WEB ANALYTICS ACTION HERO

Using Analysis to Gain Insight and Optimize Your Business

BRENT DYKES

Foreword by Thomas Davenport

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To my family.

To anyone who has aspired to be an action hero—
on the playground, in a company, or in a community.

Acknowledgments

Action heroes are frequently portrayed in films as working covertly and independently on their missions. I've discovered that writing a book requires a small army, and I feel fortunate to be surrounded by so many great people who willingly supported me in so many different ways. I'd like to start by thanking the entire Peachpit team, especially my development editor, Linda Laflamme, who patiently guided this first-time author throughout the entire writing process. My friend James Arrington (www.pukrufus.com) worked tirelessly on the book's illustrations and diagrams. It's rare to find a designer so talented and equally patient and easy to work with. A few people who went above and beyond in terms of reviewing the material for this book deserve special thanks: Andrew Anderson, Jeff Terry, and Sami Iwata. I really appreciated their critical eye, pushing me and my ideas every step of the way. The content is the better for it.

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Most of all I'd like to thank my wonderful family for being patient with me during this entire grueling process. They sacrificed a lot so that this book would be possible. Special thanks to my wife Libby for all her love and support as well as each of my five children (Lauren, Cassidy, Linden, Peter, and Josh) for their understanding and willingness to give up their Dad for a time. I am truly blessed to have you all in my life. Thank you for believing in me.

About the Author

Brent Dykes has been focused on enterprise-level web analytics for more than seven years. He was one of the first business consultants hired by Omniture in 2004 and has worked with such industry leaders as Microsoft, Sony, EA, HP, Dell, Comcast, Nike, Allstate, Cisco, Redbox, Samsung, Nintendo, and USA Today. In his time within the Omniture Business Unit at Adobe, he has led industry-specific consulting teams for multiple products (Adobe SiteCatalyst, Test&Target, Insight) and now leads a team focused on strategic areas such as predictive analytics and web governance.

Brent has been involved in online marketing for more than ten years, including positions at Blast Radius (WPP), Lands' End, and Microsoft. Brent has a BBA (Marketing) degree from Simon Fraser University, and graduated from Brigham Young University's MBA program, where he was a Hawes Scholar. Brent is an active blogger for Adobe on web analytics and has delivered presentations at web analytics and online marketing conferences around the world. Besides his passion for web analytics, he also runs a popular Microsoft PowerPoint tips and tricks blog at www.powerpointninja.com.

Foreword

Web Analytics Action Hero is a wonderful and playful guide to the web analytics behaviors that will improve your marketing and create business value. It's clear, concise, and clever, and you will never get lost in technical detail or marketing jargon. Despite the playful terms and acronyms, however, Brent Dykes adopts a very pragmatic tone that puts action and improvement above theoretical considerations. And since virtually every business and organization today has a website, it is difficult to imagine the enterprise or businessperson who wouldn't find the book a useful guide to web analytics.

In addition, the book is an extremely good guide to finding value from all types of analytics. Some wrinkles, of course, apply only to web analytics, but the great majority of Dykes' recommendations will help you with other forms of analytics as well. For example, a key aspect of the book is the distinction between reporting and analysis/analytics. I won't explore the distinction here because *Web Analytics Action Hero* does an excellent job of it, but suffice it to say that almost every organization needs to free up energy, money, and time from reporting activities to make room for analysis. Otherwise, as Dykes memorably puts it, you will be forever stuck in Setupland.

Another key element of the book, and of success with analytics in general, is that that web and other forms of analytics are all about making better decisions and taking more informed actions. Web analysts usually can't make the decisions and take the actions on their own; they have to collaborate and communicate with others—particularly managers and executives. Dykes correctly points out that the best web analysts do not passively gather data and produce reports, but actively work with decision-makers to help frame the decision and implement it successfully.

Although *Web Analytics Action Hero* is primarily a book about how individuals can succeed with web analytics, it also addresses the factors that make organizations succeed overall. The factors affecting the overall success of a web analytics initiative are exactly those for analytics in general. They include strong leadership, capable analysts, quality data, and a clear strategy for what to accomplish with analytics. In other words, if your web analytics initiative is headed for success, you'll probably

also do well with customer, supply chain, human resource, finance, and other forms of analytics. The converse also applies: if you're already good at other types of analytics, you're likely to be successful in analyzing web data too.

Even if you have a high likelihood of success with web analytics, don't let that keep you from reading this book. You will enjoy its tone and prosper with its recommendations.

Thomas H. Davenport

President's Distinguished Professor, Babson College
Co-author of *Competing on Analytics* and *Analytics at Work*

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INTRODUCTION

"No great marketing decisions have ever been made on quantitative data."

– John Sculley

This astounding declaration was made by the former PepsiCo executive and Apple CEO John Sculley, the same visionary responsible for ousting Steve Jobs in 1985. While some traditional marketers might still agree with his statement, today most marketing executives recognize data-driven decisions will shape the future of marketing. With the expansion of digital marketing, web analytics is at the forefront of this data-driven transformation in marketing.

Since joining Omniture's business consulting team in 2004, I've had the privilege and opportunity of working with several online leaders. I've seen the industry grow in size, prominence, and popularity, embracing new technologies and consolidating around a core group of vendors. Although some organizations have had tremendous success with web analytics, too many firms are still struggling to reach their full potential and some are even questioning the value of their web analytics investment.

The current state of web analytics raises an important question: *Why aren't more companies successful with web analytics?* Between vendors battling on features, companies fixating on implementation and reporting, and industry experts pushing the latest metric-du-jour, I believe we've lost our focus on what's important as an industry. Although the technology, data, and metrics

are essential elements, *they are a means to an end.* We need to return to the fundamentals in order to move forward.

The original value proposition of web analytics was to help companies achieve their online business goals and maximize the return on their digital marketing investments. Web analytics achieved these objectives by helping companies to *measure*, *analyze*, and *optimize* online performance. In other words, CMOs invested in web analytics to improve their online marketing initiatives through insights found in the online data.

Somewhere in our executing against this vision, a noticeable breakdown has occurred. While measuring online performance with a web analytics tool is common practice (and comes with its own set of unique challenges), the necessary analysis isn't happening across most organizations. Many firms simply lack the analytical talent or bandwidth to take full advantage of their online data. When analysis typically drives action (optimization), most of the potential value that could be created by web analytics becomes stunted by the scarcity of analysis. The fate of your company's online success hangs in the balance, and somebody needs to do something—fast—before your competitors can strike first.

Enter the Action Hero

Cue the cool, action theme music because a new breed of web analyst or data-driven marketer is about to enter the picture: the action hero. In pop culture, an action hero is "often simply an ordinary person in extraordinary circumstances, who, despite the odds being stacked against him or her, typically prevails in the end."[1] Maybe that doesn't sound like you at first, but think about it: By most standards, web analysts and marketers are just ordinary individuals (not rich, famous, or powerful), and aren't you caught in the extraordinary circumstances of the fast-paced, ever-evolving digital space? Constrained by limited bandwidth, budget, and training, you may even feel the odds are stacked against your success. With the right mind-set and strategy, however, you too can prevail in the end and save the day.

Web Analytics Action Hero reveals how you can fill the void of insight and action that is plaguing many companies today. Chapter by chapter you will walk through a transformative process that will elevate you from ordinary analyst to action hero:

- **Chapter 1** covers the growing need for action heroes, as well as how the responsibility for performing analysis extends beyond analysts to marketers and other individuals.
- **Chapter 2** introduces two important regions in the land of web analytics: Setupland and Actionland. You'll learn how companies need to move beyond focusing on implementation and reporting and instead emphasize analysis that drives action. Likewise, you'll discover key differences between reporting and analysis as well as how you can escape from being a reporting robot.
- **Chapter 3** highlights the three key success factors of any action hero: ability, environment, and approach. After fleshing out the required talent and skills of an action hero and the necessary environmental factors, the chapter introduces the Action Hero Framework, which will transform ordinary, unassuming analysts into action heroes.
- **Chapter 4** focuses on how to prioritize your analysis approach before performing any analyses. The chapter concentrates on five key criteria for targeting your analysis: your understanding of the business goals, your ability to influence an outcome, the potential impact of an analysis, the level of effort to obtain the insight, and the context required to stay plugged into the business.
- **Chapter 5** concentrates on the actual process of performing analysis. The chapter introduces the HEROIC framework, which is based on the scientific method, that provides a disciplined approach and various techniques for finding the key insights and optimization opportunities buried within your online data.
- **Chapter 6** looks at how you can mobilize or rally people around your insights and recommendations. The chapter looks at how you can become an agent for change within your company by focusing on the following four areas: knowing your audience, communicating your message effectively, driving your insights through to execution, and closing the loop on your recommendations.
- **Chapter 7** explores several practical, real-world analysis examples and techniques across four main action zones: acquisition (finding both high-converting and cost-effective sources), site interactions (understanding visitor behaviors on your site), conversion process (identifying key attrition points), and visitor value (targeting valuable visitors).
- **Chapter 8** concludes by highlighting how both companies and individuals need to be ready for action and what they can do to better prepare.

Heroes never complete their quests without meeting a villain or two, so the book introduces you to an eclectic group of the villains that vex and challenge many web analysts. To assist you in accomplishing your data-driven mission, I've included tips for defeating these adversaries who span the senseless to the downright sinister. By the end of the book, you'll have a clearer understanding of what it takes to become an action hero. Each chapter builds on the concepts and techniques shared in the previous ones, so I would recommend reading them in sequence for full effect.

Who Should Read This Book?

With the online channel increasingly affecting a greater portion of most businesses, more and more individuals and teams can benefit from analyzing and optimizing their respective online results. Not everybody has grasped they can't afford to wait and be passively fed information anymore. They need to be more proactive about diving into their own online data to find solutions and opportunities. The few that adopt analysis will be in a stronger position for driving their own online success. As I prepared to write this book, I identified three main audiences who stand to significantly benefit from web analysis:

- **Web analysts.** Whether you've been in web analytics for several years or are just breaking into the field (college grads), the material covered in this book will be invaluable in either forging a new path or further refining your craft. The concepts, frameworks, techniques, and practical tips will help you to be more strategic, efficient, and effective in your analysis approach. Although other authors have covered different aspects of web analytics, none have provided a comprehensive focus and robust framework for mastering the art and science of online analysis.
- **Marketers.** Increasingly marketers are being thrust into the path of online data. Rather than being paralyzed like a deer in headlights, why not manage it with the skill and confidence of an action hero? You'll not only be able to optimize your online content and campaigns but also manage your marketing spend more effectively, which can pay dividends for your company and your career.
- **Executives.** If you would like to create a more data-driven organization, this book will highlight some of the key areas where aspiring action heroes will need your political influence and budget authority to make it happen. They need brave, data-driven leaders who are willing to roll up their sleeves and work collaboratively alongside them to make the data-driven culture a reality. I recommend reading the entire book, but if your time is limited you'll definitely want to focus on Chapters 2, 3, 4, and 8.

The concepts and approaches in this book are not specific to any one tool and should be applicable and relevant to whatever web analytics tool you're using. My intent was to write a book for anyone who performs or consumes online analysis, regardless of their affinity or allegiance to one vendor or technology. Although all of my analysis examples are taken from Adobe SiteCatalyst (Chapter 7), in most cases the screenshots could have come from any number of web analytics tools. This book was never intended to be a product guide for a particular tool but more of a practical, principles-based handbook for performing online analysis. In fact, many of the analysis approaches in this book could also be applied outside of the field of web analytics to drive action.

Why I Wrote This Book

Back in college I found myself debating between choosing accounting or marketing as my major—yes, two areas traditionally viewed as being diametrically opposed. If you were good with numbers in business school, you typically went into finance or accounting—not marketing. Even though my analytical skills had served me extremely well in all my quantitative classes, I decided to break away from the path that would have led me into a safe but uneventful career in accounting and instead pursued my deeper passion for marketing. What might have been viewed as a somewhat irrational move by my fellow students has turned into one of the best decisions of my life when it eventually led me into web analytics, an online marketing discipline that has challenged both sides of my brain.

I share this background information to highlight two simple things you need to know about me. First, before focusing exclusively on web analytics, my educational and professional background wasn't grounded in statistics, business intelligence, web development, or some other highly technical field—just good, old-fashioned marketing. While I'm definitely of the data-driven persuasion, I can appreciate the day-to-day challenges that all marketers face because I've experienced them firsthand. Having seen both approaches in practice, I'll admit being data-driven is my preferred path. For the most part, optimizing online marketing efforts comes down to making relatively small bets, measuring performance, making course corrections, and constantly moving forward.

Second, I'm incredibly passionate about the power and potential of web analytics. The intersection of marketing, analysis, and the Internet that web analytics represents is a real "sweet spot" for me. As a consultant, I've had the opportunity to meet with several web analysts, web analytics teams, or entire organizations that are struggling to build momentum for their web analytics programs. Over

time you begin to spot troublesome patterns and warning signs that can lead to full-blown problems as well as identify key best practices in the most successful organizations. In writing this book, I hope to help more companies to become more data-driven by sharing these observations and insights.

More importantly, I want to equip you with the tools, techniques, and tips needed to lead the change at your firm and become a real-life action hero for web analytics. In most cases, web analysts get only small doses or glimpses of what it would be like to be an action hero; just imagine what high concentrations of undiluted analysis and action would be like. Be prepared to transform your current role into one that

- Provides more intellectual stimulation as you acquire a license to explore and innovate (not kill) through analyzing and optimizing your online business
- Focuses your time on things that really matter to the business and provides a greater sense of achievement when you deliver significant value
- Gives you a deeper understanding and better perspective of what's happening across your business, both in terms of its inner workings and high-level trends
- Forms relationships with key individuals and teams throughout your company, where your cross-functional knowledge can connect ideas and solve business problems that span multiple areas
- Equips you with the latest and greatest analytics tools to drive even deeper insights and more optimization opportunities
- Earns you the respect and recognition from your entire organization as well as the promotions and pay increases that come with the territory
- Provides you with the experience, results, and influence that can take your career any direction you want

If you're not excited about the prospect of becoming a web analytics action hero by now, I don't know what to say other than you might have mistakenly picked up this book thinking it was some new online action thriller. For the rest of you, I look forward to initiating your action hero journey, and since there's no better time than right now, let's begin your training now.

ENDNOTES

1 http://en.wikipedia.org/wiki/Hero

CHAPTER 1

WANAMAKER'S QUOTE IS DEAD

"Half the money I spend on advertising is wasted. The trouble is I don't know which half."

– John Wanamaker

Ever since legendary nineteenth-century American merchant John Wanamaker uttered this insightful statement, countless marketers have struggled to overcome the same challenge of distinguishing between good and bad marketing. As we increasingly shift from an industrial to a digital economy, however, we must also face the truth: This famous quote is antiquated, irrelevant, and unacceptable. Marketers can no longer afford to rationalize inefficient or ineffective marketing efforts by Wanamaker's outdated words.

In fact, if the pioneer of newspaper advertising, department stores, price tags, and money-back guarantees was alive today, I reckon he'd recant his statement as a relic of his steam-powered, mechanized past. The innovator Wanamaker would take full advantage of the cutting-edge technologies available to retailers and marketers—WiFi-tablet-enabled salespeople, location-based advertising, Facebook shopping apps, Twitter-based customer service—and maybe devise new tactics that we couldn't even fathom with the available technology. Most importantly, he would invest in analytics tools that would give him the ability to track and optimize online and offline marketing initiatives. With more insight into the performance of his marketing spend, John Wanamaker would feel more empowered as an entrepreneur and retailer in our century.

NOTE While this quote is most commonly attributed to John Wanamaker, it has also been credited to Lord Leverhulme; Henry Ford; William Wrigley, Jr.; and other famous entrepreneurs. Researcher and author of *The Quote Verifier* (St. Martin's Griffin, 2006) Ralph Keyes was unable to verify who originally stated the famous line.

Although most companies don't yet have a complete understanding of the effectiveness of their marketing initiatives, organizations have made aggressive strides over the past five to ten years in becoming more data-driven and aware of what portion of their marketing budget is actually wasted. Unfortunately, we're not making as much progress as we think we are. In 2007, the Fournaise Marketing Group surveyed 3,000 marketers who indicated that "65% of their marketing spend had no discernible effect on consumers."[1] So while marketers may have a better idea about which part of their marketing spend is squandered, the inefficiency appears to have increased since Wanamaker's days. Clearly we've still got some work to do, and as you'll learn, opportunities abound for data-driven organizations that leverage both technology and people to optimize their marketing efforts.

The Deepening Data Deluge

One of the key things that John Wanamaker lacked in his day was data. Today's companies are facing problems at the other end of the spectrum. In fact, many large organizations are already talking about *big data*, which is a massive amount of structured or unstructured data that can't even be stored in traditional database software. The expansion in data storage capacity is actually outpacing the growth in processing power (remember Moore's Law?), doubling every nine months instead of every two years.[2] In the past, technology limitations might have caused companies to be selective about the types of data they collected, but now more companies are becoming data pack rats.

Have you seen the new mountain ranges of data forming at your company? With no apparent technical or cost limitations, companies are collecting and storing all kinds of data—more than they can possibly ever use. In a 2010 MIT survey, 60% of businesses felt their organization had more data than it knew how to use effectively.[3] In most cases, the real challenge is isolating the actionable insights amidst an ocean of data collected across multiple marketing campaigns, channels, and customers. How do we extract value from all of the data that has been collected?

Human Intervention Still Required

> **"The human mind is our fundamental resource."**
>
> **– John F. Kennedy**

The good news is that technology is enabling the automation of mundane analytics tasks that marketers and analysts don't mind giving up. New statistical models and processing power also help us to more easily sift through the ever-growing piles of data, enabling us to find new insights we couldn't possibly find on our own.

Automation and algorithms aren't enough, however, as Michael Eisen, an evolutionary biologist, noticed on April 8, 2011. On that day, an interesting pricing war erupted on Amazon.com between two sellers of the scientific book *The Making of a Fly*. Both of the booksellers had set up pricing algorithms based on each other's list price. The first bookseller set the price to be 1.27059 times higher than that of the second seller. The second seller had set its price to be 0.9983 times the price of the first. Over the course of ten days, the robot-driven pricing war pushed the list price of the book to $23,698,655.93 (plus $3.99 for shipping).[4] Clearly, technology's strengths in memory, accuracy, and speed are not always enough to respond appropriately to market trends. The human touch—creativity, domain knowledge, common sense reasoning—are still needed to realize a greater potential with our data.

Dr. Usama Fayyad, former Yahoo! Chief Data Officer and data mining expert, offered another illustrative example of how statistical algorithms still need a common sense override from time to time. In an up-sell or cross-sell scenario on a clothing website, a new visitor shopping for pants might receive recommendations for accessories such as a belt because statistically the belt is more relevant than other items based on the algorithm. However, the best thing to cross-sell is actually other variations of pants so that the shopper can find what he's looking for more quickly.

Once the shopper places the pants in the shopping cart, the statistical model will then determine that this person likes pants and may recommend more pant options. However, showing more pants is the worst thing you can do in the shopping cart because it causes the person to question his original selection. Instead it would be better to feature complementary items such as a shirt or belt which will increase the cart's contents and not interfere with a purchase decision.[5] As this example shows, to solve today's business problems we can't always rely on just computers and algorithms. We need a blend of statistics, technology, and good old-fashioned human insight.

While the responsibility for collecting and storing marketing data falls mainly to technology, extracting actionable insights from the data lands primarily in the realm of analysts. Successful, data-driven companies need talented people who know the tools and aren't afraid to dive into the deep end of their company's data.

From a web analytics perspective, these individuals can identify problems with marketing campaigns and pinpoint opportunities to optimize the website experience. In several cases, web analysts have uncovered huge revenue opportunities and cost savings, which have paid for not only their salaries but also the cost of the tools many times over.

For example, one of our consultants was working with a multinational retailer to analyze its sites for optimization opportunities. He was able to identify a simple nugget: a statistical relationship between cart abandonment and browser type. Specifically, the Google Chrome browser displayed a 12% higher cart abandonment rate when compared to all other browser types. The analyst discovered that when a visitor using Google Chrome entered credit card information, the browser automatically displayed a non-secure content warning message stating that the content "…can be modified by *an attacker* to change the look or behavior of the page." Correlation isn't causation, but that kind of message would probably scare away even the web-savviest of visitors. By fixing this non-secure content issue and bringing the Google Chrome cart abandonment in line with the other browser types, our analyst estimated that the retailer could increase revenue by $1.2 million per day, or $400 million per year.

Who's at the Wheel?

Although organizations make significant investments in the actual analytics tools to measure their online marketing initiatives, many of these firms fail to make an equivalent investment in human resources. They neglect to hire the minimal number of web analysts to meet even the basic analytics needs of their business.

I'm reminded of Volkswagen's past marketing tagline: "Drivers Wanted." Too many companies have shiny, analytics sports cars sitting in the driveways, but no drivers. As a result, the analytics tools mainly just sit there. Idle. Not being driven or used because either nobody is available (no resources or bandwidth) or the individuals who could drive it don't have the necessary training and expertise. Or maybe your company underutilizes all that horsepower on basic reporting errands, when it really needs to let loose on the actionable analysis racetrack against the core business questions troubling your CMO.

Some organizations may still be questioning the value of their web analytics investment; however, the decision to inadequately staff the tools may be the main reason why they haven't yet seen the expected return. Web analytics can have a massive impact on online business performance, but it's going to take great people—not just great technology.

The Cavalry Isn't Coming

Consulting with Fortune 500 companies over the years, I don't think I've ever met a single web analytics team that wasn't short-staffed to some degree. Every company could have used at least one more good analyst, and some needed multiple individuals to shore up their teams. Many web analytics teams simply aren't allocated a sufficient headcount by their organizations, whereas others can't find suitable talent to fill open positions. Barring some unforeseen change in hiring patterns, web analytics teams will continue to be shorthanded.

Okay, the cavalry isn't coming to reinforce you, so how do you save yourselves? The secret is to leverage your time and skills in a more effective and efficient manner to maximize the value you create for your main stakeholders and the overall business. This may sound easier said than done because many web analysts are stuck in an awkward spiral: Unless the team can show more value to its organization, it is not going to get more help, but unless the web analytics team gets more bodies, generating more value will be very hard. The key becomes doing more with what you have in a more disciplined manner. This book will introduce new frameworks, concepts, and approaches—from prioritizing your analysis (Chapter 4) to mobilizing your organization into action around your recommendations (Chapter 6) to drilling into specific analysis techniques (Chapters 5 and 7)—to help you be more productive as a web analyst and get the reinforcements you need.

Data-Driven Marketing: Stay Goal-Oriented

Marketers are also important members of the web analytics community. Like Neo in *The Matrix*, marketers must choose between the blue pill of happily continuing down the same path marketing has marched since John Wanamaker's time—free spending ways, squishy-fuzzy metrics, and low accountability—and the eye-opening red pill that reveals what's really happening to their company's digital marketing initiatives. Being held accountable for a new multimillion-dollar social campaign or a major website redesign may cause some marketers to seek a safer and more familiar path. Leave that fear, uncertainty, and doubt of data (FUDD) to your competitors. Swallow the red pill of data-driven marketing. The benefits will outweigh the costs, so long as you don't lose sight of the fact that *data is a means to an end, not the destination itself*.

One key is to keep your data-driven marketing goal-oriented rather than metric-oriented. Don't be swayed by the mountain of marketing books with audacious titles like *301 Marketing Metrics Your Mother Didn't Teach You*. These books have it completely backwards. You don't begin your data-driven journey by cherry picking key performance indicators (KPIs) from a list; instead, you start by concentrating on your key marketing goals and objectives. If your KPIs are not properly aligned to your business goals, they can actually lead you astray, doing more harm than good.

