity making an implicit comparison in an effort to improve communication. Essentially, replace one entity or concept for another where the replacement shares the same applicable characteristics.

Method - An approach for conceptualizing successful graphics.

Mindshare - The awareness of a company, product, service, or idea.

Network Diagram – A diagram showing the connections between elements that compose a network.

Noise (visual) - Many visual elements or "busy" textures/imagery.

Ockham's Razor – A widely accepted and proven postulate asserting that simplicity in design is preferred over complexity.

Organizational Chart – A graphic depicting the hierarchy, arrangement, structure, and/ or relationship of a group of elements. (Typically, an organization and its personnel are the subject matter.)

Path Graphic – See Road Graphic.

Peg Graphic – A graphic showing the interconnectivity of entities or ideas to create a unified whole (think Legos[®]).

Photograph – A picture of a person, place, or thing.

Pie Chart (also called a Segmented Chart) – A graphic that communicates percentages of the whole using proportional segments.

Pipe Graphic - A graphic metaphor representing the isolated linear flow of elements.

Point Chart - A graphic that shows quantitative data using plotted points.

Presenter – The person, place, or thing most associated with the graphic in the mind of the audience.

- A mall map kiosk: The mall is the presenter.
- A PowerPoint presentation: Either the orator(s) or the entity (i.e., company or association) for whom the presentation was created is the presenter.
- Vehicle maintenance instructions: The vehicle manufacturer or dealership is the presenter.

Primary Objective – The main goal of a graphic.

Process Diagram (also called a Flow Chart) – A graphic showing the flow or progression of steps in a process or event.

Puzzle Graphic – A graphic metaphor representing the synergy of separate elements that creates a new whole.

Pyramid Graphic – A graphic metaphor that depicts hierarchy, arrangement, structure, and/or relationship of a group of elements. The bottom elements support the elements above.

Quantitative Method – A process for conceptualizing graphics by capturing descriptions of quantity (value, amount, or time) and choosing one of thirteen quantitative graphic types to communicate that data.

Render – The physical creation (in any media) of the graphic.

Risk Matrix – A table that depicts varying levels of risk as affected by the influences of one or more variables.

Road Graphic – A graphic metaphor depicting the path between the "as is" or "before" state to the "to be" or "after" state.

Scale Graphic – A graphic metaphor that illustrates comparison.

Segmented Chart – See Pie Chart.

Simile (visual) – A graphic depiction of an action, concept, or entity that augments (having a logical relevance to that which is augmented) another action, concept, or entity making a comparison in an effort to improve communication.

Spiral Graphic – A graphic metaphor that illustrates the evolution of an action, concept, or entity through a cyclical process.

Stacked Diagram – A graphic that depicts the hierarchy, arrangement, structure, and/ or relationship of a group of elements. A stacked diagram can also show flow or a progression of steps in a process similar to a pyramid and/or process diagram but can be more versatile.

Stair Graphic – A graphic metaphor depicting steps in a process.

Step-by-Step Graphic – A graphic that depicts the execution of a linear process.

Substitution Method – A process for conceptualizing graphics by substituting one action, concept, or entity for another—using a visual metaphor, analogy, or simile—to better clarify or explain information.

Subsurface (Emotional) Communication – Subconscious effects a graphic and its content have on our emotional state, our state of mind.

Surface (Cognitive) Communication – Conscious comprehension of the data presented in the graphic.

Symbol – A representational graphic element that has a learned meaning or accepted connotation for an action, concept, or entity.

System/Enterprise Architecture – A graphic showing the architecture of a system or enterprise.

Symmetry (visual) – Equally divide a graphic in half using a central axis as the dividing line (usually vertically or horizontally divided). The more alike both halves are, the more symmetrical the image.

Table (also called a Matrix) – A grid that correlates data along two axes. A lengthier but more descriptive definition is an array of rows and columns (arranged in a grid) interconnecting elements. The point of row and column convergence reveals the data that links the action, concept, or entity indicated in the row title and the column title.

Target Audience – The person(s) for whom the graphic was intended.

10 Second Rule – A widely accepted and proven postulate that the target audience needs to know and understand the main point (the most important message) of a graphic within 10 seconds or else the graphic will fail to achieve its primary objective.

Timeline – A graphic that linearly represents time.

Vee Diagram – A type of process diagram that illustrates the relationships (between the two arms of the "v" shape) and verification path of interoperable elements.

Venn Diagram – A graphic that shows the relationship and/or synergy of disparate elements through the overlap of those elements.

Visual Noise – Too many visual elements or "busy" textures/imagery in a graphic. Visual noise often induces a negative opinion of the subject matter.

Visualization - To see the graphic components in your mind's eye before rendering.

Waterfall Diagram – A type of process diagram that depicts the linear flow of steps in a progressive nature.

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Before Training

After Training

SAIC Honeywell **BAE** Systems CSC CANDIDATE Clarifications and guestions Clearance check Exhibit J Personnel Qualification Methodology Day 1 Day 4 • Training (as n • Badge Background check

All open positions are filled by **qualified** staff within **four days** through our staffing proces

"The power in the process is that it eliminates rewrites, gets the message right, and validates your approach all at the same time. It really validates the whole solution." -Bob Gillette, CRI

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Mike Parkinsor Graph	nic Cheat S	heet		Billion Dollar Office Graphics
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