If you were preparing a meal for friends, which approach would most likely lead to success: focusing first on the ingredients, then conjuring up a meal or deciding on a recipe, then purchasing the required ingredients? From my experience, the second approach wins hands down every time. Business goals and metrics are both important but for different reasons. Goals tell you where to go, and the data tells you how you're progressing to your destination. Ultimately, your success as a data-driven marketer will be defined by the goals you help to achieve (goal-oriented) rather than how much data you capture or crunch (metric-oriented). In addition, by taking a goal-oriented approach to data-driven marketing, you're less likely to drown in a sea of data because only the metrics and data that are relevant to your key business goals merit your attention.

Everyone Is a Part-Time Analyst

Be honest, do you suffer from "notmyjobitis?" Even as data-driven marketers, do you passively consume online marketing data, preferring to be spoon-fed by your web analytics team through various reports and dashboards? For most of the past century, that approach has been the status quo. This notmyjobitis, a prevalent form of analyst dependency, is impeding the success of marketers.

Diving into web data to find useful insights can help you better understand your customers and optimize your marketing initiatives (web, search, mobile, social, and so on). But, what happens when the specialists (analysts) are too short-staffed to support all of the data requests pouring in from marketers? Data-driven marketers have two choices: full-serve (outsource to external consultants) or self-serve (perform their own analyses). If you're not familiar with web analytics, slicing and dicing the data on your own may not feel like it's a viable option. Most marketers are not comfortable with building OLAP cubes, performing advanced SQL queries, and creating statistical models.

The good news is that web analytics tools such as Adobe SiteCatalyst, Google Analytics, and WebTrends Analytics are far more accessible and intuitive than traditional business intelligence tools. With some training and hands-on experience, marketers can quickly become proficient in analyzing and optimizing their online marketing initiatives.

The shift to digital marketing turns every marketer into a part-time analyst. Increasingly, you'll see more employers seeking marketers who are data-savvy and comfortable with analytics tools. You can either resist and risk becoming less valuable to your organization, or you can adapt and seize the opportunities afforded by the new data-intensive environment.

Past studies have shown that online marketers who leverage web analytics outperform their peers who don't. Finding time for analysis and acting on the insights needs to be a top priority for more marketers. Whether you can free up 5%, 10%, or 20% of your time for online analysis as a marketer, this book can help to maximize what time you can afford to spend on it.

Enter the Action Hero

Companies need more than just more web analysts and data-savvy marketers. They need action heroes. Growing up with three brothers in the '80s, I watched my fair share of action movies and TV. Unlike superheroes who typically possessed superhuman abilities, all our favorite action heroes—Indiana Jones, Rambo, James Bond, MacGyver—were normal guys (although usually blessed with impeccable intuition, incredible luck, and a dash of Special Forces training) who were always able to overcome the venomous snakes, ninjas, attack helicopters, and more to accomplish their missions. They were brave, confident, self-sufficient, inquisitive, resilient, resourceful, practical, reliable, street smart, and yes, a little dangerous.

While most of us never battle motorcycle gangs or search for lost Incan treasure, successful web analysts have more in common with action heroes than you may think. The main goal of any respectable web analyst is to change their organization for the better. How do they do this? They identify strategic, actionable insights and translate them into high-value recommendations, which the business in turn acts on to generate higher revenue, profits, and cost savings.

The difference between a successful and unsuccessful analyst comes down to *action that leads to business value*. Action is the lynchpin between analysis and value. You may be an excellent analyst, but if your organization takes no action based on your insights and recommendations, you won't ever be truly successful. In addition, just because the business actually followed your recommendations doesn't guarantee you'll be a hero. If your analysis contributions don't have a noticeable positive effect on the business, you won't be hailed as a hero—in fact, you could even end up being a villain if you're careless with your analysis and recommendations.

Action heroes are web analysts who are able to get their companies to act on their recommendations and whose analysis work leads to significant returns for their firms. Like the successful actors portraying the popular action heroes, they can command much higher salaries than analysts who may be smarter, better educated, and more experienced but who are not able to translate their abilities into tangible business value.

The truth is being an action hero isn't easy. As an analyst, you hand your organization a gift—an idea or observation that could lead to more orders, leads, registrations, and so on. Your company can accept and apply it, or it can be rejected or forgotten. Web analysts rarely have control over which insights are acted on by the business. Big companies, especially, are not known for being responsive, nimble, or flexible. Your analysis approach, however, can have a significant influence over whether or not something is acted upon.

Aspiring action heroes in the arena of web analytics benefit from the same attributes that fictional action heroes embodied. Among other things, you'll need to be curious like Indiana Jones, street smart like James Bond, resilient like Rambo, and resourceful like MacGyver. (Being a little bad-ass like Chuck Norris couldn't hurt either.) Before you can be an analytics action hero, however, you need to become familiar with a place called Actionland. In Chapter 2, you'll learn how to take your company there.

ENDNOTES

1 www.emarketer.com/Article.aspx?R=1005863

2 http://videolectures.net/kdd07_fayyad_dms

3 http://sloanreview.mit.edu/improvisations/2010/12/22/do-you-have-too-much-data

4 www.cnn.com/2011/TECH/web/04/25/amazon.price.algorithm/index.html

5 http://videolectures.net/kdd07_fayyad_dms

CHAPTER 2

ON THE ROAD TO ACTIONLAND

"Never confuse motion with action."

– Benjamin Franklin

Every company wants to be in Actionland. It's the promised land of analytics, and it has all the coolest rides. In Actionland, you're regularly optimizing your business and driving real value. It's where the successful analytics professionals like to spend most of their time. When you originally decided to invest in web analytics, Actionland was the vision of where your company would be spending most of its time. Getting to Actionland, however, takes some planning and hard work; first you have to go through Setupland.

Just like you need to go through the parking experience (a regular adventure in itself) before you can enter Disneyland, every company needs to pass through Setupland before arriving at the ticket booths for entry into Actionland. Various products and types of projects may require a different amount of time in Setupland, but they all pass through it on the way to the real attractions found in Actionland. In this chapter, you'll learn how to efficiently maneuver your way through Setupland so that you can punch your ticket and begin your valuable adventures in Actionland.

Start in Setupland

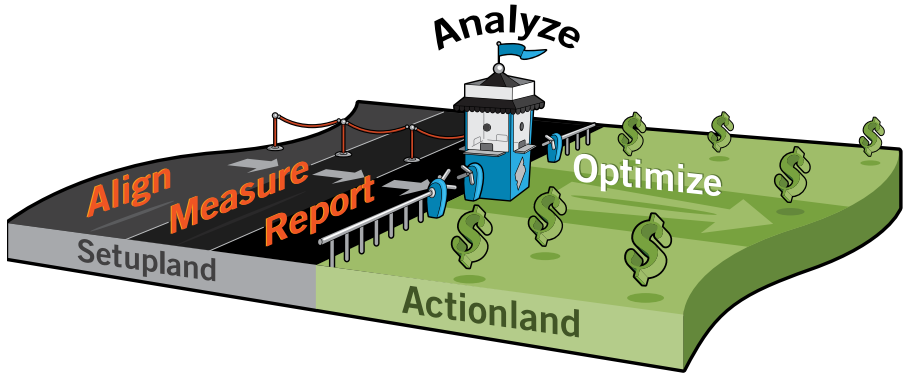


FIGURE 2.1 You pass through three stages in Setupland before entering Actionland.

In Setupland, every company passes through three main stages when setting up a web analytics tool (**Figure 2.1**):

- **Alignment stage.** Here you gather business objectives and requirements from key stakeholders and capture them in an online measurement strategy. At this early planning stage, a clear and complete understanding of the online business strategy is critical to success. The data has to be relevant and meaningful to the business. There can't be any gaps between what is actually measured and what the business needs to be measured. If the implementation isn't aligned with the business goals, you'll be in Actionland only long enough to get a hand stamp before you're paged back to Setupland to realign your implementation.
- **Collection stage.** At this point, the technical heavy lifting occurs: tagging, data validation, and data collection. You may spend a fair amount of time on technical implementation, especially for large companies with multiple web domains, online marketing initiatives, mobile and social applications, and so on. Frequently, you may complete this technical stage in phases, giving the company a potential day-pass in Actionland. With all the technical aspects in place, some companies may feel as though they're ready to cross over into Actionland and enjoy the park. However, just because your company is stockpiling data, you're still not ready for action.
- **Reporting stage.** The final stop before a company can leave Setupland for Actionland, this stage is where you create reports and distribute them to the organization using a manual or preferably automated approach. Knowing that you have the raw data on your online marketing initiatives may give your organization some comfort, but it's really not useful until it ends up in some

form of report for your business users to consume (a standard report, custom report, dashboard, scorecard, or similar). These reports typically need to be configured and tailored to the specific needs of your end users. Reports will be useful only if they help to move your company forward, becoming a launching pad for questions, ideas, and analysis.

Don't Get Stuck

Amazingly, many organizations seem more enamored or content with Setupland than Actionland. If the key to getting value from your web analytics investment is to enter Actionland, why do many organizations fail to leave Setupland? Some keep forgetting important items in their car and have to start over repeatedly (incomplete business planning). Others spend so much time battling unruly kids that they never make it far into Actionland before the park closes (stakeholder buy-in). Some fail to dress properly for their day at the park and need to leave early (poor tagging).

Many real and perceived obstacles prevent organizations from optimizing their business and essentially keep them milling around, collecting even more data or cranking out mundane amounts of reporting. Each organization has a unique set of data-driven challenges. One company simply may lack the analytical resources to go beyond reporting. Another firm may not have sufficient executive support for becoming more data-driven. Yet another organization's intuition-based culture may distrust data and fear accountability.

The first two stages of Setupland can trip up organizations in plenty of ways; however, I think the most common culprit is the Reporting stage. Companies are now collecting vast amounts of online data. As marketing budgets shift from traditional channels to digital channels (social media, mobile, video, and more), the volume is only going to increase. Analysts are caught in a vicious cycle of endless reporting, both maintaining current reports and building new reports. Unfortunately, too many organizations misinterpret reporting as the main destination of implementing an analytics solution and mistakenly view reporting as though it were a part of Actionland. Reports display information, *not insights*. Information is useful, but insights are invaluable. Insights from analysis can drive actions or optimizations, which can transform a good business into a great one. No wonder executives get frustrated when they learn that their analytics dollars are being wasted on standing around Setupland instead of spending time inside Actionland optimizing for success.

A Ticket to Actionland

Maybe, however, you're rethinking whether you really need to enter Actionland; you've heard some of the rides are a little unnerving and the lines are too long. Isn't reporting enough? No. Reporting is not going to improve a company's online performance on its own. If you want to optimize your business, you need to overcome internal obstacles and focus on analysis. Analysis is the isolating of meaningful and actionable insights in data and reports that when acted upon by your organization can drive business value. That's right: *Analysis is the ticket to Actionland*.

Analysis sets the stage for all optimization efforts. It can pinpoint new optimization opportunities. It can help prioritize the available options. It can evaluate why a particular initiative performed a particular way and how it can be improved. Analysis is the genesis for how your company can generate more sales, reduce marketing costs, enhance campaign performance, provide a better user experience, reach specific target segments, and more. It's the only way to gain entry to Actionland. On a personal level, if you're a web analyst or data-driven marketer, your career won't advance very far if you can't help your company to move beyond Setupland.

Myth: Setupland Is Once and Done

TIP If you can't remember the last update to your implementation, have an administrator pull up the usage reports for your web analytics tool. If nobody is screaming for training and a handful of people are pulling the same low-value reports, there's a good chance your tagging is stale.

The deployment of analytics solutions is an ongoing process, not a project you complete once every couple of years. Your company evolves (new products, websites, campaigns, marketing channels, partners, senior executives), market trends change, customer behaviors shift, and competitors innovate. Three-year-old tags applied before your company's merger and two website redesigns won't cut it. Your online measurement approach can't remain static. It needs to keep pace with your company's online evolution and the shifting needs of your industry.

After you've entered Actionland, analysis may identify more business questions that can only be answered through further implementation to enrich the current data or better pinpoint the right data. You often don't know what you don't know until you've had an opportunity to analyze the collected data. While returning to Setupland again (and again) may be frustrating, it is an essential part of the optimization process to refine the online data. Some large firms find themselves in Setupland and Actionland at the same time as they roll out new implementation projects while analyzing and optimizing existing online initiatives. You may feel like your company is spending a lot of time in Setupland simply due to the volume of new projects. While you can't skip Setupland, keep your trips as short and efficient as possible. Actionland is your destination; it's where the real magic happens.

VILLAIN PROFILE: STALE DATA

BACKGROUND

He sneaked into the online data when the implementation was no longer aligned with the current business goals. When the data isn't relevant to their needs, the business owners lose interest in the reports.

TIPS TO DEFEAT

- Review current business goals and requirements.
- Audit current reporting to identify gaps between business needs and implementation.
- Determine how much work is required to update tagging.
- Prioritize areas that are most important to the business.
- Ensure the technical team views tagging as an iterative process.
- Evangelize updated reporting throughout the organization.
- Schedule an annual review of data with key stakeholders.

A Tale of Two Analysts

How can your time in Setupland and Actionland affect you? Consider the case of former classmates Lou and Max. After graduating from the same top-ranked MBA program, both have spent the last four years as dedicated, hardworking, and intelligent web analytics professionals, becoming senior web analysts at their respective companies. They both look to be equally busy and consumed by the demands of their jobs. Under closer examination, however, key differences emerge.

Lou's web analytics team has actually shrunk from attrition since he joined the company; even his admired mentor left. Although his team was spared during the recent round of layoffs, his company never filled the open positions on his team and they eventually disappeared. Despite repeated requests, Lou's team struggles to get any budget for more advanced analysis tools or to attend any key industry conferences.

Max's team, meanwhile, is thriving. Not only has it expanded each year, the company is planning to hire three more analysts in the coming months. He can't think of a time when his team wasn't able to get funding for whatever tool it needed. He

is regularly invited to present at conferences and has built up a robust network of industry contacts. He enjoys his work, feels recognized, has received regular pay increases, and may be up for a promotion this year.

When the two friends catch up over coffee, Lou is shocked to learn Max is making significantly more than him. Lou determines he needs to explore the job market immediately. Maybe he'll even apply for one of the open positions at Max's company.

Why the stark difference experienced by these two equally capable analysts? *Max spends 70% of his time on analysis* whereas Lou focuses most of his time on reporting or other tasks and less than 10% on actual analysis. I've seen the same scenarios play out at countless companies. Analysts who are action heroes focus primarily on analysis, but too many analysts perform very little actual analysis in their day-to-day responsibilities. In fact, they are essentially reduced to being reporting robots (**Figure 2.2**): humans performing repetitive, routine reporting tasks that in many cases could and should be automated. In most cases these reporting tasks are mechanical in nature and don't require massive amounts of analytical horsepower to perform.

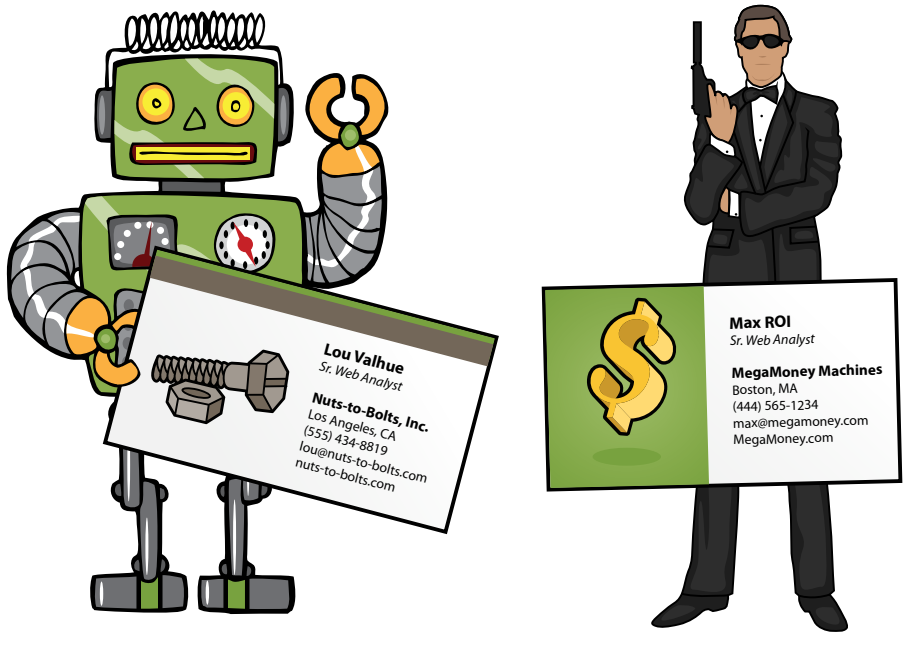


FIGURE 2.2 Are you a reporting robot or action hero?

Whenever sharp analytical minds are spending most or all of their time on reporting, talent is being wasted. Technology should be doing more of the heavy lifting with reporting through automated reports and dashboards.

Where Do Reporting Robots Come From?

In most cases, reporting robots are products of their environment. Most of the reporting robots out there dreamed of being in Max's shoes rather than finding themselves in Lou's. However, one thing or another has caused many web analysts to feel more mechanical than analytical (**Figure 2.3**). The following list identifies five scenarios that will create reporting robots at any company:

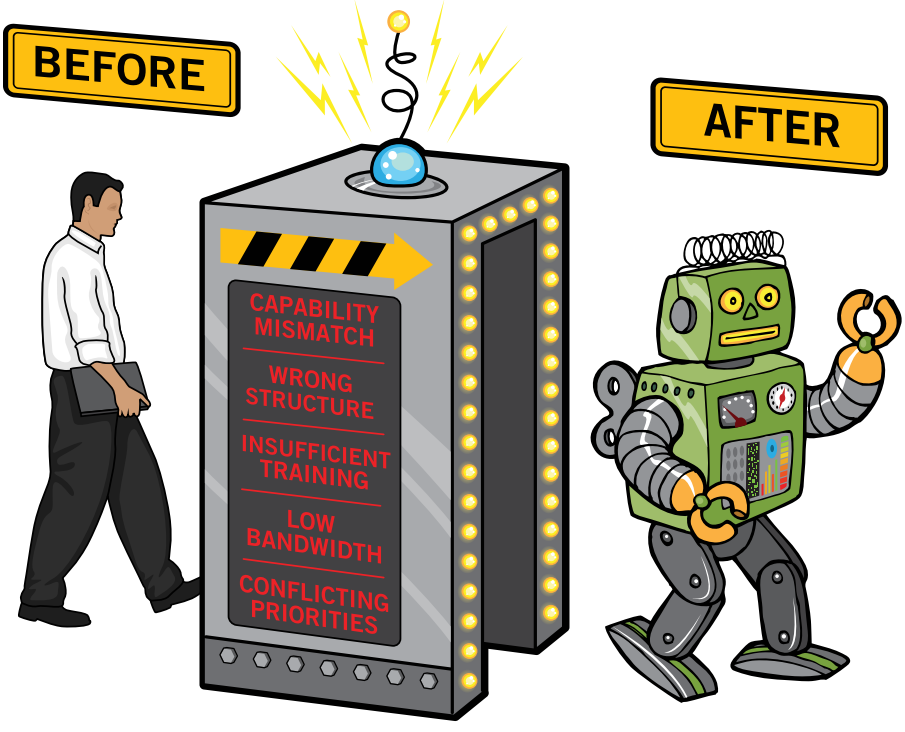


FIGURE 2.3 Most reporting robots didn't start out as machines; they were shaped by their environment.

- C**apability mismatch.** In this scenario, the issue is the individual. The organization does an inadequate job of matching the candidate to the required skill set of the web analyst position, but the person simply doesn't have the capacity to be anything other than a reporting robot. He may have been available or interested in the web analyst position but that doesn't necessarily mean he's qualified for it. "Jimmy in IT set it up. He knows how the web analytics tool works. Can't we have him do the reporting and analysis?" These mismatch scenarios often lead to having someone who is comfortable with reporting but not with analysis.

- **Wrong structure**. The ownership of the web analytics program can influence whether an analyst flourishes or dwindles. A company might not know which department should own its analytics resources, and senior executives mistakenly align it with a department that doesn't fully appreciate the strategic importance and value of web analytics. As a result, web analysts will report into a group and manager who may not understand or care about web analytics. In these cases, the analyst is typically measured by the volume of work she generates rather the actual impact of the work. You can generate tons of reports and dashboards without taxing your brain too heavily, and the throughput looks great to an uninformed, disinterested manager. Over time, the web analyst will fall into the trap of focusing on low-value work that is inadvertently rewarded and recognized by such a manager.
- **Insufficient training**. A web analyst may have the talent but lack training to do in-depth analysis. Without proper training, he may be limited to just focusing on reporting because that is all he knows how to do with the analytics tools. Until he receives some kind of training, he will continue doing what he's comfortable with. In addition, without adequate training, an analyst may not be using the products in the most efficient or effective manner. With the right training, he may be able to complete reporting tasks more efficiently and be able to invest more time in performing strategic analysis work.
- **Low bandwidth.** The web analytics team may be understaffed and unable to meet all of the reporting requests coming from different parts of the company. Just keeping up with ad hoc questions and reporting requests will leave very little to no time for exploratory analysis.
- **Conflicting priorities.** A web analyst may be tasked with other responsibilities besides web analytics duties (managing paid search, reporting on offline data, etc.), which may limit her ability to focus on anything but basic reporting. If analysis is not a high priority for her manager, then realistically it's not going to receive much attention from the analyst.

If you're assigned to manage a group of web analysts who appear on the surface to be reporting robots, closely examine the individuals you inherited, as well as their environment. Before you start evaluating the skill sets of the individuals, first look at their job satisfaction. Generally, potential action heroes are not happy being reporting robots. Over time their analysis spark may have been extinguished due to organizational issues out of their control. They may be team players who are willing to do their fair share of the reporting drudgery, but deep down they know that their talent and passion for analytics is being wasted. Meanwhile, individuals

who are content with their current reporting focus often don't have the capacity to perform more meaningful analysis.

If your company has a large analytics team, it might have the luxury of retaining some of its reporting robots to deal with ongoing reporting requests. Most companies will want individuals who can handle both the reporting and analysis aspects; however, more and more the low-level, standardized reporting is being automated or outsourced to external third parties so that the strategic analysts can apply their skills and expertise where they can add the most value: deep-dive analysis and optimization efforts.

The Difference Between Reporting and Analysis

Sometimes the line between reporting and analysis tends to blur, so if you want a ticket to Actionland instead of a one-way ride to Robotville, you need to be able to distinguish between these two areas of web analytics:

- **Reporting** is the process of organizing data into informational summaries in order to monitor how different areas of a business are performing.
- **Analysis** is the process of exploring data and reports in order to extract meaningful, actionable insights, which can be used to better understand and improve business performance.

While both draw upon the same collected online data, reporting and analysis are very different in terms of their purpose, tasks, outputs, delivery, and value. Without a clear distinction of the differences, an organization may sell itself short in one area (typically analysis) and not achieve the full benefits of its web analytics investment. Take a look at how the two differ across the five key areas.

Purpose

Reporting translates raw data into information. Analysis transforms data and information into insights. Reporting helps companies to monitor their online business and be alerted to when data falls outside of expected ranges. Good reporting should raise questions about the business from its end users. The goal of analysis is to answer questions by interpreting the data at a deeper level and providing actionable recommendations. Through the process of performing analysis you may raise additional questions, but the goal is to identify answers, or at least potential

answers that can be tested. In summary, reporting shows you *what is happening* (numbers) and analysis focuses on explaining *why it is happening* and *how you can act on it* (words).

Tasks

Sometimes what feels like analysis is really just another flavor of reporting (yes, there are more than 31 flavors). One way to distinguish whether your organization is emphasizing reporting or analysis is by identifying the primary tasks that are being performed by your analytics team. If most of the team's time is spent on such activities as *building, configuring, consolidating, organizing, formatting,* and *summarizing*, then you're reporting.

NOTE Testing, you could argue, is also an analysis task. However, I view such optimization efforts as a key attraction within Actionland. Analysis generates ideas that need to be validated through testing.

Analysis focuses on *questioning, examining, interpreting, comparing,* and *confirming*. Reporting and analysis tasks can be intertwined, but analysts should still evaluate where they are spending the majority of their time. It's not uncommon to find web analytics teams spending most of their time on reporting tasks.

Outputs

On the surface, reporting and analysis deliverables may look similar with lots of charts, graphs, trend lines, tables, and stats. Look closer, and you'll see some differences. The first is the overall approach (**Figure 2.4**).

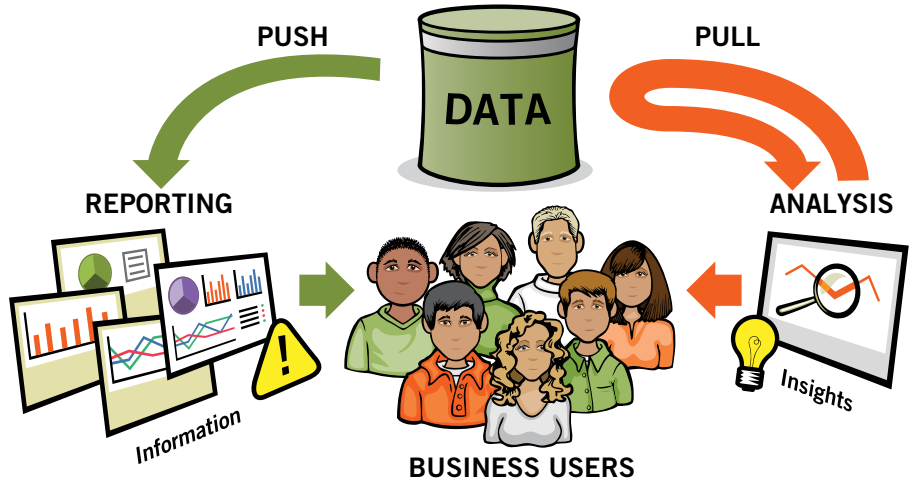


FIGURE 2.4 Reporting pushes information, and analysis pulls insights.

Reporting generally follows a *push* approach, where reports are *passively* pushed to users who are then expected to extract meaningful insights and take appropriate actions for themselves (think self-serve). The three main types of reporting are

- **Canned reports.** These are the out-of-the-box and custom reports that you can access within the analytics tool or which can also be delivered on a recurring basis to a group of end users. Canned reports are fairly static with fixed metrics and dimensions. In general, some canned reports are more valuable than others, and a report's value may depend on how relevant it is to an individual's role (SEO specialist versus web producer).
- **Dashboards.** These custom-made reports combine different KPIs and reports to provide a comprehensive, high-level view of business performance for specific audiences. Dashboards may include data from various data sources and are also usually fairly static.
- **Alerts.** These conditional reports are triggered when data falls outside of expected ranges or some other predefined criteria are met. Once people are notified of what happened, they can take appropriate action as necessary.

In contrast, analysis follows a *pull* approach, where the analyst *actively* pulls particular data to answer specific business questions and provide recommended next steps with possible outcomes. A basic, informal analysis can occur whenever someone simply performs a mental assessment of a report and makes a decision to act or not act based on the data. In the case of analysis with actual deliverables, there are two main types:

- **Ad hoc responses.** Analysts receive requests to answer a variety of business questions, which may be spurred by questions the reporting raised. Typically, these urgent requests are time sensitive and demand a quick turnaround. The analytics team may have to juggle multiple requests at the same time. As a result, the analyses cannot go as deep or wide as the analysts may like, and the deliverable is a short and concise report, which may or may not include any specific recommendations.
- **Analysis presentations.** Some business questions are more complex in nature and require more time to perform a comprehensive, deep-dive analysis. These analysis projects result in a more formal deliverable, which includes two important sections: key findings and recommendations. The key findings highlight the most meaningful and actionable insights gleaned from the analyses performed. The recommendations provide guidance on what actions to take based on the analysis findings.

You may run across other hybrid outputs such as annotated dashboards (analysis sprinkles on a reporting donut), which appear to span the two areas. Remember the *push-pull* and *numbers-words* rules, and you'll be able to see the deliverable's true colors.

NOTE If the goal is to simply provide "a number," the ad hoc request may be more akin to reporting than true analysis. Computers spit out numbers; analysts provide insights with color, context, and consequences.

Another key difference between reporting and analysis is *context*. Reporting provides no or limited context about what's happening in the data. In some cases, the end users already possess the necessary context and background knowledge to understand and interpret the data correctly, but not always. Context is critical to good analysis. In order to tell a meaningful story with the data to drive specific actions, context is an essential component of the storyline. For example, without context a steep year-over-year drop in site visits may cause alarms to go off. When context is added (it's a weekend rather than a weekday), the data point is better understood and a fire drill is avoided.

Although they both leverage various forms of data visualization in their deliverables, analysis is different from reporting because it emphasizes data points that are significant, unique, or special, and it explains why they are important to the business. Reporting may sometimes automatically highlight key changes in the data, but it's not going explain why these changes are (or aren't) important. Reporting isn't going to answer the "so what?" question on its own.

The *recommendations* component is an important differentiator between analysis and reporting as it provides specific guidance on what actions to take based on the key insights found in the data. Even analysis outputs such as ad hoc responses may not drive action if they fail to include recommendations. Once a recommendation has been made, *follow-up* is another potent outcome of analysis because recommendations demand decisions to be made (go/no go/explore further). Decisions precede action. Action precedes value.

Delivery

Through the push model of reporting, recipients can access reports through an analytics tool, intranet site, Microsoft Excel® spreadsheet, or mobile app. They can also have them scheduled for delivery into their mailbox, mobile device (SMS), or FTP site. Because of the demands of having to provide data to multiple individuals and groups at regular intervals, the building, refreshing, and delivering of reports is often automated. It's a job for robots or computers, not human beings.

On the other hand, analysis is all about human beings using their superior reasoning and analytical skills to extract key insights from the data and form actionable recommendations for their organizations. Although analysis can be "submitted" to decision makers, it is more effectively presented person-to-person. In their book *Competing on Analytics* (Harvard Business School Press, 2007), Thomas Davenport and Jeanne Harris emphasize the importance of trust and credibility between the analyst and decision maker. Decision makers typically don't have the time or ability to perform analyses themselves. With a "close, trusting relationship" in place, the

executives will frame their needs correctly, the analysts will ask the right questions, and the executives will be more likely to take action on analysis they trust.

Value

Finally, you need to keep in mind the relationship between reporting and analysis in driving value. Think of the data-driven decision-making stages (data > reporting > analysis > decision > action > value) as a series of dominoes. If you remove a domino, it can be more difficult or impossible to achieve the desired value.

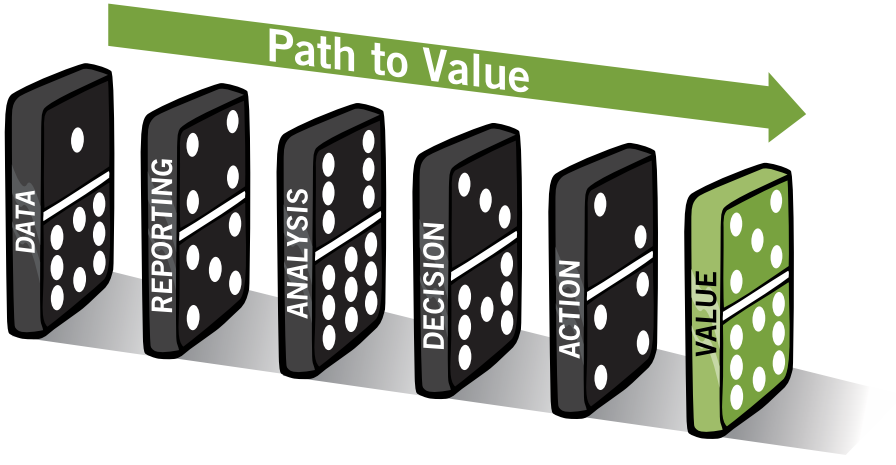


FIGURE 2.5 If you remove one of these dominoes, you won't be able to achieve the desired value.

As you can see in **Figure 2.5**, the path starts with having the right data that is complete and accurate. It doesn't matter how advanced your reporting or analysis is if you don't have good, reliable data. While most companies have an abundance of reports, the quality of those reports can still be an issue. Effective reporting gives a broad audience of business users an important lens into the performance of the online business. Reporting will rarely initiate action on its own as analysis is required to help bridge the gap between data and action. With decision acting as the gatekeeper to action, you usually need analysis to knock it over.

Having analysis doesn't guarantee that good decisions will be made, that people will actually act on the recommendations, that the business will take the right actions, or that teams will be able to execute effectively on those right actions. It is, however, a necessary step closer to action and the potential value that can be realized through successful web analytics. When I hear a client is struggling to find value from its web analytics investment, the cause is usually a path-to-value domino is missing or misaligned. Most often it is the analysis domino. **Table 2.1** highlights the subtle but important differences between the reporting and analysis dominoes.

NOTE Seasoned analysts might argue that they don't need reports to do analysis, saying "just give me the raw files and a database." On an individual basis, this approach can be successful. It doesn't work at the organizational level, however, if you're striving to democratize your data.

TABLE 2.1 Reporting and Analysis Comparison

	PURPOSE	TASKS	OUTPUTS	DELIVERY	VALUE
Reporting	Monitor and alert	Build Configure Consolidate Organize Format Summarize	Canned reports Dashboards Alerts	Accessed via tool Scheduled for delivery	Distills data into information for further analysis Alerts company to exceptions in data
Analysis	Interpret and recommend actions	Question Examine Interpret Compare Confirm	Ad hoc responses Analysis presentations (findings + recommendations)	Prepared and shared by analyst	Provides deeper insights into business Offers recommendations to drive action

Reporting Robot Rehab

With a more thorough understanding of how reporting and analysis differs, you may have come to the difficult realization that you or your coworkers have become reporting robots trapped in Setupland. Don't lose hope. You can do two simple things to start the reprogramming process before embarking down the enlightened path of becoming an action hero.

The first step is to *relentlessly and systematically automate as much reporting as possible*. Too often web analysts become comfortable with manually building reports instead of automating them. They fail to realize, however, how much time can be saved over the long term by investing some extra time upfront to simply build automation into the reports. Most of the popular web analytics tools have Excel add-ins, which make it easy to import online data for building spreadsheet-based reports and dashboards. Routine, regularly scheduled reports should be automated so they can be refreshed in a manner of minutes instead of hours. Even if you can't automate the entire report, try to automate as much of it as possible. If you don't need to review or touch the reports, your tool may also allow you to schedule them for delivery directly to your stakeholders. By automating repetitive, mundane reports, you'll be able to reclaim many hours each week that would have been wasted on unnecessary report creation.

The next step in the two-step rehabilitation process is to *inject more insights into your reporting*. If you've been successful in automating reports, you'll now have extra time to add context, insights, and action steps to your reports and dashboards. Here's an example of each:

- **Context.** "Paid search traffic spiked in the first week of August due to the start of the Back-to-School campaign."
- **Insight.** "The affiliate program had a 53% higher conversion rate (4.78%) than the paid search campaigns."
- **Action step.** "Consider shifting 60% of our remaining ad budget to the affiliate program for the rest of August."

By adding these different types of analysis comments, you're shifting to data interpretation and making reports more actionable. These notes may actually pique end users' interest in performing deeper analysis. When you add analysis notes to your reporting, however, be selective and strategic (**Figure 2.6**). While the first round of comments might be exciting, the thirteenth time probably won't be as invigorating. You want to be sure you can maintain your momentum throughout the life of the reports. As such, you should focus your annotation on what is most important, unique, or topical so that it truly stands out to your stakeholders. These two simple steps are guaranteed to deliver a hard reboot to any web analyst who is feeling more robotic than heroic.

TIP You can build metric definitions and report explanations into your reports via pop-up text, which appears when a user hovers over the help icon for a particular chart. The help information is easy to access and doesn't take up much space. VBA skills required.

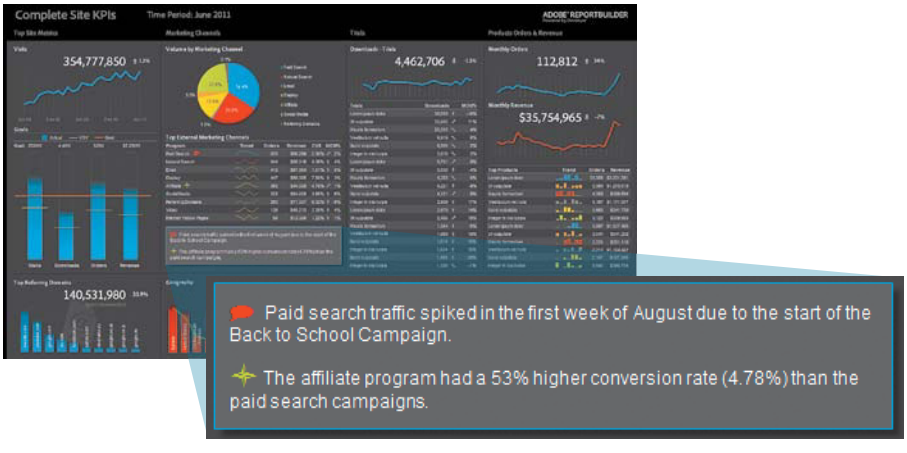


FIGURE 2.6 Adding context, insights, and action steps to your reports will make them more actionable.

Break the Reporting Routine

"Habit and routine have an unbelievable power to waste and destroy."

– Henri de Lubac

You're ready to shift your focus to Actionland, *but is your organization ready*? Many organizations are ensnared and entranced by the rhythm of reporting. Each day, week, or month different reports arrive in people's email boxes waiting to be consumed. It may be reassuring to your company that these reports are being distributed, but few people actually question if those reports are even being used. In many cases, they just gather electronic dust. From my experience, I think everyone—analysts, executives, and entire teams—assumes or hopes *somebody else* is leveraging and getting value from the reporting. At one company I was working with, an executive admitted she never used her monthly executive dashboard, but she sincerely hoped her team was actively using it. However, her team was too busy updating reports and creating dashboards each month to even look at it.

The reporting rut can be taxing for both business users and web analysts. On one hand, your business users are having their minds and senses dulled by a never-ending flow of reports. Meanwhile, different individuals and groups keep bombarding your web analytics team with more and more reporting requests. Even though you want more time in Actionland, your organization's reporting rhythm has you handcuffed.

You need to somehow disrupt your organization's reporting routine, which may have cast a spell over different individuals and teams within your company. You're not necessarily going to switch off reporting or stage a reporting rebellion, but you will apply more scrutiny to what's being requested. Rather than just taking their long list of requirements for a particular report or analysis, you're going ask more questions:

- What are you trying to achieve?
- What business question are you trying to answer?
- How are you going to use this report or analysis?
- What actions will you take from this report or analysis?
- With what frequency will you be using the data (real-time, daily, weekly, or monthly)?
- Who are you taking this information to?
- What are you trying to convince them to do?
- What is your theory or hypothesis?

By asking these questions, it's another important step away from being just a reporting robot and a step toward awakening your organization from its self-inflicted,

report-induced stupor. Web analytics expert Avinash Kaushik noted this type of approach plays to the strengths of each side of the conversation. Business users provide what they know best—the context, business priorities, and problem framing. Meanwhile, the web analysts can better apply their knowledge of the data, tools, and analytical approaches.[1] You're going to know better than the business users how to find the right information or insights they're seeking, but only the business users can define what they really need. Working together will result in a better solution whether it's a report, an analysis, or just a conversation.

TIP If you have an ongoing relationship with a specific team, have them keep an active record of all the business questions they couldn't answer as they come up. When it comes time to review their implementation and reporting, they'll have a readymade list of gaps to discuss and explore.

INSIDER INSIGHTS

TIP Drive discussion through data.

Jennifer Frigault is the director of business analytics for Gannett Digital where she leads the Audience Analytics and Revenue Analytics teams.

What brought you to the conclusion that data discussions are important?

For years I said yes every time a request for a new report or dashboard came to my department, whether it was a basic request from the sports editor or a new dashboard request from executives. We had so many reports running on auto delivery that we created rules in Outlook to automatically file them on arrival. We didn't read or track them, and we *never* received any questions on them. Then the day came when I said no.

Gannett was embarking on a major redesign of its more than 100 local newspaper and broadcast websites, and the project manager was requesting the same old boring, who-cares metrics, in the same old auto-delivery dashboards. When I thought about the strategic importance of this redesign, something told me page views and time spent weren't going to cut it. So I said no—very calmly, but still no. I told the group that I wasn't going to do another daily dashboard that auto delivered to everyone's email.

What did you propose in place of the dashboards?

I recommended we have *daily discussions* instead and said I would bring the metrics into the meetings where we'd look at them and discuss them together. My team created a template to pull the requested metrics, but we also focused on other things that we felt contributed to the whole story, such as videos viewed, SEO referrals, and so on. The first two weeks of launch we met every other day and discussed the data, making adjustments to expectations, communications, and design. The product team was able to observe, discuss, and learn from what was happening. The discussions generated both insight and action, which another dashboard couldn't have done as effectively. Saying no doesn't always work, but try it every now and then. Let yourself become an analyst again. ■

Gathering Business Requirements

As you tactfully push back on requests by asking more questions, you're essentially striving to better understand your company's business needs. Whether you're focusing on implementation, reporting, analysis, or testing, you need to be skilled in gathering business requirements. It's a core skill that's applicable in both Setupland and Actionland. Properly clarifying, defining, understanding, and prioritizing business requirements will ensure there are no major gaps between what's needed and what's provided. When it comes to gathering business requirements, there's a simple formula for achieving alignment (**Figure 2.7**):

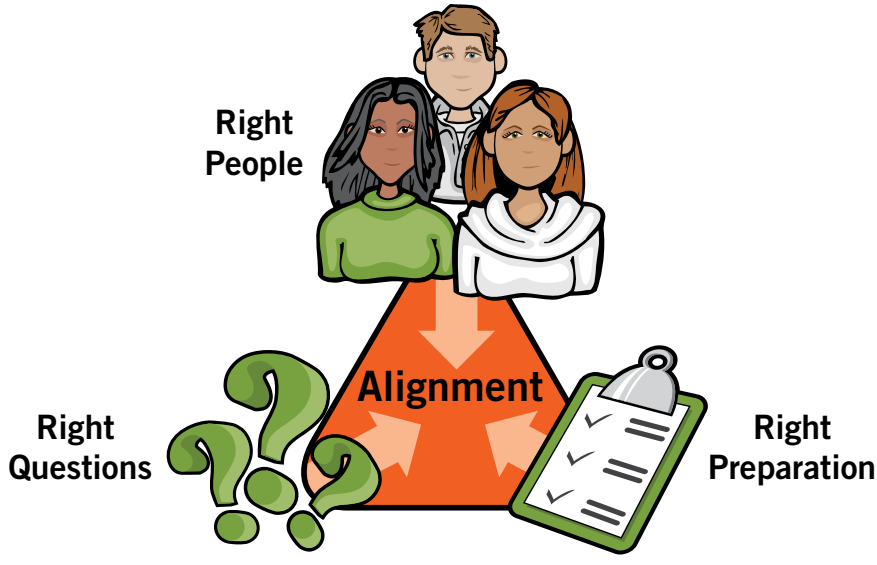


FIGURE 2.7 These three focus areas ensure there's alignment between what's needed and what's provided.

- **Right people.** You want to identify and gain direct access to the people who really matter and care about the initiative. These people typically control the purse strings and are ultimately held accountable for the initiative's success. Some intermediaries like to minimize the involvement of these people thinking they're doing them a favor. In other cases, managers may not believe they need to be involved and just delegate the responsibility to one of their subordinates. The business requirements often degrade with each passing interpretation and re-interpretation, introducing potential imprecision and misalignment. In addition, you want to make sure all of the key stakeholders participate in the process or you will end up with an incomplete picture.

- **Right preparation.** Both sides need to be prepared for the process of gathering the business requirements. If business owners show up at your meetings not knowing why they're there, you've failed. Ideally, they should be asked to put some thought into the discussion prior to the meeting so that you can maximize everyone's time and effort. On your side, you should try to gather and review as much material beforehand so that the participants don't feel like you're starting from zero. Showing you've prepared can give you an instant shot of credibility with a new team.
- **Right questions.** Drilling down into the bottom-line needs of the business team or executive requires the skilled use of thought-provoking, open-ended questions as well as some intuition as to when you've struck the bottom and don't need to keep drilling. Frequently, you'll need to try a few variations of a particular question until you unlock the right answer. Remember you're primarily focused on understanding "what" they want to achieve, and then you dig into the "how" part. Along the way you need to determine what the business priorities are. You also never want to assume you know what the business requirements are, and therefore, you'll want to create your own set of "go-to" interview questions. Here are some basic examples:
  - What are your key pain points?
  - What business challenges are you trying to solve?
  - What is the expected outcome?
  - How do you define success?

"If you do not know how to ask the right question, you discover nothing."

– W. Edwards Deming

An important side benefit from the business requirements gathering process is that different stakeholders, groups, and other individuals will feel as though they've been given a voice during the process. Simply by involving various people in the approach you're more likely to gain their trust, buy-in, and support during the execution phase. While gathering business requirements is important in Setupland, you'll see how it becomes an invaluable tool when you venture into Actionland and need to prioritize your analysis efforts.

Actionland Is Not Fantasyland

Most organizations that have invested in web analytics had every intention of arriving at Actionland, but many have gotten lost along the way. For some companies, the promise of Actionland has felt more like Fantasyland, and frequently analysis has been the missing domino in their path to value.

Actionland is within reach of any company, but some changes may be required to gain admission. As a web analyst, your approach to analysis can be a critical success factor in helping your company to enter Actionland and initiate the process of optimizing your online business. Action heroes ensure that organizations not only get into Actionland but also return there on a regular basis. It's critical that more analysts and marketers become action heroes because the field of web analytics will not advance with reporting robots stuck in Setupland. In the next chapter, I'll outline what it takes to get a season pass to Actionland and how to become your company's equivalent of Chuck Norris for web analytics.

ENDNOTE

1 http://www.kaushik.net/avinash/refuse-report-requests-answer-analytics-business-questions/

CHAPTER 3

THE MAKINGS OF AN ACTION HERO

"A hero is an ordinary individual who finds the strength to persevere and endure in spite of overwhelming obstacles."

– Christopher Reeve

Remember when you first saw what was to become your all-time favorite movie? For me, it was a lazy summer afternoon in 1981. *Raiders of the Lost Ark* was on the big screen, and I was a mesmerized nine-year-old. Back then, I couldn't imagine anything better than crawling through jungles and catacombs with Indiana Jones and thwarting the Nazis in their quest for supernatural artifacts and world domination.

Today, I still admire Indy's unique brand of action hero. He was a man of ability—an accomplished scientist and professor, an expert in ancient cultures and languages—and a street-smart, resourceful adventurer (hey, he brought a gun to a sword fight). As a professional, I appreciate even more his thoughtful approach to accomplishing his goal and making the most of his environment. Rather than blindly racing off to Egypt at the start of his mission, Indiana Jones took a more calculated approach; he headed to Nepal to retrieve the headpiece artifact that would reveal the true location of the lost ark. Once in Egypt he leveraged his environment and recruited local help to translate the markings on the headpiece, find the secret location in the Map Room, and

break into the Well of Souls. It was a balanced combination of ability, environment, and approach that made Indiana Jones successful as an action hero.

These same success factors can help you navigate and master the web analytics jungle too. It's really that simple: To be a web analytics action hero, you need the right ability, environment, and approach (**Figure 3.1**). If you have two of these three aspects covered, you might still experience some success but before long that giant ball of trouble will roll your way. Success isn't sustainable without all three factors in place—just ask Peter.

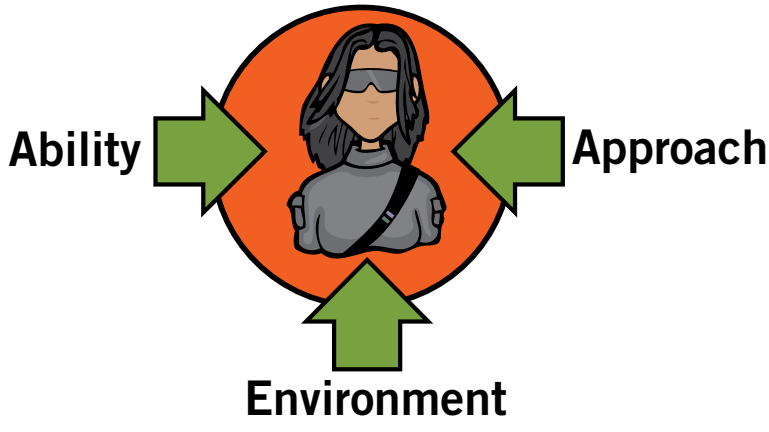


FIGURE 3.1 An action hero requires all three elements for long-term success.

My friend "Peter" took an exciting position at a new company after being heavily recruited by its recently hired CMO. Bringing with him several years of experience in web analytics at a well-known, multinational firm, Peter was going to play a key role on the CMO's new dream team for analytics and optimization. He had the ability, the approach, and the environment, or so he thought. Three months into the job, the CMO, who was the analytics champion, left the company and the environment began to crumble.

Peter watched as the strategic, data-driven initiatives his team had begun to set up with the support of the CMO quickly unraveled across the organization. In a short amount of time, Peter was being asked to defend marketers' poor decisions with data. On one occasion after his team analyzed and tested a new order flow on the company website, the CEO requested an untested change just prior to launch. When conversion bombed, the CEO demanded to know why it didn't perform like the original test. His abilities were strong, his approach excellent, but even combined these two could not overcome the environment factor. After working 14-hour days and still not making a significant impact, Peter decided to leave the company after six months on the job.

In terms of the action hero's success factors, *two out of three doesn't cut it*. But how do you identify whether you have them or can achieve them all? To help you avoid ending up as frustrated as Peter, the rest of the chapter will examine each success factor—ability, environment, then approach—in detail, concentrating on just what to look for and foster in your company, your team, and yourself.

Ability: Attributes of a Good Web Analyst

In my mind, not just anyone can become a good web analyst. The best analysts that I know have a unique blend of skills and talents that are often difficult to find in just one person. Some fundamental qualities are core to who you are; you were either born with them or you had the natural propensity to develop them. Don't go cursing your parents or grandparents' DNA yet; other hard and soft skills you can learn or improve through training and hands-on experience. **Figure 3.2** shows the four main categories of desirable attributes, as well as a fifth bonus category that I call the *Hero Factor* (*H Factor*). The sections that follow examine specific skills in each category, indicating which ones are core, augmentable, or learnable.

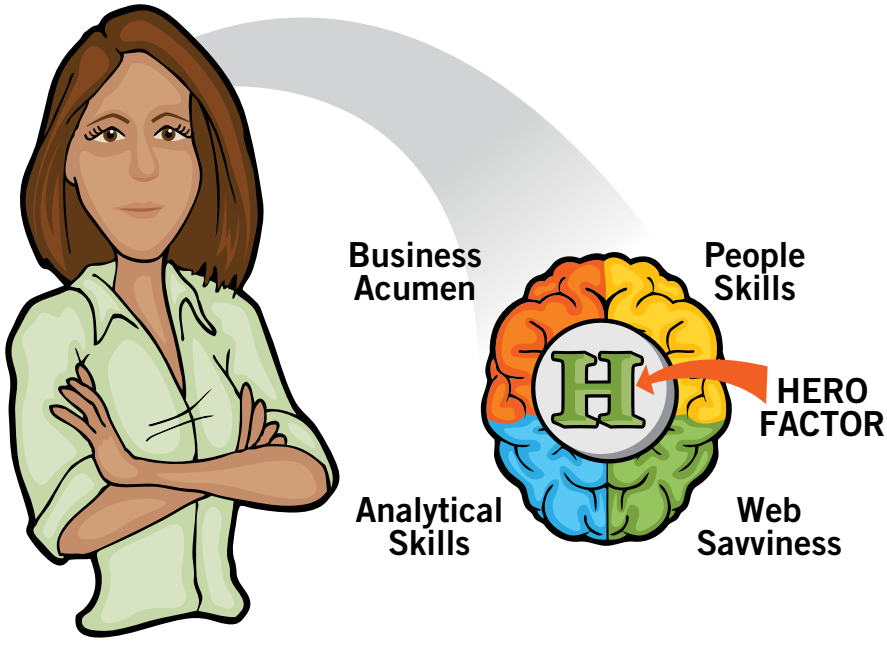


FIGURE 3.2 The attributes of a good web analyst fall into four main categories plus the Hero Factor (H Factor).

Business Acumen

A web analyst needs to have a sharp business mind, not just analytical skills. Without adequate business acumen, their insights won't be actionable. Analysis needs to be grounded in the context and realities of the business so that the subsequent recommendations are relevant and practical. In particular, the individual should possess the following business-related attributes:

- **Big picture thinking.** One of the real dangers of focusing on analysis on a daily basis is getting lost in the details. You need to be able to see details *and* the big picture to be truly effective. Successful analysts possess an astute understanding of how the business operates and makes money—both online and offline. With a broader perspective, they are able to tie tactical-level recommendations into the strategic goals and initiatives of their businesses. They can better frame insights and potential actions in a way that resonates with senior executives—a key audience that is constantly thinking about the big picture.
- **Customer-centric.** As customer relationships are even more important and powerful in today's interconnected, social economy, you need to have a customer-centric approach. At a moment's notice, web analysts must be able to shift gears from the corporate perspective to the customer's point of view. They use both quantitative and qualitative data to better understand customer behaviors, conversations, and needs to drive value for the business. They are skilled at differentiating customer wants from needs.
- **Marketing acumen.** When most of web analytics' emphasis is focused on measuring the performance of marketing initiatives, it's important that you are familiar with marketing concepts, strategy, and tactics. Analysts who have marketing backgrounds typically have a good grasp of the strengths and weaknesses of the business as well as the opportunities and threats faced by the organization. They look at what competitors are doing and what trends are happening in the industry. Marketers comprehend the macro-level business issues but can also appreciate the customer perspective.

Analytical Skills

If there's an obvious requirement for the job, it's an analytical mind that hungers for business insights and new challenges. Web analysts need to be comfortable operating from the left side of their brain in terms of math, logic, and critical thinking. In terms of analytical skills, there are several related attributes:

- **Intelligent.** The higher your intellectual horsepower, the more likely you'll be successful as a web analyst. Having a faster and more powerful mental processor enables you to handle more information and quickly pinpoint problems, opportunities, and solutions.
- **Curious.** Web analysts are naturally inquisitive and constantly learning new things about the business, technology, industry trends, analysis techniques, and other hard or soft skills. They were the kids who took things apart to understand how they worked. When they spot something extraordinary or unusual in the data, they find it very difficult to pass it by without exploring it further, even if it means staying a little later at work than expected. Think Curious George minus the fur, destructive behaviors, and affinity for men in bright yellow clothes.
- **Detail-oriented.** The credibility of an analysis is both important and fragile. It's no surprise that the word "analyst" begins with "anal" (as in anal retentive) because attention to detail is critical. Web analysts understand that one or two small mistakes can undermine days or weeks of work. They don't want to waste time redoing flawed analysis work or have their analyses discounted and discarded due to perceived sloppiness by executives.
- **Open-minded.** With the fast pace of change across all aspects of the Internet and within the field of web analytics, you can't afford to be close-minded and static in your approach. Good web analysts are open to new ideas and approaches, as well as being willing and able to embrace them.
- **Objective.** Data can be twisted and contorted like origami into whatever the analyst or business wants it to be. Instead, you need to be objective and focus on the facts in the data. Successful web analysts allow the data to speak freely, especially when it has something important to say no matter what the message is. Like a good ship's doctor they tell the business what it needs to hear, not what it wants to hear. Although it may be difficult to remove all subjectivity (we are subjective in what we choose to emphasize or not emphasize in our analysis or recommendations), web analysts should strive for objectivity.

NOTE The best web analysts are essentially tool agnostic, and tool knowledge is the least important part of their skill set. Given the choice, I prefer to hire an excellent analyst with no previous product experience over an average analyst with excellent knowledge of my company's web analytics package. The ramp time is a little longer, but the long-term payoff is potentially greater.

- **Problem-solving skills.** Web analysts approach problems with the expectation that they will be able to dissect the issue and find a solution. They know there isn't one "silver bullet" approach that will solve all problems. Instead, they consider the problem from different angles and test various problem-solving techniques until they find an approach that unlocks the puzzle.
- **Tool mastery.** Good web analysts know how to get the most from their analytics tools. They possess an in-depth understanding of the tool's capabilities and limitations as well as how other complementary tools can fill gaps or provide additional insights. They are fast learners who can quickly become proficient with new tools, technologies, or features.

People Skills

The socially awkward quant geeks who are head-down buried in web analytics reports and spreadsheets aren't going to make it very far as web analysts, as social skills are a major requirement for the job. Whether they are gathering business requirements from different stakeholders, bridging the gap between business and technical teams, or presenting to executives and stakeholder groups, web analysts are constantly interacting with not only data but people across the business. As a result, they need the following social skills:

- **Communication skills.** No matter how brilliant you are, if you can't communicate your insights in a persuasive and compelling way through effective verbal, written, and visual communication, you're not going to succeed. Good web analysts have the ability to sell ideas, push back when appropriate, and influence decisions. They are adept at reading their audiences and responding appropriately.
- **Interpersonal skills.** Good web analysts are more effective in their roles because they build a strong network of relationships across the organization. They are self-aware and skilled in building rapport, active listening, relating to other teams (empathy), conflict resolution, consensus building, and negotiation. Overall, good web analysts are likable and earn the trust of the people they work with. They have the ability to influence people above them and outside of their group to get stuff done.

Web Savviness

Domain knowledge and expertise is another critical success factor in being a good web analyst. If you want to excel as a web analyst, you need to be well versed in everything that contains the words web, online, Internet, or digital. In particular, you need to be familiar with a few key areas:

- **Online marketing.** While it is valuable to understand the general fundamentals of marketing, you need to have a good command of the different aspects of online marketing: display advertising, paid search, SEO, social media, affiliate marketing, e-mail marketing, and mobile advertising. It is difficult for web analysts to measure and optimize the performance of these marketing channels without a sound understanding of how they work and are managed.
- **Online business models.** Each business is unique and takes a different approach with its online properties. Good web analysts have a solid grasp of the different business models that are employed by their companies (e-commerce, advertising, subscription, lead generation, support) along with the unique business drivers and KPIs associated with each business model.
- **Web design.** A good knowledge of web design principles, tactics, and processes enables you to identify design-related issues that are affecting the user experience and overall site performance. Good web analysts are familiar with the personas, scenarios, and wireframes used in web design as well as the best practices for usability, visual design, and information architecture.
- **Online technology.** Good web analysts may not necessarily know how to code JavaScript from scratch, but they do know what JavaScript is, how it is used to collect data, and its limitations. Their technical knowledge is laser-focused on how different nuances and aspects of online technologies can potentially affect measurement and analysis. For example, they have a good grasp of potential issues related to query-string parameters, redirects, first- and third-party cookies, iframes, Flash/HTML5, browser types, mobile devices, and so on.
- **Online trends.** High-performing web analysts are aware and in tune with the current and emerging online trends. Their knowledge can span new online marketing tactics, changes in user behaviors, new privacy concerns, new web technologies, new online standards, and so on. By keeping a finger on the pulse of online trends, you can not only identify how those trends are affecting your company (understanding which ones are valuable and which ones aren't) but also determine how the organization can best respond to those trends.

Hero Factor (H Factor)

Web analytics action heroes possess many of the qualities in the four main categories to varying degrees. In addition, they seem to have a little something extra in their tank that sets them apart from other web analysts; I call it the Hero Factor, or H Factor for short. H Factor attributes are like rocket fuel that, when combined with the aforementioned talents and skills, can drive incredible results with the right environment and approach. Pumped full of the H Factor, action heroes are

- **Passionate.** Because web analytics is still a relatively new field with a shortage of talent, I always look for candidates who are passionate and excited about web analytics. If interviewees don't believe web analytics is the coolest thing since the Flux Capacitor, they aren't worth hiring. I've found that individuals who are truly passionate about web analytics have a hidden turbocharger that makes them more determined, dedicated, and innovative. Their passion is also infectious and inspiring to everyone they work with.
- **Proactive.** As a web analyst, you could simply react to the ad hoc requests and projects that pour into your email inbox. You'd have plenty to do, and your annual performance review would probably be uneventful. If you take control of your role, however, believe in your abilities, anticipate the needs of the business, and apply your skills in unexpected but meaningful ways, you can become a powerful protagonist for positive change at your organization.
- **Confident.** Self-confidence can go a long way in terms of establishing yourself as a trusted advisor within your organization. When you combine confidence with high-quality work, you'll build credibility over time and be highly valued by the organization. Executives and teams may question the data from time to time, but they won't question your abilities, insights, or recommendations.
- **Relentless.** Like Indiana Jones fighting his way back into the driver's seat after being dragged behind a truck by his bullwhip, heroic web analysts are tenacious in their approach to analysis and optimization. They doggedly search for actionable business insights and tirelessly work with the organization to adopt recommendations. Failure is not an option to these analysts.
- **Resourceful/Innovative.** MacGyver could make hand grenades from pinecones, duct tape, and toothpaste, and the best web analysts need similar ingenuity. Your data isn't always going to be perfect so you need to be adaptive and inventive. In addition, these web analysts use innovative approaches to identify interesting solutions.

No Analyst Is Perfect

Be inspired, not discouraged: No analyst meets all these criteria perfectly. Even the action heroes I've worked with aren't without some minor blemishes. As long as you don't exhibit too many key gaps across the core qualities, you are potential action hero material. You may need to work on adding or strengthening certain attributes, but you now have a punch list for rounding out your skills.

If you're a manager, be aware that hiring an experienced web analyst and action hero can be difficult and expensive. You may, however, be able to hire and groom someone who possesses the essential raw talents of a *future* action hero. **Table 3.1** recaps which characteristics and abilities are essential (core), which ones need some natural propensity to excel in (augmentable), and which ones can be developed over time (learnable).

TABLE 3.1 Key Abilities Summary

CATEGORY	ATTRIBUTE	TYPE
Business Acumen	Big picture thinking	Augmentable
	Customer-centric	Learnable
	Marketing acumen	Learnable
Analytical Skills	Intelligent	Core
	Curious	Core
	Detail-oriented	Augmentable
	Open-minded	Augmentable
	Objective	Augmentable
	Problem-solving skills	Augmentable
	Tool mastery	Learnable
People Skills	Communication skills	Augmentable
	Interpersonal skills	Augmentable
Web Savviness	Online marketing	Learnable
	Online business models	Learnable
	Web design	Learnable
	Online technology	Learnable
	Online trends	Learnable
H Factor	Passionate	Core
	Proactive	Core
	Confident	Augmentable
	Relentless	Core
	Resourceful/Innovative	Core

TIP If you are hiring an experienced web analyst and really want an action hero, make sure your future hire has some familiarity with Actionland or at least will be comfortable operating in Actionland. Many web analytics professionals have amassed many years mastering the ins and outs of Setupland but don't have much practical experience in Actionland. The last thing you want to do is hire someone who isn't excited about leaving Setupland.

Environment: How to Thrive, Not Just Survive

If I were interviewing with a company for a new web analytics position, one of the most important things I would explore in the interviews would be the health of the organization's analytics or optimization environment (the second key factor shown in Figure 3.1). Even if you have mad analytics skills and a solid strategy, you can still fail due to factors completely outside of your control.

Sometimes experienced action heroes don't realize how much environmental factors have contributed to their past successes. They feel as though they have the Midas touch at whatever company they join, only to learn, as my friend Peter did, that some internal obstacles are too great to overcome on their own.

Having worked with multiple organizations as a consultant, I've identified seven key environmental factors that can significantly influence the success or failure of a company's web analysts and its web analytics program:

- Executive sponsor
- Strategy
- Staffing
- Training
- Data
- Tools
- Accountability

The following sections will examine each factor in detail.

Executive Sponsor: Do You Have a Champion?

Without a doubt one of the most frustrating positions you can be in as a web analyst is when you don't feel you have an executive sponsor or champion for web analytics within the organization. No matter how smart, innovative, or productive web analysts are, they can't overcome organizational inertia without cover fire from above. On the other hand, I've seen many action heroes credit much of their success to the support of an internal champion. An executive sponsor can help web analytics initiatives through the Four P's of Executive Sponsorship:

- **Prioritization.** To be successful, web analytics needs to be aligned with key business goals. The executive sponsor provides crucial direction to the team

so the web analytics program is always in line with the corporate strategy and top priorities.

- **Protection.** The executive sponsor plays an important role in protecting the web analytics team from other conflicting initiatives or corporate politics.
- **Problem-solving.** Using her clout or influence within the organization, the executive sponsor steps in to remove any problems that could impede the success of the web analytics program such as resource or budget constraints.
- **Promotion.** The executive sponsor plays a key role in championing the benefits of web analytics, holding people accountable, and promoting data-driven wins within the organization, especially among other executives.

If you don't currently have a champion (or at least not a good one), you'll want to look for four key traits in your search. An effective executive sponsor should

- Be a senior executive within a key stakeholder group that will benefit from web analytics (e-commerce, marketing, CRM/customer insights)
- Have sufficient authority and influence within the organization to ensure the program can be successful
- Be data-driven by nature and believe strongly in the value of web analytics
- Be able to invest the time and effort necessary to create a data-driven organization

The last two criteria are important because you need a champion who is both committed and involved.[1] If his eyes glaze over whenever you discuss online data, for example, you probably don't have the right person. If the executive sponsor is involved but not committed, he may go through the motions and only provide lip service. On the other hand, if the executive sponsor is committed but not involved, he may believe in the importance of web analytics but not provide enough support to make it successful. A reluctant executive sponsor is actually worse than having no champion because other potential sponsors think you're covered when you're not. In either scenario, the web analysts are left to their own devices without the needed fire support from the executive boardroom.

"Leadership appears to be the art of getting others to want to do something you are convinced should be done."

– Vance Packard

Strategy: Is Your Online Strategy MIA?

Having a clear, well-articulated online strategy is a critical success factor for web analysts and data-driven marketers. Aside from impeding the employees' ability to actually execute against a strategy, it is also hard to measure or optimize performance if you don't know what the strategy is. A lack of understanding and agreement on the online strategy is a common problem across organizations. In the 2011 Online Measurement and Strategy survey by eConsultancy and Lynchpin,

only 22% of the companies surveyed had a "company-wide strategy in place that ties data collection and analysis to business objectives."[2]

The results of this survey are consistent with what I've seen in the field. At a successful high-tech company, I met with some 15 product marketing managers to discuss their business requirements for web analytics reporting and analysis. After some debate about what they wanted to measure online, the product marketing managers told me to ask senior management what their online strategy was and "let us know when you find out what it is." Ouch.

Online strategic direction can be MIA for a variety of reasons, including no clear ownership of the online channel; a fast-paced, tactically oriented work environment; and poor communication between executives and frontline employees. Despite all of these challenges, there is no valid excuse for not having a clear online strategy. You can't execute against or measure a strategy if you don't clearly know what it is. As you can see in the path-to-value diagram (**Figure 3.3**) and the list that follows, strategy truly impacts each of the steps and serves as an essential foundation for creating data-driven value:

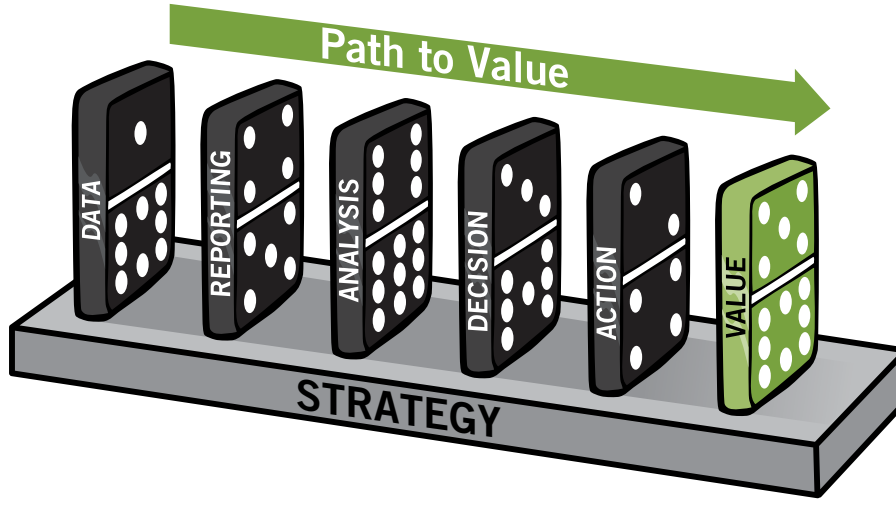
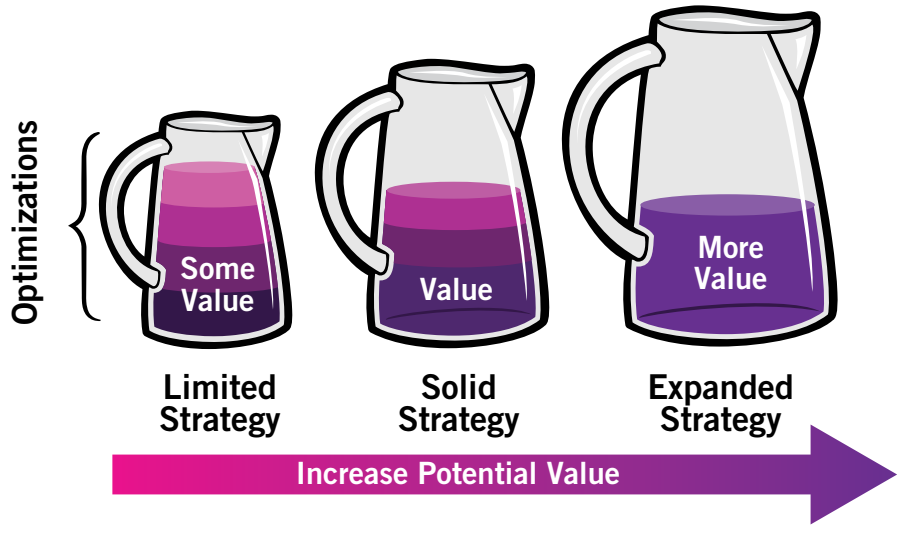


FIGURE 3.3 Strategy is the foundation for all of the dominoes in the path to value.

- **Data.** For web data to be useful, relevant, and complete, it needs to be aligned to the online strategy and goals of the organization. No organization wants bad data. Irrelevant and incomplete data can be just as useless as inaccurate data.

- **Reporting.** The best reporting and dashboards are finely tuned to measuring the performance of the business. From time to time, the web analytics team may be asked to re-create a particular report for continuity reasons. Before moving heaven and earth to accommodate the request, someone needs to hit the pause button and ask "why does this report exist?" and "is it still relevant to the business?" Rather than replicating historical reports, which are based on an outdated strategy with potentially different (and probably forgotten) business goals, you need to determine if those reports should be replaced with more relevant, meaningful ones tied to the current online strategy.
- **Analysis.** Web analytics tools provide a rich set of web data for companies to analyze. In most cases, you have more data than you know what to do with. In addition, web analysts have multiple requests pouring in each day or week from different parts of the business. When analysts have a clear understanding of the online strategy and key business goals, they can prioritize which analyses to pursue, postpone, or return to sender. Pushing back is easier when analysis prioritization is based on what's most important to the business.
- **Decision.** Strategy has a significant influence on the decision-making process as alignment to business goals and objectives will play a key role in determining which optimization opportunities are pursued or ignored. When executives make decisions based on strategic considerations, they consider more holistically the effects their decisions will have on the entire business. Strategy will also push executives to contemplate the long-term impact of their choices.
- **Action.** Data is only valuable if it is acted upon. Strategy influences the actions that companies take once they have useful analysis insights to act on. Similar to how strategy can guide prioritization for analyses, it can also help prioritize which recommendations to pursue or which tests to run first. Strategy can also instill a greater sense of urgency among the teams executing on any recommendations. With a shared understanding of the key business objectives, marketing and IT teams can rally around strategic projects that need support in jumping the queue over lower-priority projects.
- **Value.** Strategy determines the maximum potential value that a company can achieve from its data-driven initiatives. A weak or limited strategy will reduce the overall potential value (**Figure 3.4**). You can be solid in all other areas (great implementation, insightful reporting, skilled analysts, action-oriented teams), but the business value generated will never exceed the boundaries set by a weak strategy. On the other hand, a solid strategy offers more potential value to an organization.

FIGURE 3.4 The quality and scope of the strategy determines how much value can be achieved through the optimization efforts.



"There is no such thing as a self-made man. You will reach your goals only with the help of others."

– George Shinn

Once an organization has optimized and tapped out the potential value of its current strategy (diminishing returns on optimization efforts), the company will need to create a new, more expansive strategy in order to grow, which will open up new opportunities for analysis and optimization. The capacity of the data, reporting, analysis, and actions to drive value for the company will ultimately be defined by its online strategy.

Staffing: Do You Have All the Positions Covered?

At one of my previous employers, I was part of a motley group of softball players. The company provided us with branded t-shirts and decent equipment, but each week we struggled to muster sufficient numbers to play. If someone had a last-minute scheduling conflict, got sick, or preferred whatever was on TV that night, we were unable to field a complete team and would have to forfeit the game. Not fun.

Web analytics has its own unique playing field with various positions that need to be filled in order to create a data-driven environment (**Figure 3.5**). It can be equally frustrating for web analysts when not all of the positions are being covered because it impacts their ability to deliver value to the organization.

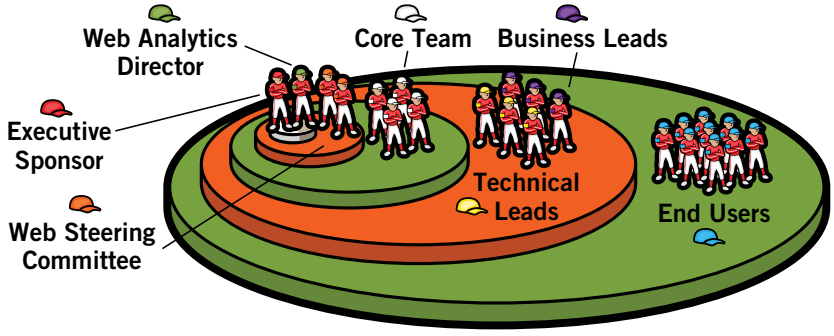


FIGURE 3.5 The playing field of web analytics has a number of different positions that need to be filled.

The following positions are critical to a successful web analytics program, although the size of your organization may change the need for certain roles as well as the number of people in each role.

- **Executive sponsor.** This leader sets priorities, provides high-level support, resolves internal conflicts, and promotes data-driven decision making throughout the organization.
- **Web steering committee.** Formed by the executive sponsor and containing executives from all of the online stakeholder groups, this committee is focused on overall online performance, strategy, and future initiatives.
- **Web analytics director.** Managing vendor relationships and web analytics program at company, this person is the single point of contact for all web analytics–related issues for the organization.
- **Core team.** This centralized team of web analysts focuses on overall business measurement, reporting, and analysis. They report to the web analytics director.
- **Business leads.** At the business-unit level, these business managers and analysts are responsible for measurement, reporting, and analysis.
- **Technical leads.** This group contains web developers who implement web analytics tools at the business-unit level.

NOTE The steering committee isn't a "web analytics" steering committee. They aren't meeting regularly to discuss web analytics because you'll lose momentum with that narrow a focus. This is an "online" steering committee that is focused on driving the digital part of the business forward.

While Indiana Jones worked mostly independently, occasionally he did rely on help from Sallah, Short Round, and other associates. In web analytics, good technical leads can form a powerful duo with web analysts, empowering the analysts with the right data to deliver valuable insights to the organization. Technical leads provide the technical know-how to get the right measurement in place and working correctly. They possess a solid understanding of internal web architecture and systems, coding and web development expertise with JavaScript and other web-related technologies, familiarity with vendor deployments, and business acumen. I've seen several of these great partnerships work magic at various companies.

INSIDER INSIGHTS

TIP Drive the technical success of your web analytics program.

Mitchell Schuler is the director of search and analytics at Politico and has more than ten years of experience in media industry web analytics.

How do you ensure its technical success if you're not technical?

A good analyst should understand basic JavaScript and how the data collection works. You need to be able to crunch the numbers but also speak with confidence on where the data comes from and how it's processed. Even if you have a strong technical background, you probably won't be coding templates and deploying files at the enterprise level. Developing a relationship with your technical counterparts is crucial to your success. Spark their interest by educating them on how you use the web analytics data and sharing reports that might benefit them. Recommend allocating funds to send technical team members to implementation training and attend with them so that you can all speak the same language. Ensure more than one person gets trained; you don't want to be in a prolonged holding pattern should the only trained person leave your company. Bring them along to gather business requirements so they can hear the pain points firsthand and help to create a better solution.

What else can you do to ensure your technical house is in order?

Web analysts often have to contribute to project management during implementation. The data validation process involves quite a bit of organization and repetition, and you will need to play an active role in organizing and signing off on everything. Encourage your project managers to build analytics requirements into future projects so that you're not being pulled in last minute before a new website is about to go live—make it a step on the deployment checklist. Constantly reinforce that your analytics platform will need to evolve as your site does; maintaining your analytics system is an open-ended, never-finished project. Finally, finding an executive sponsor to help drive the project can make your life a whole lot easier. ■

Frequently, large companies use a pool of IT staff to service various technical projects. When you have to work with different IT resources for each new web analytics project, you constantly have to educate new technical resources on web analytics, and you're also unable to designate a single point of contact for all future technical issues. For example, you may want to adjust the tagging for a Flash microsite a few weeks after launch, but find out that you're forced to work with a completely different technical resource because the original web developer has already been assigned to another IT project. It may not make sense to have an IT person fully

dedicated to only web analytics projects, but it is a best practice to use the same resources for all web analytics initiatives.

Training: Who Knows How to Use the Tools?

One part of the people investment is making sure that your organization has enough people covering the various positions on the web analytics playing field. The second part of the people investment is to ensure people receive adequate training to excel in their roles. Just having people standing on the bases and outfield positions does not mean they are ready to play ball. Hopefully, each individual knows what to do when the ball comes to them and has trained to perform their role effectively.

"Train everyone lavishly; you can't overspend on training."
– Tom Peter

Training impacts web analysts in two distinct ways. First, just like athletes, web analysts need to go through hours of training to develop, maintain, and hone their skills in order to be effective in their roles and get the most out of the provided tools. Without some form of training, new web analysts will take longer to ramp up on the tools, and they may end up not leveraging the web analytics tool's full capabilities. If action heroes are at the top of their game, their productivity and the value they can deliver to their organizations increases.

Second, training isn't just limited to the power users of web analytics within the company. If an organization wants to become more data-driven, it will need people throughout the company who are comfortable with consuming and analyzing the web data on their own. If your organization has a large user base, you might want to provide self-service training options, such as on-demand videos for people needing the basics and advanced classes for emerging power users. Although executives may never become experts on the tools, they will probably need to be educated on the online metrics and how they should be interpreted. Educating non-analysts is important because it lightens the support burden placed on web analysts. The less time web analysts need to spend pulling reports or explaining the data, the more time they can spend on analyzing and optimizing the online business.

Data: How Useful Is Your Sandbox?

My three-year-old twin boys were very excited when my wife and I first added a play set and sandbox to our backyard. After a few weeks, however, they weren't playing in the sandbox anymore. A little annoyed, I asked them why. "Too many wood chips," they answered. The area surrounding the play set was covered in safety wood chips, and because the border of the sandbox wasn't high enough, wood chips easily spilled into the sandbox. I learned from my boys that it's fun to play with sand but not when it's mixed with wood chips.

Your company's deployment or implementation of its analytics solution creates a data sandbox for web analysts to play in (**Figure 3.6**). Three factors contribute to how clean and useful the data will be for web analysts:

- **Time.** The time elapsed since data collection initiated correlates to the height of your sandbox. If the data being collected recently changed, web analysts will only have an inch or less to work with instead of the normal twelve inches in their sandbox. Prematurely analyzing something without an ample data set to work with can be problematic.
- **Scope.** The length and width of your data sandbox is shaped by the scope of the implementation. The more comprehensive and complete the tagging is (number of domains, site features, micro-conversions, mobile apps), the greater the volume of data that will be available for analysis. Companies need to strike a balance between tracking everything needlessly and collecting enough useful data to derive actionable insights.
- **Quality.** Data quality for web analysts relies on *data granularity* and *data integrity*. First, the granularity of the data affects the level of insights that can be gained from the data. You can aggregate granular data into larger units, but you can't do the reverse if they're already aggregated at a certain level. For example, if you collect data at the state/province level, you'll need to restart the data collection if you really needed it at the zip code/postal code level instead. Bad data (wood chips) can be introduced into the sandbox depending on the thoroughness of the pre-launch data validation and ongoing maintenance of the implementation (corporate standards). No implementation is perfect, nor will it remain in pristine condition in perpetuity. Too many wood chips, however, can reduce the productivity of web analysts as well as the organization's willingness to trust and act on the data.

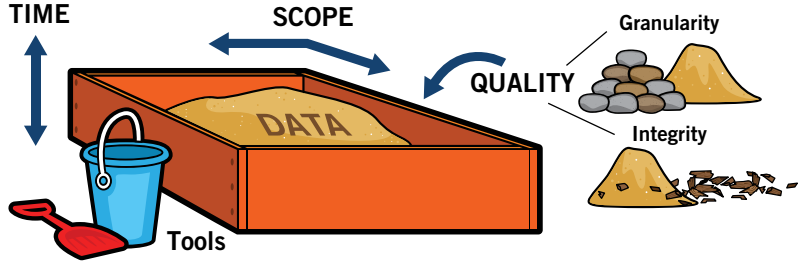


FIGURE 3.6 Three factors determine your data's usefulness.

As a web analyst, you've probably realized that data integrity isn't an issue or concern of the technical web analytics staff alone. If people begin to lose trust in the data, they will not marvel at the awesomeness of your analysis, nor will they

pursue your recommendations. It's in your best interest to ensure the data is as accurate and relevant to the business as possible. Too many wood chips can lead to weak sand castles and splinters.

Tools: Do You Have What You Need?

As a web analyst, you can't afford to bring a knife to a gunfight. You really need to have the right weapon or tool for the analysis task at hand. From company to company, the required tools will differ slightly as each organization will have its own unique set of analysis needs and challenges. Such considerations as expertise level, business model, industry, company size, type of assets to be measured, and tool adoption can all influence what type of web analytics package(s) and complementary tools will work best for your organization.

Like MacGyver, most action heroes will make do with whatever tools they have access to; however, if Rambo needs to take out an enemy tank, a bazooka will work better than a pellet gun. The right weapon will significantly reduce the time and effort required to achieve the objective. When considering which analytics tool is right for your company, evaluate these seven areas:

- **Collection.** From which types of platforms, channels, applications, and devices does your organization need to collect data: social media (Facebook, Twitter, YouTube), video, mobile, rich Internet applications (RIAs)?
- **Aggregation.** Does your organization need analysis performed at different levels of aggregation? For example, your business might need to understand behaviors and trends across multiple websites or evaluate performance of different content types or levels (category pages, product pages, article pages).
- **Segmentation.** What level of segmentation features do you need for analysis? Will simple, two-dimensional breakdowns suffice, or does your project demand n-dimensional breakdown capabilities?
- **Flexibility.** How much customization will you require? Will your business needs be mainly met by the standard reporting features of the tool, or will your organization need more flexibility around variables, micro-conversions, calculated metrics, user interface, reporting, and more?
- **Integration.** How much data integration must you have to answer key business questions? For example, will offline data need to be combined with online data to provide meaningful insights to the business? Do you need to both import and export data to and from the tool? What options are available for integrating the data with other tools (APIs, data feeds, prebuilt integrations, and so on)?

"Do not wait; the time will never be 'just right.' Start where you stand, and work with whatever tools you may have at your command, and better tools will be found as you go along."

– George Herbert

- **Democratization.** Will the tool be used primarily by a small group of highly trained users or will it be a shared tool across the entire organization? Which matters more: advanced features that will drive a smaller number of big wins or ease-of-use features that will fuel multiple wins across the entire business?
- **Total cost of ownership.** What is the total investment that will be required beyond just software licensing fees? What are the expected needs in terms of internal staffing, consulting, training, support, and hardware?

Depending on what your company's needs are related to each area, you could end up requiring a very different tool set than even one of your closest competitors. In some cases, you may require multiple tools to meet the disparate analytical needs of different parts of your business. Eventually, your organization may outgrow the capabilities of your existing web analytics package.

One word of advice I would offer is to be careful about not turning your current web analytics package into a "fall guy" when other environmental factors are really to blame for any perceived lack of value (such as a lack of leadership, resources, training, or corporate standards). If the root problems are not addressed, your company will be second guessing its new tool shortly after it has been deployed.

Even though web analysts may be using a primary web analytics tool, such as those from Adobe, Google, and IBM, they also rely on several other complementary tools in performing their analyses. While not an exhaustive list of other analysis tools, here are some of the major ones:

- Debugging tools (Charles, Firebug, JSView)
- Spreadsheet (Microsoft Excel)
- Data visualization (Tableau, Spotfire)
- Statistical packages (SAS, SPSS)
- Competitive intelligence (Compete, Hitwise, Quantcast)

If your company has testing, online survey, customer experience (packet sniffing), or social analytics tools, your toolbox may be even larger. I'd also lobby for some good noise-canceling headphones as an essential analyst tool. To be successful, you've got to be able to focus and become one with the data.

Accountability: Do They Care About the Numbers?

> **"Accountability breeds response-ability."**
>
> **– Stephen Covey**

An organization can have leading-edge analytics technology, a world-class analyst team, and well-defined processes, but its online marketing team can still end up repeatedly churning out poor-performing campaigns and websites. How can this happen? When individuals and groups are not held accountable for online performance, nothing will change because there's no urgency to operate differently. Without accountability within an organization, all of the investments and efforts in analytics and optimization can be rendered useless.

Wanting, wishing, or trying to be data-driven won't earn you a gold star. The rewards come only to the organizations that actually leverage the online data to inform key business decisions. When there's no accountability within an organization, the data becomes "nice to know" instead of "need to know." If your people aren't motivated or expected to learn from or act on online data, your company won't ever be data-driven, just data-informed at best.

A lack of accountability puts web analysts in an awkward position. As a web analyst, you have the ability to pinpoint optimization opportunities, but you need an open-minded and receptive audience within the business to have them acted upon. If different internal teams are more concerned about looking good, saving face, and suppressing any negative results, web analysts can have only a limited impact on the business as many of their actionable insights and recommendations will be shot down and discarded when they don't support a decision that has already been made. Despite how tempting it may be to go vigilante and bring different problems directly to the CEO or CMO's attention, even that approach will just ostracize key stakeholders whose buy-in will be needed to introduce any proposed changes.

Returning to the first environmental success factor, you will need support from leadership (an executive sponsor) to overcome accountability issues within your organization. In most cases, it is a cultural issue that spans the entire company, not just one or two departments. Changing or influencing a corporate culture takes time (not days or weeks, but months and even years) and focused leadership attention. Throughout the company people need to stop viewing accountability in terms of discipline and punishment, but instead associating it with learning and improvement—key facets of a data-driven, optimization-focused culture, one that will fuel plenty of adventures for aspiring action heroes.

VILLAIN PROFILE: TEFLON MAN

BACKGROUND

No matter what he does, nothing sticks to him. He's impervious to any form of accountability. When your decisions and actions have no consequences, why care about performance data? He doesn't.

TIPS TO DEFEAT

- Work with teams who are willing to learn and improve.
- Help data-driven groups and executives to look good.
- Encourage transparency by establishing clear online KPIs and accessible reporting.
- Ensure business leaders are educated on how to interpret online KPIs.
- Work above the Teflon Man if possible.

Create Your Ideal Environment by Building Momentum

All of these aforementioned factors affect your long-term success as a web analyst or data-driven marketer, and each organization has its own unique set of strengths and weaknesses across these seven factors. Many of the environmental factors will be out of your control unless you're in senior management. For example, as the web analyst or web analytics manager, you can't necessarily decide who your executive sponsor will be, pull the trigger on more hires for your team, or wave a magic wand to turn people throughout the company into tool experts. You are not entirely powerless, however. You *can* act.

Before launching a surprise attack, movie action heroes always do some reconnaissance on their targeted surroundings: How many guards are on duty, what are the building's entry points, where are the surveillance cameras deployed? Do the equivalent at your company. As long as the odds are not *too* insurmountable (multiple gaps in the key environmental factors), you can leverage your analyst abilities and a strategic approach to influence and change your environment for long-term success in Actionland.

The key comes down to establishing and building momentum for analysis and action within your company. Sometimes web analysts feel they need a big, attention-grabbing heroic act so people can recognize the value of the online data. Action

heroes know that they win the confidence of their superiors and teammates by stringing together small successes that build into something bigger.

Start by identifying a simple but meaningful quick win for a nimble internal team that is willing and able to execute on the recommendations. If you can string together enough small quick wins, you'll earn the right to focus on bigger opportunities. As you build momentum within your organization, you will hopefully attract the attention of upper management who will be able to address some of the inhibiting environmental factors such as training or staffing.

Despite all of your efforts, if you still can't gain support from leadership, you'll need to review your career options. All seven factors have a direct or indirect connection to leadership's commitment to becoming a data-driven organization. The environmental factors also reflect how data-driven your company's culture is. Web analysts can't change the corporate culture on their own. Ultimately, you will need the big guns' support to succeed, because as the saying goes, "culture eats strategy for breakfast."

Approach: The Way of the Action Hero

Having a strong analyst pedigree (*ability*) and a supportive data-driven organization (*environment*) doesn't mean you're a lock on becoming an action hero. As shown in Figure 3.1, you still need to have that third key factor: a strategic *approach*. Finding it means first understanding the role of the web analyst in general, and in your company in particular.

"What's the use of running if you are not on the right road?"

– German Proverb

Role of the Web Analyst

All too frequently as a web analyst you are an army of one—not just for the analysis but also for the entire web analytics function at your company. It would be wonderful if the main challenge was only about shifting time from reporting to performing more analysis. As any web analyst or web analytics manager can attest, however, a variety of other responsibilities are also important to the inner workings of a successful web analytics program.

Although these duties can make the job more interesting, they also pull you in more directions, making focusing on becoming an action hero difficult. Depending on how many people are in your web analytics team, your company's size, your skill set, time and budget constraints, you may own or assist with the following tasks, besides just handling reporting and analysis duties:

- **Business requirements gathering.** Web analysts are adept at clarifying exactly what different business owners are looking for in terms of reporting and analysis. They ask the right questions upfront to avoid potential disappointment and misaligned expectations with the reporting and analysis options.
- **Solution design.** They are able to map high-level business requirements into specific metrics, reports, and tagging approaches, which are captured in a solution design document that the technical team leverages for implementation guidance.
- **Data validation.** In addition to the technical quality assurance (is the JavaScript code executing correctly?), web analysts shine a business perspective on the reports to ensure the actual values are correct and useful (do we have one instance of a value, not multiple?).
- **Support.** Web analysts can provide timely, expert responses to support-related questions and issues from throughout the business, both end users and executives. Support topics may include inquiries on the tool's features, metrics, and reports.
- **Documentation.** Key business processes and policies (corporate standards) related to the web analytics program need to be documented and regularly updated. The goal is to not skip a beat if a key, experienced resource on the team leaves.
- **Training.** Focused on growing user adoption through education, web analysts may provide training offerings such as classes, on-demand videos, and one-on-one training sessions to enhance tool expertise and broaden the overall user base.
- **Implementation.** Depending on their technical prowess, web analysts may perform some small implementation tasks to modify or update existing tagging.
- **Testing.** When companies don't have separate resources focused on testing, web analysts are often tasked with managing tests.

With all of these responsibilities and reporting requests pouring in, how does anyone find time for analysis? As the productivity guru David Allen stated, "You can do anything but not everything." If you're familiar with the Pareto Principle or 80/20 Rule, analysis definitely falls into the 20% of your activities that will define 80% of your success as a web analyst.

NOTE You would be shocked at how many large companies fail to focus on documentation and are then left high and dry when a key resource leaves for another job opportunity. Documentation and cross-training are critical. However, too much documentation can also be detrimental when analysts are turned into technical writers and internal teams are more worried about granular documentation than actually analyzing and taking action. Find the right balance.

NOTE Although web analytics and testing are related, testing requires a different skill set and discipline knowledge. The interactions and needs are different enough that I recommend you have separate teams focused on each area.

BEWARE OF FOAM

The foam I'm talking about isn't the pleasingly scented fluff of a bubble bath; it's more like the smelly, disgusting froth you find collecting near a storm drain or on a polluted beach. *Frivolous Ongoing Analytics Minutiae* (*FOAM*) is one of the most harmful epidemics facing web analysts today because it fills up their precious bandwidth. When web analysts are bombarded by wave after wave of demands from across the business, a portion of the incoming requests are important to the business but the rest are unnecessary, pointless, or preventable FOAM. When analysts get caught up in dealing with tedious and time-consuming FOAM, it prevents them from performing valuable analysis or optimization work. FOAM is created by environmental factors such as unreliable data, a poor understanding of strategic direction, a lack of training, a shortage of data democratization, and so on. Organizations need to take steps to fix these issues to reduce the FOAM faced by web analysts.

The company in **Figure 3.7** has two web analysts. The Analytics Baseline indicates how much of their time should be spent on key responsibilities related to keeping a web analytics program up and running, such as reporting, support, training, and so on. In Scenario A, their bandwidth is completely consumed once you factor in the filthy FOAM, leaving no time for Actionland. In Scenario B, the web analysts are able to eliminate most of the FOAM (let's be realistic that it will never entirely go away), which frees up the equivalent of at least one analyst to focus on more meaningful and impactful work. Each company will have its own unique Analytics Baseline. A large company, for example, may need four or five people just to meet its specific baseline before even factoring the FOAM.

Here's a simple equation you'll want to remember:

Total Bandwidth – Analytics Baseline – FOAM = Actionland

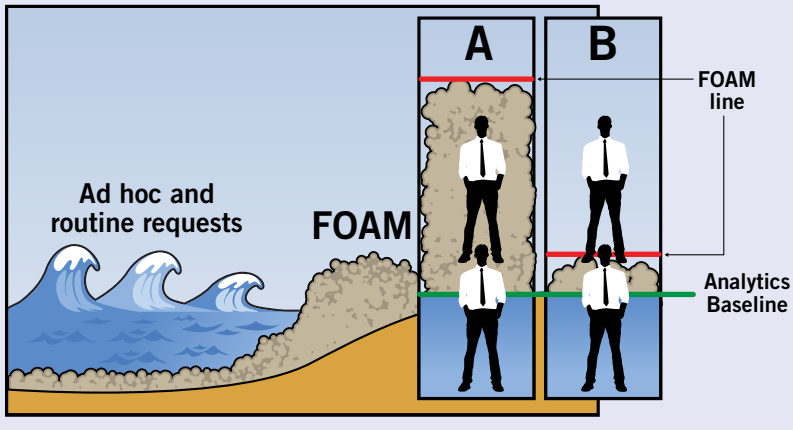


FIGURE 3.7 In Scenario A, two analysts are drowning in FOAM. Scenario B reduces the FOAM to free the equivalent of one analyst to focus on analysis and optimization work.

If you have any desire to be an action hero, you'll need to find more time for analysis-related activities. Your goal is to set aside at least the equivalent of one day per week (eight to ten hours or 20% of your time) to focus on analysis. That threshold is the bare *minimum* to get started down the path of becoming an action hero. You don't necessarily need a full, dedicated day, but a few longer stretches will help you more than snatching 15-minute blocks all week long. In general, the more time you can spend on analysis, the better. You might need to block the time in your calendar each week and turn off your email during those times.

With this long-term goal in mind, you may need to invest some time upfront on streamlining your other responsibilities before turning more of your focus to analysis. For example, you might consider how the following ideas could reduce the burden on your analysts' shoulders:

- Automate reporting (use scheduled reports or refreshable Excel reports) to minimize your time spent on manually building reports.
- Have business owners complete a form for ad hoc reporting requests; from this form you can capture information on the goals, KPIs, requirements, and expected outcomes that will help you prioritize reporting projects.
- Outsource low-level reporting tasks to a third-party agency.
- Customize your tool's menu structure, dashboards, and reports for specific user groups so they can easily find information they need on a regular basis.
- Add metric definitions and report explanations to standard and custom reports to reduce misinterpretation and routine questions.
- Create a community of web analytics power users (wiki, email distribution list, or the like) who can assist you in supporting new users.
- Target specific individuals and groups that consistently require a lot of support for more training emphasis.
- Assign low-level tasks to more junior analysts and have senior analysts focus on high-value analysis.

For some web analysts, it may be easier to carve out time for analysis work than others. After reviewing where all of your time goes during a week, prioritizing what's important, and determining what options you have for streamlining your time, be honest with yourself about how much time you can reasonably free up for analysis and driving action. You may want to review it with your manager to see if you're missing something else that can be moved off your plate. Your manager should be excited about your desire to become an action hero. No *sane, intelligent* manager would pass up the halo effect of having an action hero on the

team. If you can successfully carve out analysis-focused time, you're ready for the strategic approach.

The Action Hero Framework

The action hero's approach to analysis is bound by two simple principles: efficiency and effectiveness. *Efficiency* is about how you use your time as an analyst, and *effectiveness* is about how you drive action. Basically, what you do before and after your analysis matters just as much as your actual analysis. What you analyze should be shaped by the priorities of the business. How your analysis drives change will be determined by how well you can mobilize support and adoption of your ideas. If you want to be more strategic with your analysis, you must understand how time and action relate to an analyst's efficiency and effectiveness.

The *Action Hero Framework* (**Figure 3.8**) is designed to address your analysis efficiency and effectiveness by helping you to focus on three strategic stages during the life cycle of your analysis projects:

- **Prioritize**. How can you use your time more efficiently?
- **Analyze**. How can you be more efficient and effective with your actual analysis?
- **Mobilize**. How can you be more effective by driving more action?

Each stage of the Action Hero Framework is important to making your analysis successful from beginning (what to analyze) to middle (how to analyze) to end (how to drive action). Taking a brief look at each stage will help you to better understand them and where this book can best augment your current analysis approach.

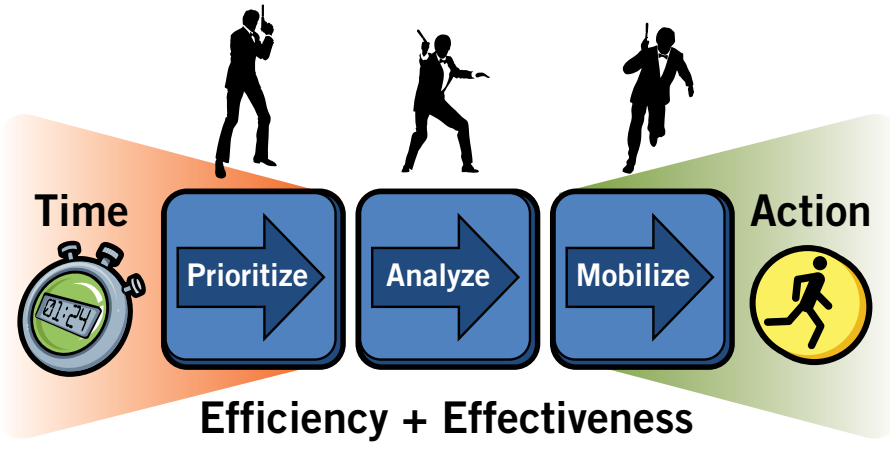


FIGURE 3.8 The Action Hero Framework has three major areas: Prioritize, Analyze, and Mobilize.

PRIORITIZE

Your time for analysis is finite—and precious. Whether you have the minimum eight hours per week or you're clearly on a suicide mission at 80 hours per week, you have a fixed amount of time to work with. You need to be efficient with it. Every analysis has an opportunity cost. Each hour you spend analyzing one thing means that you weren't able to analyze 300 other things.

Once I was assigned to work with a leading healthcare provider that specialized in cancer treatments. The company's executives insisted on meeting their prospective analyst (me) prior to signing a contract with our consulting group. During the unusually tense interview, they stressed the fact that my performance as an analyst literally had life-or-death consequences. Increasing the number of leads generated by their website actually meant that more individuals and families would benefit from their lifesaving services, and the opposite effect meant loved ones could be lost forever. Although you may not have that sort of pressure and urgency hanging over your head, you too need to *prioritize* what you focus your time on in order to be strategic. Chapter 4 will present various strategies for prioritizing and being more efficient with your analysis time.

ANALYZE

This stage is where the analysis magic happens. You're actually performing the somewhat painstaking yet exciting task of turning over rocks looking for useful nuggets. You never know what you'll find, and you don't always know what you're looking for—but you'll know it when you see it. From a timing perspective, you don't know when you'll find the nugget. You could find one in the first ten minutes of your analysis, or it could happen in the last ten minutes right before you're about to give up and explore another area. From a success perspective, you don't know how many or what type of nuggets you'll find. One of the goals of this book is to help you maximize the business insights that you can extract from your analysis efforts. Chapter 5 offers some concepts, strategies, and tactics for being more efficient and effective with your actual analysis work. In addition, Chapter 7 will flesh out specific analysis scenarios and techniques to help you in Actionland.

MOBILIZE

Action may not always lead to value, but no value will be created without action. If you're going to be effective with your analysis, it needs to compel the organization to act. Each year millions of dollars of potential value are left to rot in analysts' Excel spreadsheets and PowerPoint® slides, never seeing the light of day in organizations around the world. Was the analysis poor quality? No, most of it was prepared by extremely intelligent analysts, but for whatever reason, the analysis didn't resonate with its intended audience and fell to the wayside.

One of my colleagues argues that areas with recommendations that aren't adopted are actually worse off than other areas of the business that were never analyzed. At least unanalyzed areas still have a chance at being analyzed, presented on, and have recommendations acted upon. However, the bitter memory of defeat for the web analyst and the vague confidence from the executives that the topic has already been carefully considered will ensure the area isn't revisited anytime soon—not until the analyst's ego has mended and the executives' minds have forgotten, which may take months or years.

Although no web analyst can guarantee that her recommendations will be followed, you need to give valuable business insights a fighting chance of survival. It can be difficult to watch hours of great analysis crash and burn simply because the analysis wasn't shared with stakeholders in the right way. The key comes down to communicating the recommendations in a strategic way that will rally or *mobilize* the organization around them. In Chapter 6, I will share different ways in which you can make your analysis more actionable and as a result more effective.

The Action Hero Framework can be a powerful guiding force for your approach to analysis. You need to be strategic across the board in how you prioritize your analysis, how you perform your analysis, and how you mobilize the organization to act on your business insights. Lock and load, aspiring action heroes, we're about to enter the jungle.

ENDNOTES

1 www.computerworld.com/s/article/103703/The_Elusive_Executive_Sponsor?taxonomyId=73&pageNumber=2

2 http://econsultancy.com/us/reports/online-measurement-and-strategy-report

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CHAPTER 4

PRIORITIZE FOR IMPACT

"Chaos is a friend of mine."

– Bob Dylan

Chaos is probably your *best* friend—maybe even your BFF. You live in the eye of a fast-moving, turbulent storm that engulfs your company's online properties and initiatives. The breakneck speed of the ever-evolving digital world along with the large number of variables involved keeps web analysts and data-driven marketers in constant motion. Navigating the technology and data can be overwhelming in itself; throw in multiple stakeholders and end users from various business, technical, and creative disciplines, however, and the chaos ratchets to ability-stretching heights. To handle it all you need is a little of the tiger blood that pulses through the veins of action heroes as they methodically dismantle any obstacles foolish enough to get in their way. Action-film heroes are the very definition of cool under pressure—how do they do it?

Several studies show that cool-headed individuals who function well in stressful situations share three core traits:[1]

- They aren't threatened by change and uncertainty but view them as exciting opportunities.
- They focus on improving their chaotic circumstances rather than growing helpless.
- They are committed to those around them and don't withdraw.

Web analytics action heroes embody these very same qualities as they calmly and successfully traverse their way through Setupland to prepare for operations in Actionland. When facing such a volume of noise, demands, and distractions, keeping your presence of mind and prioritizing your analysis opportunities becomes critical to success. In this chapter, you'll learn the five essential factors that action heroes consider when prioritizing what to analyze.

The Key Drivers of Analysis Direction

In every action movie, the protagonist's choice of actions is influenced by several key factors that ultimately make the hero victorious in the end. The action hero begins with a clear mission objective, and then he quickly realizes that he is substantially outmanned and outgunned. The hero needs to be realistic and cunning because in a head-to-head confrontation he's not going to be able to defeat a whole army battalion or overthrow a corrupt government on his own.

Instead, the action hero looks for breakthrough, high-impact opportunities to shorten the distance to accomplishing his goals. With only limited resources at his disposal, however, the action hero must be judicious in his approach. Simultaneously, he is also constantly monitoring the situation and his surroundings, looking for plot twists that could impact any parameter or facet of his mission. When an approaching rescue helicopter is unexpectedly shot down or much needed reinforcements suddenly appear, the action hero must swiftly adapt his plans to these new challenges or opportunities.

Web analysts need to approach prioritizing their analysis projects with the same precision as big-screen action heroes. With a plethora of analysis options to choose from, you have to be strategic in what you focus on. Time spent on analysis is precious and can't be wasted on analyzing poorly chosen areas that aren't really important to the business or things you can't influence. To refine your analysis focus, consider these five factors (**Figure 4.1**):

- **Business Objectives.** You need to have a clear understanding of the company's key business goals and objectives to target your analysis properly.
- **Ability to Influence.** Focus your analysis only on areas in which you have a chance of influencing an action or outcome. Even if something looks promising, if you have no way of influencing change then it isn't worth pursuing.

- **Potential Impact.** Some aspects of your online initiatives and websites are more directly tied to success than others. As a result, they are more likely to lead to high-value analysis opportunities.
- **Level of Effort.** Each analysis requires a certain amount of effort, skill, and time to complete. The potential impact of each analysis needs to be weighed against how much work it will take to perform.
- **Context.** Every company and its industry, competitors, customers, and analytics platform are in a state of constant change. You must be plugged into your environment so that you can adjust or streamline your analysis emphasis when needed. Context keeps you aware of how the other factors in this list may shift or change over time.

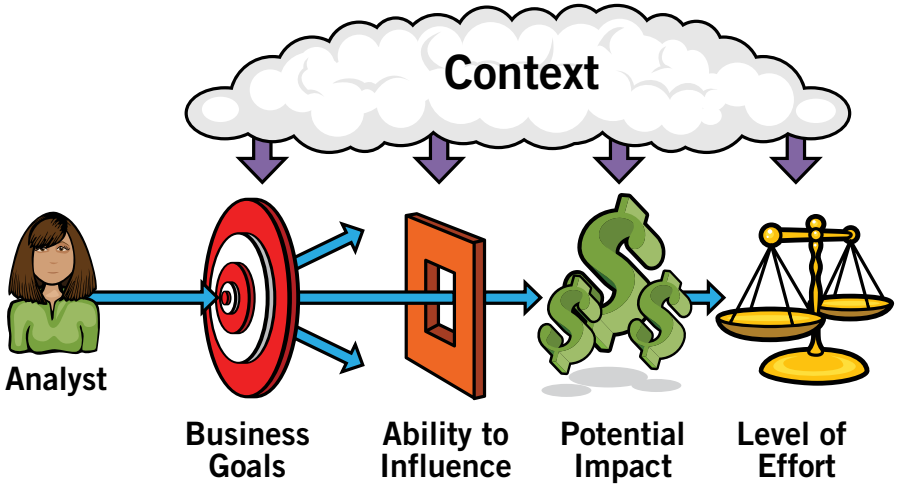

FIGURE 4.1
Web analysts should prioritize their analysis based on five criteria.

When you leverage these five influential factors as you pinpoint and prioritize your analysis, you'll be more in tune with the needs of the business and your ability to deliver actionable, high-impact analysis. Business objectives, potential impact, and context are about your understanding of the business needs, whereas the ability to influence and the level of effort are about recognizing what you're capable of delivering as an analyst. Balancing the needs of the business with your ability to execute will be essential to successfully prioritizing and targeting your analysis.

As a quick example of how this Key Analysis Drivers framework comes together, **Table 4.1** evaluates three different analysis opportunities.

TABLE 4.1 Analysis Opportunities Scenario

OPPORTUNITY	GOALS	ABILITY TO INFLUENCE	POTENTIAL IMPACT (MAX IMPACT OF 5)	LEVEL OF EFFORT (MAX DIFFICULTY OF 5)	CONTEXT
A	Supports all key objectives	Timing looks challenging but probably still doable	4 out of 5	3 out of 5	Limited IT bandwidth through end of month
B	Supports one key objective	Main decision maker is known as being opinionated and difficult to work with	2 out of 5	1 out of 5	Customer complaints are increasing in this area
C	Unclear if it supports a specific objective	Good relationship with team responsible for implementing potential solution	5 out of 5	5 out of 5	Team's initiative is receiving more management attention

Opportunity A looks promising because it will support several business objectives. While the timing issue may be challenging, it looks like the opportunity has good potential with a manageable level of effort. After discovering that the IT team has low bandwidth for the rest of the month, you decide not to pursue this option. You know that under normal circumstances an aggressive timeline would be difficult, but with less IT bandwidth in the coming weeks this option just isn't feasible.

Opportunity B seems to be pretty straightforward, but you dread working with the key decision maker who is demanding and opinionated. The increasing customer complaints about the area could mean it's going to be more difficult than it looks. Before deciding on this option, you want to consider option C.

Opportunity C has a tremendous upside, and you have a good working relationship with its team. The complexity of the analysis means it will be a monster project, but you remind yourself "no pain, no gain." You're a little confused about where the initiative ties into the key business goals, but it's encouraging that management appears to be giving it more attention.

Despite its great potential and your strong relationship with the team, you decide against focusing on option C as you're just not able to map it to any key business goal, which is pretty much a deal killer. You grudgingly choose to focus on the only viable option, opportunity B. As it turns out, the management team was also

concerned about the team's direction related to option C, and the initiative was eventually scrapped. All of your analysis work would have been for naught.

It just so happens that option B goes smoother and better than you anticipated. The increasing customer complaints open up the decision maker to new ideas and understanding why things are broken. In very little time you're able to identify some great quick wins and get them in place via the team's content management system. With the success of this project your reputation as an action hero grows, and you move on to the next set of opportunities to evaluate and prioritize (including some exciting options from the previously difficult business owner you just helped).

Hopefully, this example demonstrated why prioritizing your analysis time is critical to your success and how the Key Analysis Drivers framework can assist you in the process. In the rest of this chapter, you'll examine each of the five factors in more detail, starting with the key business objectives.

What's Keeping Your CXO Awake at Night?

As a web analyst, this is a useful question to ask yourself on a regular basis; it will keep you laser-focused on what matters most to your company. It's a simple question, but it can be difficult to answer. Most of us don't have regular, two-way dialogue with the C-level executives (CXOs) at our companies, in which we can candidly probe them on their top-of-mind concerns. You're probably lucky if you get eye contact and a nod in the hallway (if you even work in the same office). Whatever it is, though, I can guarantee that something *is* troubling them and you, the skilled web analyst, can help if given the opportunity.

If you're not in a position to ask, a clear understanding of your company's business strategy will help you to extrapolate the key issues that weigh heavily on your CXO's mind. Unfortunately, most of the time the business strategy isn't crystal clear (let alone the online strategy). In fact, research by Robert Kaplan and David Norton, inventors of the Balanced Scorecard, showed only 5% of the workforce understands its company's strategy, and not surprisingly nine out of ten companies fail to execute on these strategies.[2] When it comes to online strategies that may be shared by multiple stakeholders with no "single throat to choke," the shared understanding of the online strategy by employees can be even muddier.

Your analysis needs to be aligned with your company's goals so it can be relevant and effective. You can't afford to just get lucky every so often when an analysis

> **"However beautiful the strategy, you should occasionally look at the results."**
>
> **– Winston Churchill**

actually lines up with what senior executives are sincerely concerned about. *There's no time for analysis bingo*. Action heroes stack the odds in their favor by clarifying the organization's strategy upfront and then focusing their analysis exclusively on areas related to the key business objectives. You can do it too.

The Anatomy of Strategy

People frequently misuse and abuse the term "strategy." They use it quite loosely to mean many different things, which can cause problems for web analysts and lead to clumsy online performance measurement. To be effective, you need a clear understanding of a strategy's core components so that you can put the various elements in their proper perspective. To ensure we're interpreting the terms in the same way, please consider a new definition and perspective.

At a high level, a strategy is a plan of action or initiatives to achieve a specific goal or set of objectives. In essence, a strategy consists of three integral components: scope, goals, and initiatives (**Figure 4.2**). *Scope* defines the boundaries of a particular strategy (the "where"). For example, is the strategy for the way the entire business should operate, your company's approach to social media, or the method you use to get to work each morning? The *goals* (also called *objectives*) are the desired aims or outcomes (the "what"), such as doubling annual revenue or reducing marketing costs. Finally, the strategic *initiatives* are the high-level action plans (the "how") to achieve the goals, such as expanding paid search efforts. Don't confuse the initiatives with the tactics, which dig into the low-level details of execution, such as search keyword selection. When business leaders establish their strategic initiatives, they consider various alternative approaches and select the ones they believe will be the best ways to achieve the desired goals.

NOTE Some people draw a distinction between goals and objectives. They view goals as more general with a long-term focus, while objectives are specific steps or milestones that are short-to-medium term in nature. Most business people (and this book) use the terms interchangeably.

FIGURE 4.2 A strategy's three main components are scope, goals and objectives, and initiatives. Low-level tactics then flow out of the overall strategy.

GOAL MEASUREMENT

When you're trying to determine a strategy's goals, you need to separate goal setting from goal measurement. Only parts of the SMART approach to goal setting (specific, measurable, attainable, relevant, and time-bound) matter from a measurement perspective. Whether a goal is attainable or relevant will be revealed in the performance results; for assessment purposes, however, the goals need to be specific, measurable, and time-bound, as well as prioritized. A goal must be specific and unambiguous so that the required action and desired outcome are clear. If an objective is difficult to measure, it's going to be challenging to know what the results should be. Holding people accountable to an unmeasurable goal is nearly impossible and increases the likelihood that the goal won't be achieved.

To measure a goal, you need to tie each objective to at least one metric or KPI (conversion rate). With a KPI assigned to a goal, you can make the objective more specific and actionable by determining the target (such as increasing the conversion rate to 5%). A target date for the objective helps an organization to understand its progress toward the desired aim and may generate a sense of urgency if progress isn't happening as expected. Finally, when a goal is a part of a set of objectives, you want to establish its priority level compared to other goals competing for attention and resources. Rather than worrying if the business goals are SMART, approach them from an analysis perspective as needing to be PACT (prioritized, assessable, clear, and time-bound).

Each objective should have at least one strategic initiative associated with it. Within each strategic initiative, a number of tactics map out specific, low-level actions. Just because tactics are at the bottom of the strategy stack doesn't mean they're not important. Sun Tzu once stated, "Strategy without tactics is the slowest route to victory. Tactics without strategy is the noise before defeat." How we define what is strategic or tactical is relative to our position within the chain of command. What you may consider to be strategic, someone above you may consider to be tactical. Inversely, what you consider to be tactical may be strategic to someone below you. Strategies are frequently nested within one another, meaning an über-strategy will cascade into a series of lower-level, more narrowly scoped strategies. For this reason it's important to identify the level of each strategy within the hierarchy of the overall strategic direction.

DECONSTRUCTING A STRATEGY

The world has known many great military strategists throughout history, but none compare to the strategic mastermind, Col. John "Hannibal" Smith of TV's *A-Team*. On a weekly basis, this fugitive colonel laid out an elaborate plan that somehow

led his band of misfits to victory. And nobody ever died—it was sheer genius that would make even Sun Tzu proud. A-Team strategies may involve more explosions than your average online strategy, but they were still based on the same three elements: scope, goals, and initiatives. To practice breaking down a strategy into these key components, try partially deconstructing a typical Hannibal strategy. Creating an outline like the example that follows can be a useful technique in your own attempts to clarify your company's online strategy.

Scope:

- Help the small Mexican town of La Paz.

Goal/Objective:

1. Remove the motorcycle gang that has been intimidating townspeople and ruining their livelihood by this Saturday.
   - *KPI:* Number of gang members still riding around town.
   - *Target:* Zero
2. Restore the local townspeople's confidence in defending themselves.
   - *KPI:* Percentage of townsfolk who participate in efforts (pop. 100).
   - *Target:* 60%

Initiatives (for Goal #1):

1. Cut off the bike gang from its source of food and income.
2. Pinpoint ringleaders and key agitators within the gang (cut the head off the snake).
3. Destroy the gang's mode of transportation and immobilize bikers.

Tactics (for Initiative #3):

- String reinforced chain ropes across specific streets around the town.
- Combine sugar with gasoline, and then add it to the motorcycle tanks to ruin their engines.
- Build a fully armored vehicle with a battering ram and a mounted machine gun and flame thrower (because we can—and it will paralyze the bikers with fear).

Everyone loves it when a plan comes together (Hannibal certainly does). By distinguishing between the different components of a strategy you'll have the needed clarity so your analysis and optimization efforts can contribute to achieving your company's business objectives.

Deciphering Key Business Objectives

If you asked senior executives to estimate the percentage of their employees who knew the company's current business strategy, rest assured that their answers would be significantly higher than 5%. And they'd be wrong. As shocking as it may sound, a major, recurring disconnect exists between how well senior management thinks employees grasp the company's strategy and how much the teams responsible for executing on the strategy actually understand.

> **"Do first things first, and second things not at all."**
>
> **– Peter Drucker**

In her book *The New How* (O'Reilly Media, 2010), Nilofer Merchant eloquently expanded on this common strategy challenge using the analogy of an Air Sandwich: "An Air Sandwich is, in effect, a strategy that has clear vision and future direction on the top layer, day-to-day action on the bottom, and virtually nothing in the middle—no meaty key decisions that connect the two layers, no rich chewy center filling to align the new direction with new actions within the company." She goes on to explain that repetition of the high-level ideas isn't going to fill the Air Sandwich; what's required is fostering more practical understanding. Strategy needs to move beyond just specifying what needs to be done by also clarifying *how it needs to be done*.

NOTE Nilofer Merchant advocates a compelling collaborative approach to strategy creation that falls outside the scope of this book. I recommend, however, that you consult her book, *The New How* (O'Reilly Media, 2010), for a complete description.

The Air Sandwich issue can be addressed at the beginning of a new implementation, but also identified during the analysis process. In the first phase of Setupland, the Alignment step focuses on clarifying the business goals and requirements prior to collecting any data. It represents a great opportunity to fill the Air Sandwich from an online measurement perspective. As you focus on analysis, you also want to be aligned with the business objectives so that you know what's most important to analyze. Being so attuned will also help you recognize emerging gaps between the needs of the business and the current data, gaps which necessitate a trip back to Setupland. In either scenario (alignment or analysis), the ability to distinguish between different strategic elements and how they are connected to each other is crucial.

CASCADE AND ORGANIZE

Some companies leverage a cascading strategy approach where high-level corporate goals are cascaded down through the divisions, departments, and teams with each unit interpreting and tailoring the goals to their respective area. In principle, that's how it's intended to work, but as we've seen with the Air Sandwich some of the middle parts are often assumed, implied, unclear, or missing—especially when it comes to the online part of the business, which sometimes feels more like a corporate free-for-all. In addition, besides a disconnect between the goals and strategic initiatives, you may also find gaps in terms of other key elements such as KPIs, targets, scope, and priorities.

One of the dangers of the cascading strategy approach is when different teams become too siloed in their optimization efforts, unknowingly contradicting or cancelling out the efforts of other teams. As each individual team (email, SEO, paid search, content) interprets and executes against the overall online strategy, they often fail to consider the impact their efforts will have across other initiatives or to tie their success all the way back to the overall site-wide objectives. As a result, the various online initiatives can become far less than the sum of their parts. The web analyst in the middle plays a pivotal role in tying everything back to a central common goal and in helping to optimize the entire online channel—not just the silos.

Whether or not your company has implemented a cascading organizational strategy, it is a worthwhile exercise to go through the process of organizing and mapping the diverse business objectives, priorities, and initiatives to their appropriate level within the greater organizational strategy. The cascading or waterfall strategy framework will help you to make better sense of your online measurement efforts. As you focus on better understanding the online strategy, be aware of the five key levels shown in **Figure 4.3** and detailed in the following list:

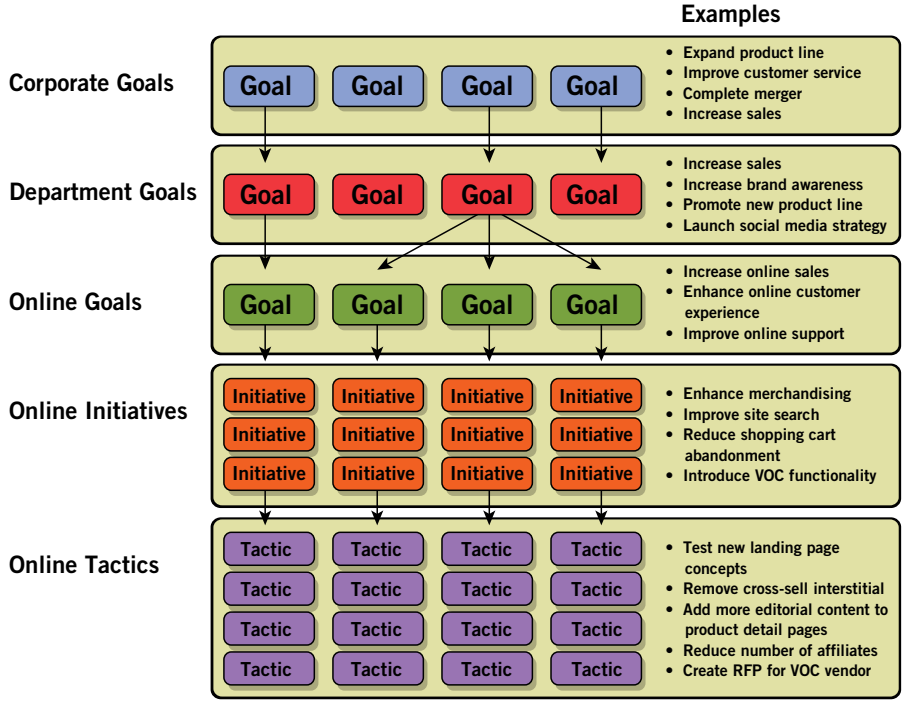

FIGURE 4.3 High-level goals cascade down to the online goals and initiatives. This example follows a marketing department's goals.

- **Corporate goals.** Your company's executive team establishes the enterprise-wide goals. Some of these goals may not apply directly to marketing or online initiatives (for example, successfully complete business merger by end of Q3 or increase employee retention by 15%). These goals are usually readily available in internal presentations. As an analyst, you need to be mindful of these objectives as you try to determine how lower-level goals and initiatives could potentially roll up into these overarching goals. These objectives provide a big picture perspective, which can be helpful as you dig into your analysis.
- **Department goals.** Depending on your analysis focus, the department objectives could be for a functional department (marketing), a regional business unit (Japan), or a product/customer division (home computers). The goals will still span both offline and online initiatives. At this level, you may identify some department-specific goals that don't necessarily roll up into corporate goals. Some objectives may be a little harder to ascertain at this level. In a really complex organization, you might even run into separate goals for multiple layers between the overall corporate goals and the online goals. In these circumstances, use your best judgment as to how complex your coverage needs to be.
- **Online goals.** The online part of the business is essentially your backyard as a web analyst or online marketer, so being familiar with its business objectives is critical. The corporate and department objectives are often better defined than the online goals, because the online initiatives may be shared by different groups (e-commerce, customer service, various flavors of marketing) with no single owner. You may need to do a bit of detective work to solidify and get consensus on the online goals. Leaders may disagree on the online strategy and have conflicting opinions. You'll find some objectives will be independent of the corporate and department goals and specific to just the online area.
- **Online initiatives.** Each of the online goals will be paired with one or more online strategic initiatives. Most of your analysis work will concentrate on evaluating your company's online initiatives and identifying how they can be improved. The initiatives will be a mixture of the tried-and-true initiatives (email, paid search, SEO) as well as the latest "shiny object" initiatives (social media, mobile). Although the online goals are more or less fixed, proposing new online initiatives is still within your analyst wheelhouse.
- **Online tactics.** All of the day-to-day activities involved in carrying out the online initiatives fall into this category. Each online strategic initiative can have several tactics, which can begin to add up when you realize each online goal may have more than one initiative. The tactics are more fluid and likely to change as different actions are taken and adjusted while executing an online

NOTE If your company is an online pure play or you work in an e-commerce department, your corporate or department goals are your online goals. This can be advantageous; the objectives are more likely to be well defined in these scenarios because the goals are viewed as more mission critical to the organization or group in question.

TIP Beware of any online initiatives that despite your best efforts you can't tie back to a single online goal (even implied goals). A goalless initiative is probably somebody's pet project that has somehow slipped past internal filters. Don't hitch your train to this directionless idea!

initiative. In addition, different individuals inside and outside the company (agencies, partners, contractors) implement various initiatives. Analysis will often lead to optimization opportunities that will be executed at the tactical level.

CLARIFY, PRIORITIZE, AND MAP

TIP In consulting, I've found that you sometimes need to ask the same question multiple ways until one of them finally clicks and you get the information you need. Rather than getting frustrated when you don't get the right answer, try rephrasing your question and trying from another direction.

As you think about these various levels, you'll see that they are tied to different audiences. The people who will care the most about each level will be those who have the most on the line if a particular goal isn't reached or if an initiative fails. The CXO will only care about an online goal if it directly influences one of her corporate or department goals. The magnitude of the influence will also determine her interest level. For example, if online sales represent only a tiny fraction of total revenue, then the CEO isn't going to be that interested in potential online revenue optimizations unless they will have a significant impact on her total revenue target. Fortunately for aspiring action heroes, however, the online channel is one of the fasting growing and most strategic areas of many companies. If your CXO isn't paying much attention to it today, that will change, as the online portion of the business will only continue to grow in importance.

In deciding what to analyze (and not analyze), your first step will be to clarify all of the online goals and map them to the higher-level goals if possible (some will apply only to online). This step will entail asking several questions, such as

- How do we define online success?
- What's the primary purpose of our website? Why do we need it?
- In what ways does the website support the company's overall goals? How does it contribute to our organization's success?
- What are the top online priorities for this year? What do we want to achieve through our online channel this year?

TIP A lot of emphasis is placed on key performance indicators and duly so. As you can see with multiple layers of strategy, however, lots of metrics can end up being called KPIs, which can confuse your end users. My recommendation is to be selective about which metrics you officially label as KPIs. Remember the real KPIs are "key" (read: "extra super special") performance indicators that your business performance lives and dies by. When every metric is a KPI, it's harder to know which ones really matter. In terms of web analytics, you'll find your true online KPIs at the online goal level.

Next, you'll want to rank the online goals by priority to the organization (maybe even weight them) so you place your emphasis in the right places. Your company may have five key goals for the year, but only one or two of those objectives will cause restless nights for your CXO. The same goes for the goals at the other levels. You can't treat all business objectives as equals and spread your analysis time evenly across them. Instead, make sure to identify the KPIs for each of the key online business objectives as well as any supporting secondary metrics. Hopefully, you're already collecting the data and metrics that you need. If you're missing some key metrics, however, you're better off finding out as soon as possible so a quick trip back to Setupland can fill any key data gaps.

You'll then want to identify all the online strategic initiatives and map them to the online goals. Some initiatives will be obvious as they may receive significant

attention within your organization, but others may be less obvious. The online tactics are off-limits; they're too granular and don't need to be mapped. After identifying and mapping your company's online goals and initiatives, confirm you haven't overlooked anything or made any mistakes in your strategic map. Sharing your interpretation of the online strategy with other people—your manager, a trusted colleague, or an executive—will further verify and calibrate your understanding. If you encounter some disagreement about the online strategy, you may need to verify your position with different people and modify it until you feel reasonably confident in your interpretation.

INSIDER INSIGHTS

TIP Be prepared to answer questions that haven't been asked.

Casey Feves is the leader of the Global Digital Brand, Analytics and Insights team at Nike.

How do you anticipate unasked questions?

The key is to plan ahead. A business group may identify only three or four key questions, but you need to be prepared to answer the ten that come afterwards. When you're gathering requirements, step back and evaluate what type of execution it is: campaign, website, or app. Next, evaluate what follow-up questions tend to come up with each type of execution. While you can't anticipate everything, you may need to go beyond the functional lens of the business group and consider other lenses (executive, strategic planning, PR, finance). Typically, each execution is a part of a larger brand plan with different product, category, brand, and sales objectives, but the business group may be focused on only one narrow aspect. Some institutional questions about a particular product, category, or channel will always come up regardless of the execution.

What techniques do you suggest for better anticipating needs?

When business teams ask for a specific metric (orders), think about the other accompanying metrics (average order value, average selling price) they may not realize they need. Past quarterly reviews can provide great insights into what is important to the business and what has been brought up and discussed. Get additional metrics from the industry by reading blogs or talking to other analysts about what is effective at their companies. Sometimes business teams may know what they want, but don't frame their questions in the right manner. If you provide what they requested, it might not be what they actually want. Or they may not realize that you're able to provide them with much more. For example, a web producer might ask for a report with the product name and type. However, you suggest capturing the product ID instead so that metadata can be uploaded with additional dimensions such as color, size, and category, which creates an even more meaningful solution. ■

The Nunchucks of Analysis

If you've spent any time watching martial arts films, you've seen nunchucks in action. Used for both offense and defense, nunchucks can strike a target at a high velocity or parry an opponent. Having a clear comprehension of your company's key business objectives is like having your own pair of analysis nunchucks.

From an offensive perspective, you know what matters to the business and use that knowledge to better target your analysis. Occasionally, I hear people complain about the overwhelming amount of data in their web analytics tool. Once you're focusing on what really matters, the 80/20 rule kicks in and illuminates the 20% of the online data that will deliver 80% of the value to your organization. With your eyes focused on the prize, you won't be distracted by irrelevant data or reports. You will never get sidetracked or lose your bearings so long that you can't get back on the path to driving value. Although the data may contain many valuable insights, focusing your analysis on the key business objectives will ensure you'll be able to

VILLAIN PROFILE: THE FIRE DRILL

Background

He's at home in fast-moving organizations with unclear objectives, shifting priorities, and low accountability. Analysts are frequently asked to fight fires as they jump from one emergency to the next, never appearing to make much progress as the smoke builds within the organization.

Tips to Defeat

- Determine what is causing fires by categorizing issues into buckets (lack of training, data quality, data interpretation, low bandwidth).
- Evaluate which parts of the business are generating the most fires.
- Define the level of effort to fix ongoing issues, and build a fire prevention plan.
- Help your manager understand the opportunity cost of your firefighting efforts.
- Involve your manager or champion to resolve serious issues above your pay grade.
- Ask all requests to come in the form of questions, not demands.
- Always be proactive so you can prevent fire drills.

strike on the insights that will draw the most attention from senior management and increase the likelihood of follow-through from the organization.

From a defensive perspective, when you are approached with requests or questions from various parts of the organization, you'll be better able to prioritize your analysis efforts. Business questions about online tactics are not as important as those related to online initiatives, online goals, or even key department and corporate goals that intersect with the online strategy. Essentially, by focusing on the key business goals, you will be able to defend your time from being wasted by low-value requests. When you get pressure to respond to these kinds of requests, you can ask for help in explaining to your manager why the request is more important than what you're already working on. KAA-POW! When the key business objectives become the standard (and shield) for determining how to prioritize analysis work, you'll notice a decrease in the quantity of requests and an increase in the quality of requests.

TIP One of the most important things that web analysts can do is teach people what they should and shouldn't focus on. What does and doesn't matter. The old Japanese proverb of "Give a man a fish, feed him a day; teach a man to fish, he'll enjoy a lifetime supply of sushi" applies here. The more people who "get it," the easier your life will be.

Time for a Reality Check

With a firm understanding of the key online business goals, you may be excited about the targeted list of potential analysis opportunities that lay in front of you. The next step in prioritizing your analysis is to *determine your ability to influence an outcome*. You need to look ahead far enough down the road to spot potential barricades in the way before you smash into them at 100 miles an hour. Picking up the pieces, backtracking, and restarting your analysis journey down another side street can be time-consuming and frustrating, especially when you should have seen it coming.

"There is nothing so useless as doing efficiently that which should not be done at all."

– Peter Drucker

After narrowing your potential analysis options by focusing on your key business objectives, you need to perform a stern reality check on which analysis options probably won't make it. Some potential analysis ideas will die at your hands. The data that you need may be bad or incomplete, and the turnaround time to get the right tagging in place may push it to the back of your analysis queue. In some cases, you simply cannot capture the necessary data due to technical or privacy limitations. Perhaps the complexity of the potential analysis goes beyond your abilities or your tool's capabilities. In all of these scenarios, you'll hit a barrier in your analysis and a course correction will lead to some wasted time. You may not always be able to predict when you'll run into an obstacle during the analysis stage, but anticipating potential issues can make you more efficient with your analysis time.

The Action Roadblocks

While spotting potential analysis problems beforehand is helpful, pinpointing issues that will prevent the organization from taking the required action is even more important. It doesn't matter how amazing your analysis recommendations are if your company can't or won't act on them. No value is created if no action is taken. In some situations, it's an open-and-shut case that your company can't or won't execute on your recommendations (say, a holiday code freeze). You want to avoid wasting your time in these cases.

In other instances, however, a team's likelihood to act will vary. For web analysts that means risk—risk that your insights won't be embraced. Although I'll never advocate sticking to just the safe-bet analyses, you need to fully appreciate the unique circumstances of each opportunity and evaluate what you're up against before proceeding with an analysis. As General George S. Patton counseled, "Take calculated risks. That is quite different from being rash." If you weigh your options and decide to pursue a risky analysis project, you can at least take steps to mitigate the risk by attempting to preempt the known issues and enhancing the probability of action occurring.

When you consider your ability to influence an outcome, the first of four action roadblocks is *relationships* (**Figure 4.4**). When you're working with groups that are under different reporting structures, they may be wary of adopting any "outside" suggestions (Not-Invented-Here syndrome). An analyst shared an experience of where his team had full access to the data for another group; however, because of different reporting structures he knew it would have been fruitless to propose any optimizations as his team had very little authority or influence over the other group. After a company reorg, the group was aligned to the analyst's group, and his team was then able to collaborate on optimizing the group's online initiatives.

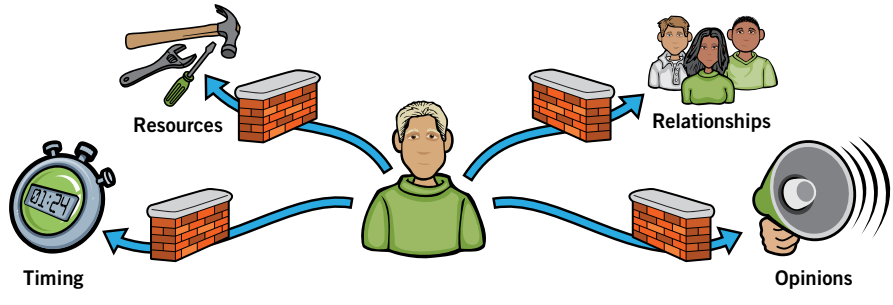

FIGURE 4.4 Analysts face four roadblocks to action.

From time to time, unhealthy, confrontational relationships may form between individuals, teams, or departments. Regardless of the quality and potential value of your analysis, it will be snubbed simply because of where it originated if you're seen as being affiliated with the wrong team. In other cases, you might not have any previous interactions with a particular team, and if you don't have an internal reputation built on a solid track record of successes, you'll face a more difficult time getting buy-in from other teams to act on your recommendations.

Another roadblock to action is close-minded *opinions*. Individuals and teams can have strongly-held opinions on different matters, but their openness to being challenged on those opinions becomes a key determinant in deciding whether to pursue a particular analysis. While I was working with one client, an executive encouraged me to validate or invalidate several beliefs his team had about its website and online visitors. He was willing to have his team's opinions put to the test. The manager set the right tone for his team, and they eagerly devoured the insights I was able to provide them with. American politician Pat Moynihan stated, "Everyone is entitled to his own opinion, but not his own facts." When leaders and teams are unwilling to be persuaded by facts, then they are likely not interested in your analysis.

Your analysis presentation may win over your audience, but they might still be unable to execute on your recommendations due to a lack of *resources*. A team might not have any additional budget that they can allocate to your proposal, or maybe they don't have the bandwidth to execute on your ideas. Perhaps your proposed solution requires expertise that the current staff doesn't have, requiring additional training that either wasn't in the budget or is too difficult to schedule for busy team members. Just because your audience is receptive to your ideas and suggestions doesn't mean you're golden. Unless they can act on your analysis, you'll never move beyond a series of show-and-tell presentations, which is a lot of effort for little to no return. You might need to prequalify your audience like salespeople do in order to find viable prospects.

Some opportunities are time-sensitive with a limited window of opportunity, and *timing* issues can hinder companies from responding fast enough to seize them. If you have a good gauge on how long it will take to perform a particularly complex analysis, you might find that the opportunity window has closed before you can even present your findings. In other cases, you might be able to turn around your analysis and present your recommendations with time to spare, only to watch the opportunity suffer an agonizing death caused by red tape and slow-moving processes during the execution phase. You need to factor not only your analysis time but also the execution time in deciding whether an optimization has any chance at seeing daylight.

TIP Open the door with unfamiliar teams by offering some "did you knows," simple but meaningful insights taken from their data. The teams may not be effectively leveraging their online data on an ongoing basis. A few well-placed insights may whet their appetite for some deeper analysis and forge a new relationship. From the reaction to your insights, you'll be able to better gauge their level of analytical sophistication and begin to pinpoint their pain points.

NOTE Different environments will react differently to "objective data." Some corporate cultures might embrace data as a way to challenge assumptions, whereas others might immediately stiffen their opinions and positions when they sense data will be used as evidence. The optimal state, of course, is an environment where data is embraced, and web analysts should do all they can to help foster a data-driven environment without bullying people with the data.

VILLAIN PROFILE: THE TECHNICAL TORTOISE

Background

The Marketing VP loves your recommendations. When they are handed over to the technical team for implementation, everything suddenly slows down and moves at a plodding pace. By the time the first status update comes out, the project has already been forgotten.

Tips to Defeat

- Involve the technical team early to avoid surprises from either side.
- Calculate the weekly or monthly opportunity cost of not acting (create urgency).
- Clearly explain the level of effort as it may not be as difficult as they initially think it will be.
- Request a go-to technical resource for all web analytics projects to avoid retraining.
- Use a tag management system to deploy and update analytics code.
- Leverage a testing tool to rapidly deploy tests without technical resources.
- Be aware of key deadlines for website release cycles, and work within them.
- Review with IT how deployment processes can be better streamlined.
- Work with senior management to find efficiencies across teams.

Expanding Your Ability to Influence

After reviewing your ability to influence certain outcomes, you might find some of your best analysis options may not be viable or may be much riskier than you initially thought. Having a narrow capacity to optimize the online business lessens the value that you can bring to the organization. Imagine an action-adventure film where the hero is constantly scrounging for ammo, always 20 minutes late to any confrontation, and able only to delay, not thwart, the ringleader's evil plans. Sounds more like a sad, pathetic comedy starring Ben Stiller than a Chuck Norris film. You won't ever be an action hero if you're only able to partially affect inconsequential areas of the business. You need to remove the major action roadblocks that are impeding your ability to have a major impact.

Over time you will identify patterns and isolate quagmires of inaction. Some of the issues that are limiting your ability to influence will be people-related (relationships,

opinions) and the rest will be operations-related (resources, timing). In regard to the latter category, you'll want to work with your manager and executive sponsor on addressing challenging operational issues so the company can become more optimization friendly over time. Most of the problematic processes, systems, and budgets were not formed with fast-paced, data-driven decision making in mind. You'll need to be patient as it may take some time to introduce changes, especially if your company is not used to being data driven. Your executive sponsor becomes invaluable in clearing a path through these obstacles and working with other leaders to make the company more action*able*.

INSIDER INSIGHTS

TIP Gain context and influence at your organization.

Tim Munsell is a lead web analyst at The Lampo Group (Dave Ramsey).

How have context and influence helped you?

Early in my career, I realized I wasn't being invited to meetings that I needed to be at. My rough edges were making my job more difficult. I might have been smart and right, but my approach was alienating people. After taking a Dale Carnegie class, I realized I could present my ideas in ways that built bridges and allowed people to keep their dignity. After I formed better relationships, opportunities opened for valuable informal dialogues; web data became good gossip.

We're in a unique position as web analysts: We focus on the Web, but we're responsible to anyone in the company who is touched directly (product teams) or indirectly by the website (call center). We need knowledge from the greater community, not just what comes through formal channels. Gaining context from different business owners gives you a bigger perspective and makes drilling down and connecting dots in the data easier. I can take my web insights to different teams and see if they are seeing the same patterns, as well as bridge efforts between the teams when I know their goals are similar.

How did you build your internal network?

I made a list of all the leaders who I could approach without having to go through another leader. I reached out to each of these individuals to get to know them through an offsite coffee or lunch. I learned their challenges and how the website helped their specific goals. I made sure to give them something of value in return; otherwise, they'd just view me as someone who took up their time. I didn't worry about them taking credit for any of my ideas because they became more eager to bring problems to me. I also asked who *they* went to with questions to discover the people who were really plugged into the pulse of the organization. I then reached out to those people to ensure I became a part of their information network. ■

NOTE Harvard professor Howard Gardner defined emotional intelligence as "your ability to understand other people, what motivates them, and how to work cooperatively with them.[4]

For the people-related issues, web analysts can play a role in building relationships and changing opinions to drive action. American statesman and merchant John Hancock stated, "The greatest ability in business is to get along with others and to influence their actions." Some analysts lean heavily on their razor-sharp hard skills, not realizing that soft skills, such as emotional intelligence, are in many ways the real catalyst for driving change. Psychologist Daniel Goleman's research found that emotional intelligence was twice as important as technical skills and IQ to excellent job performance.[3] By improving your self-awareness, empathy, and social skills, you'll help clear a path for your high-value analysis.

In most cases, trust is a big factor in forming valuable working relationships and overcoming people-related issues as a web analyst. Executives and teams are less likely to act on recommendations from an analyst they don't trust (or know). Focusing on quick wins early will build your internal credibility and establish your credentials when working with unfamiliar teams. In order to establish trust-based relationships, you'll want to gain a deep understanding of their business challenges, manage expectations effectively (under promise, over deliver), keep your commitments, communicate regularly, be proactive, and anticipate their business questions and needs. Trust-based analyst-executive relationships require time and attention to develop, but when formed can pay huge dividends as your influence expands. Be aware of your company's unique environment. In a few rare cases, you may still need cover-fire from your executive sponsor for severe people-related problems, but the goal is to use your champion sparingly only as a last resort.

If you're still at your wit's end after working on the relationship side and don't have support from above, you're in a fight-or-flight situation. No self-respecting web analyst wants to be in a long-term position where they can't win (I'm talking Jack Welch winning here, not Charlie Sheen's version of winning). While many companies are constantly on the prowl for good analytics talent, you can decide to stay and fight. Chuck Norris said, "Violence is my last option." Of course, when you have a professional karate record of 183 wins with only 10 defeats and you hold a rank of 8th Degree Black Belt Grand Master in Tae Kwon Do, a roundhouse kick to the face could be a viable route.[5] For the rest of humanity and anyone working in web analytics, however, that's not likely to generate a promotion or solve any of the internal issues.

Your last resort is to pursue a really strong but doomed analysis with the hopes of drawing management attention to the issue. One good opportunity (or more) may need to die so that others can live. When upper management learns another significant opportunity wasn't acted upon, it might spark some interest. It's a desperate, last-ditch effort at driving action before you succumb to being just a reporting robot or explore a more promising role at another company.

Biggest Bang for the Buck

> **"Inside of every problem lies an opportunity."**
>
> **– Robert Kiyosaki**

After determining the relevance and viability of your analysis, you can shift your attention to identifying which areas will yield the greatest potential benefits. At the same time, you'll want to balance the potential impact with the estimated level of effort required to obtain the insights. If you have a dollar of analyst time to spend, you want to get the biggest bang for your buck. The biggest bang doesn't necessarily come in the form of a single massive opportunity because several smaller analyses could be completed in the same timeframe and in aggregate produce more total value. Regardless of how few or many analyses you complete, maximize the return for an equivalent amount of effort.

Follow the Money Trail

As you decide what to analyze, you can be overwhelmed by the options. By focusing on your key business objectives and what you're able to influence, your list of possible targets may be more manageable, but you might still be facing several options. In terms of identifying high-value targets for analysis, you'll want to find and follow the money trail. I'm going to make a small assumption that one or more of your company's business objectives relates to wealth generation in some direct or indirect way. When you explore the money trail you can do so from two different perspectives: where your organization *spends its money* and how it *makes its money* through the online channel.

Starting with the spending side, where has your company made significant investments? The bigger the expenditure, the more attention it should receive. Although some people may be reluctant to share how different investments have performed, most people will be curious to know if they are paying off. More importantly, executives want to know if they should continue to invest more money or less on these areas. Most of the past investments will be sunk costs, but the ongoing costs and future investment can be managed. The types of expenditures will vary by company and industry, but some common examples include

- **Marketing channels.** Companies may spend a disproportionate part of their marketing budgets on a particular marketing channel such as paid search or display ads.
- **Marketing campaigns.** Millions of dollars are often thrown into high-profile brand and product marketing campaigns.
- **Content creation.** From microsites to product videos to articles, producing custom content can be expensive.

- **Licensed content.** Firms may pay a premium for exclusive media from well-known content providers.
- **Partner deals.** Organizations may choose to outsource major components of their websites to third-party partners for services such as an online catalog or checkout process.
- **Site redesign.** When a corporate website is due for another major facelift, the price tag of the new design can leave some executives with sticker shock.
- **Online functionality.** To enhance the user experience, drive conversion, and deflect call center volumes, companies may add various technologies to their sites such as personalization, click-to-chat/click-to-call, photo galleries, forums, self-service tools, or product ratings/reviews.
- **Apps.** A decent amount of development work (and cost) can go into creating various social and mobile apps.
- **Discounts.** Promo or coupon codes as well as other forms of discounting (bundling) may be more costly to the company than beneficial.
- **Resource allocation.** Internal staff and external consultants may not be optimally aligned and may need to be redeployed to better meet the needs of the business.

Regardless of type (retail, media, B2B, branding, nonprofit), each website can be evaluated from the spend perspective. When looking at where your company is spending its money, you need to be mindful of the multiplier effect. Individually, the impact of insights gleaned from one particular campaign or microsite might not be a big deal, but if your company is constantly launching new campaigns and microsites then the insights become more valuable. Although you might be tempted to focus on your organization's shiny new objects, don't assume the long-standing areas have been fully optimized. Companies often neglect older initiatives when internal attention shifts to more exciting, newer projects. Your company has several different ways of investing its money, so understanding how key investments are contributing to success will be essential to optimizing your online business in Actionland.

NOTE If you're evaluating online money generation from a profit or margin perspective (not a revenue perspective), you get an extra gold star. With so many companies struggling to simply monetize their online efforts, you're ahead of the curve.

Shifting to the money-making side, how does the online channel create or influence revenue for your organization? For some businesses, the company generates money directly from its online channel such as retailers (online sales) or media companies (ad revenue). In other cases, the online channel may influence revenue indirectly. For example, if you're a B2B or automotive website, your money is most likely made offline as online leads are closed offline by salespeople. But even the retail model isn't entirely straightforward as online research can often lead to

both online and in-store purchases. In addition, companies may earn their online money using multiple online methods (e-commerce, ad revenue, sponsorships, subscriptions, and so on), although they usually follow one primary money trail with a few supplemental footpaths.

In general, I think it's helpful to view the money trail of a website in terms of a conversion funnel (**Figure 4.5**). Using this perspective, you can identify key steps or milestones in the funnel process that can be viewed as levers for generating more money (or whatever your online currency is for success). For example, you may decide landing pages will be a good lever to pull. Rather than dumping more money into your ad spend to generate more traffic, optimizing a particular landing page may cost less and drive more overall conversions.

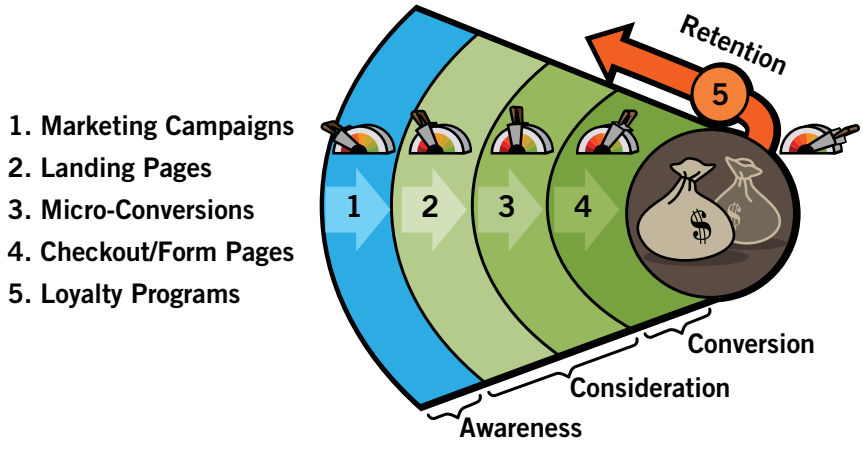

FIGURE 4.5 View your website's money trail in terms of a conversion funnel.

Each site will be unique, but here are some sample basic levers that can unlock more value for your online business:

- **Marketing campaigns.** Knowing which types of campaigns and channels are most successful will help you to better target your marketing efforts.
- **Landing pages.** These key entry pages leave an important first impression on your prospects. They either lead your visitors deeper into the site or force them to flip a quick U-turn.
- **Micro-conversions.** As visitors evaluate various features and benefits, they interact or engage with different content (videos, site searches, product detail pages). Certain interactions or activities may be key milestones or accelerators on the path to a final conversion.

- **Checkout/form pages.** As the visitors progress to a final decision, you don't want to lose them on the home stretch. Optimizing these critical final processes and bringing visitors back through remarketing can help your company to capture more conversions.
- **Loyalty programs.** Your past customers are more than likely to convert again and are less costly to re-acquire. Finding out what brings them back in droves can open up significant revenue from repeat business.

A conversion funnel approach won't apply to all situations. For lead generation sites, some landing pages may have lead forms embedded in them, creating a condensed conversion funnel. For media sites, the ad-revenue model doesn't readily map to a conversion funnel approach because there is no final outcome in mind but instead the desire to have visitors view as much high-value content as possible (the more ad impressions, the better). Although not all aspects of a particular website may map to specific levers in a conversion funnel process, I believe the exercise is still worthwhile to perform. It's not about trying to hammer a square peg into a round hole, but to challenge how you think about online success and uncover less obvious levers that are ready for analysis and optimization.

Analysis Prioritization Grid

After identifying some great analysis opportunities, how should you spend your analysis dollar? You now need to balance the potential payoff with the level of effort to create a Return on Effort (ROE). Assuming that all of the available options are on target and viable, the final step is to prioritize which ones you will pursue. Using a two-by-two grid with level of effort (a combination of difficulty and time required) on one axis and potential value on the other axis, you can plot and compare the analysis options in front of you. Consult **Figure 4.6** and the list that follows to determine where your own opportunities fall:

- **Fish in a Barrel.** With such easy pickings, you don't break a sweat and look like a rock star. While you may not be able to spend all of your time in this quadrant because eventually the low-hanging fruit will be exhausted, try to build momentum and credibility whenever you find yourself in this quadrant.
- **Pressure Cooker.** They may not be analysis lay-ups, but the opportunities in this quadrant are still engaging and rewarding work for analysts. By pushing your limits, gaining experience, and learning new techniques, the level of effort will get easier over time. Whenever you strike the jackpot, all of your hard work will be recognized and appreciated by management.

- **Cannon Fodder.** Avoid this quadrant at all costs. Sometimes you might be *obligated* to perform an analysis that falls into this category. Pray that a higher priority and more valuable analysis will come along. Be mindful when you're stuck in this quadrant too long or too frequently because you may become expendable.
- **Pez Dispenser.** At first it may be easy to respond to these simple business questions. Just be careful that the volume of simple requests doesn't prevent you from focusing on the top row.

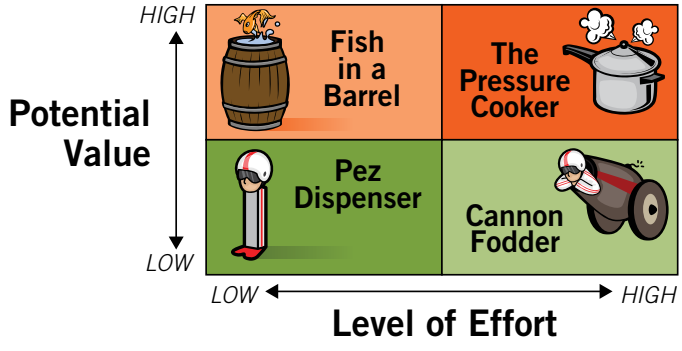

FIGURE 4.6 Action heroes focus on the top row of the Analysis Prioritization Grid.

Whether you perform a formal or informal assessment of your analysis opportunities, you'll be in a better position to maximize the value you can deliver to your organization (highest ROE). If you find you're constantly operating on the bottom row of the Analysis Prioritization Grid, you want to break into the top row somehow where action heroes focus and operate. The top row doesn't guarantee you'll find a valuable opportunity, but it certainly increases your odds. In general, the great thing about the money trail focus is that it stays relevant in an up or down economy, but especially in the turbulent times when companies are clawing and scratching for whatever financial advantage they can gain. The money trail never goes out of style. By efficiently prioritizing your analysis, you can become an action hero who is able to deliver timely, actionable, high-value recommendations when they're most needed.

Context Is Your Constant Companion

"Priority is a function of context."

– Stephen R. Covey

You've prioritized your analysis and identified some great analysis prospects. Wouldn't it be great if you could just hold everything constant until you've completed your analyses? Unlike economics class, however, the real world is constantly changing, and action heroes need to be plugged into the business environment so they can adapt to whatever new circumstances are thrown their way. Every action film has at least one good plot twist, but the action hero never bats an eye and just keeps pushing forward to complete his mission. The shifting, complex circumstances of the online world mean that web analysts can be dealing with plot twists every week whether you know it or not.

Web analysts can't afford to be disconnected from the context of the business. Context matters as it can dramatically impact your *credibility*, *relevance*, and *efficiency* in terms of how you prioritize analysis and invest your time. First, you could look bad if you're blindsided by information that is viewed as common knowledge (it gets even worse if it ends up negating your analysis). At a minimum you'll look uniformed, which isn't the image that any analyst wants to have. Second, you'll have wasted valuable analysis time on something that no longer matters. Third, you may have missed an opportunity that is no longer available. While context is crucial, the timing of the context is even more important to web analysts. In **Figure 4.7**, you can see how its timing can impact both your efficiency and reputation. Web analysts can't be expected to be clairvoyant in all cases, but they definitely need to be more broadly plugged in than other employees who don't need to span as many different groups, arenas, or subjects.

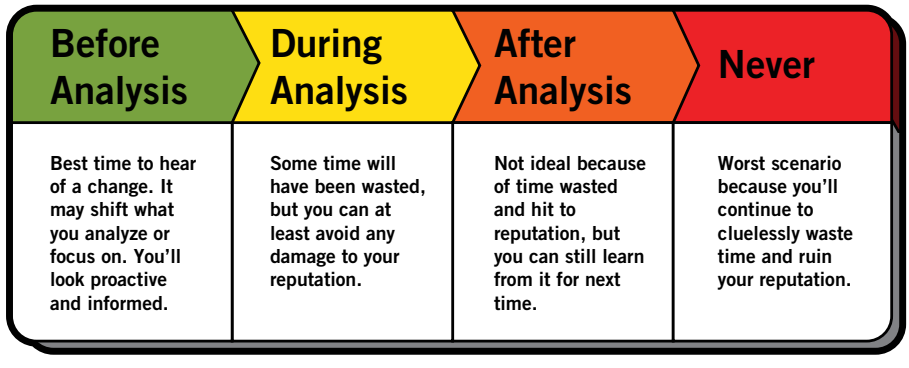

FIGURE 4.7 The sooner you understand context, the better.

As you remember from Figure 4.1, context can affect all four of the key analysis influencers. Here are four scenarios that demonstrate how the influencers can be affected by changes in the business:

- **Business Goals.** When a senior executive steps down and someone new steps into the position, everything can change: priorities, goals, initiatives, metrics, and targets. The incoming person will seek to put her mark on the department, and you can't afford to be out-of-sync with her new vision.
- **Ability to Influence.** An online marketing team receives surplus budget left over from a major campaign that was cut short. The team can now afford to test and optimize the landing pages that you discussed targeting last quarter.
- **Potential Impact.** Fired up after attending a social media conference, the CMO decides to shift half of the marketing budget into new social media marketing efforts, a channel that the company has very little experience with.
- **Level of Effort.** Your web analytics vendor just introduced powerful, new features that will make visitor segmentation much easier and less time-consuming to perform.

You'll want to pay special attention to any changes that specifically affect these four areas as the new circumstances may alter your analysis prioritization. Discovering a key change in your environment will require a reassessment of your analysis options and may lead to a shift in your direction. Although constantly shifting gears can be frustrating, it's an essential part of staying relevant and valuable to the business as a web analyst. Despite the extra work having additional information sometimes creates (usually for good reason), having more context can prevent unnecessary work as well. Context is your friend and should be your constant companion in analysis.

Owning the Context Wheel

As a web analyst, you'll find yourself at the center or hub of what's happening with your company's online efforts. Many internal and external factors will shape your organization's online strategy and success. Context is important to helping you to prioritize (and re-prioritize) your analysis options, and it's also helpful during the Analyze and Mobilize phases of the Action Hero Framework. With context playing such an integral role in your success as an analyst, you need to own the different aspects of the Context Wheel (**Figure 4.8**).

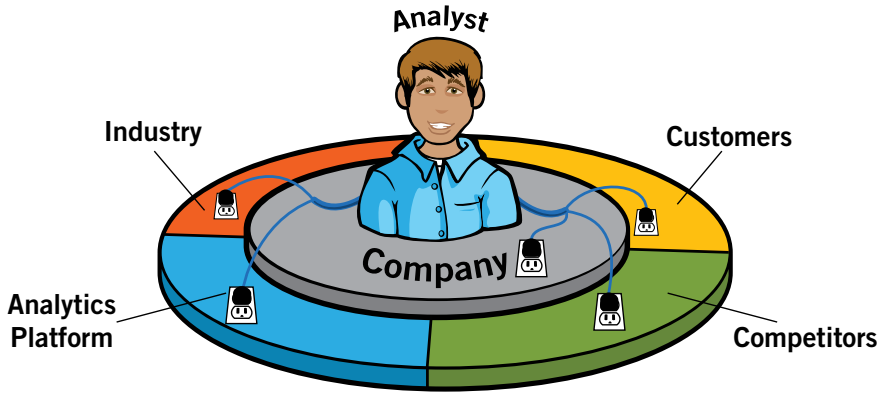

FIGURE 4.8 The Context Wheel will influence how you prioritize, analyze, and mobilize.

NOTE The Context Wheel will be relevant across all three phases of the Action Hero Framework (Prioritize, Analyze, Mobilize) as you take a more strategic analysis approach. In Chapter 5, we'll explore how context from the analytics platform, customers, and industry can shape your analysis. In Chapter 6, we'll see how competitor and customer context can be leveraged to drive action. The company context is in the middle of the wheel because it's crucial to all three phases; however, it is especially important upfront in how you prioritize your analysis.

The last thing analysts need is more data; however, you should welcome context because it sharpens your approach, enlightens your perspective, and can be used to open other people's minds. Action heroes are plugged into the broader context in five key areas:

- **Company.** You need to be aware of changes in areas that can affect your analysis such as the corporate strategy, online initiatives, marketing campaigns, website updates, testing efforts, server uptime, staffing levels, leadership team, key partnerships, business practices, processes, and so on.
- **Industry.** Many shifts occur in the external marketplace in areas such as economic trends, marketing trends, consumer trends, social trends, industry practices, technologies, seasonality, legislation, and major events.
- **Competitors.** You want to keep tabs on what your key rivals are doing with their strategies, products, services, campaigns, websites, and partnerships. You might also want to benchmark their online performance.
- **Customers.** Another key area that sometimes gets neglected is monitoring what's happening with your customers in terms of shifts in their needs, demographics, behaviors, interests, attitudes, opinions, values, and so on.
- **Analytics Platform.** Knowing your tool's features, related technologies, strengths, limitations, and pitfalls is critical for analysts. In addition, being aware of the nuances of your implementation and data is important.

The main area that will influence your analysis prioritization is the company context because the key analysis drivers are mostly internally focused (business objectives, ability to influence, and so on). Other areas may provide additional context that may affect the various analysis drivers. For example, industry trends and competitors' strategic moves may provide useful background information for

why your company's mobile strategies and initiatives appear to be falling behind. New time-saving or powerful functionality in your analytics platform may lower the level of effort for your analysis. Customer feedback on how difficult it is to complete the current application process may increase the potential value that could be obtained by performing form analysis.

Plugging into Tribal Knowledge

How many people have spent hours trying to explain something in the data that could have been clarified in five seconds by someone "in the know" from another department? Consider a chance encounter in a company break room:

Marketer to analyst: "What a day, I almost missed out on these cookies. Even after launching our Promoted Tweet ad campaign on Twitter last Tuesday, the department is still slammed. You think these have nuts in them?"

Analyst to marketer: "A new Twitter campaign? No wonder we had that spike in traffic! I've been struggling to figure it out all morning."

Clearly this analyst needed to know what was happening away from her desk, outside the walls of her team's cubicles, and beyond her department. By plugging into the tribal knowledge (company context), not only can you sharpen your analysis and save time, but you can also better target and prioritize your analysis. Here are some tips for expanding your network and plugging into what's really happening at your company:

- Identify which stakeholder groups and specific individuals are likely to have information that can make or break your analysis priorities (marketing, IT, market research, call center, sales, and so on).
- Seek to forge relationships with key people (at all levels) by taking them out to lunch or socializing with them in less formal settings (exercise, sporting events, after-hours drinks, and so on).
- Be approachable and visible. For example, eat in the company break room, not at your desk. Any advantages gained by multitasking for 20 minutes are lost when you're not sociable or interacting with people that matter to your analysis.
- Strive to share, not just take. If you want to get regular updates from your network, give something of value and don't always expect something in return. A useful insight or a latte can go a long way.
- Educate your contacts on what types of contextual information are most valuable to your role. You don't necessarily want details to be filtered, but you definitely want them escalated if they're important.

"If there is a killer approach to getting context for your web analytics data, it is through tribal knowledge."

– Avinash Kaushik

"There are known knowns. These are things we know that we know. There are known unknowns. That is to say, there are things that we know we don't know. But there are also unknown unknowns. There are things we don't know we don't know."

– Donald Rumsfeld

EXPANDING THE KNOWN

Action heroes want to know the knowns—and the unknowns. An executive shared with me how she was becoming increasingly frustrated with the reporting and analysis coming from her analyst. Even though the analyst seemed sharp and capable, his analysis just wasn't hitting the mark and meeting her needs. After the executive gave it some more thought, it dawned on her that she had two or three additional factors or considerations that influenced her decision making and she hadn't shared them with the analyst. Once she provided this additional context, the floodgates of meaningful insights poured in.

For managers, if your web analysts are consistently not providing the right insights, consider whether you've shared enough context with them. If they don't get sufficient context, your web analysts will continue to struggle with the "unknown unknowns" and not meet your expectations. For analysts, if your analyses seem to be slightly off target and potentially frustrating your audience, verify whether there's something you just don't know (maybe they assume you know). You need to shift from "not knowing that you don't know" to "knowing that you don't know" and then figuring out what that missing piece of context is.

Being aware of everything that's going on within a large company is a tall order. Often the left hand (IT) doesn't know what the right hand (marketing) is doing. Working in consulting, I'm frequently on the outside, and I need to rely on an internal contact to keep me plugged into the tribal knowledge. As a backup, I leverage various news alerts, investor alerts, and industry blog RSS feeds to stay attuned to what clients are doing. Sometimes as an extra safety net, you may need to look from the outside in as consultants do. You'd be surprised how many times consultants were the ones to inform clients of significant events happening within their own companies!

Finally, the current company context is important but knowledge of the past can be extremely helpful context as well. As the humorist Josh Billings stated, "It ain't so much the things we don't know that get us into trouble. It's the things we know that just ain't so." From project to project, your team will learn valuable lessons on what works and doesn't work within your organization and for your customers. You'll want to keep this information in a knowledge base or internal wiki so that it can assist your team in becoming more effective over time. You don't have to be limited by the past, but nonetheless it should be a key consideration.

Be the HUB

While it can be challenging to be at the center of the online business with so many moving parts, action heroes wouldn't want it any other way. The action hero's unique position and broad perspective enables her to make valuable connections between disparate teams, strategies, and initiatives across the company. By plugging into your organizational context, you can be a HUB too (Hero who Understands the Business). You can use your finely tuned appreciation of the business context to strike all analysis opportunities with precision and lethal force. No bona fide target will be left standing.

In summary, each of the five factors will contribute to your analysis prioritization in different ways. The factors ensure your prioritized analysis projects will have the following characteristics:

- **Key business objectives:** important, strategic
- **Ability to influence:** realistic, viable
- **Potential impact:** valuable, significant
- **Level of effort:** reasonable, practical
- **Context:** informed, pertinent

As you can see, the actionability of an analysis is just one of many key considerations. In the next chapter, we'll dive into how you should approach your actual analysis in your quest to find valuable business insights and optimizations. It's not quite time to start working on your signature action hero one-liner yet. We've still got some serious analysis work to do now, so pack your bags and bust out the big guns.

ENDNOTES

1 www.slate.com/id/2287216

2 http://bpmmag.net/mag/cascading_corporate_goals_performance_0304

3 http://hbr.org/2004/01/what-makes-a-leader/ar/1

4 http://psychcentral.com/lib/2007/what-is-emotional-intelligence-eq

5 http://en.wikipedia.org/wiki/Chuck_norris

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CHAPTER 5

ANALYZE FOR INSIGHT

"Once you eliminate the impossible, whatever remains, no matter how improbable, must be the truth."

– Sherlock Holmes

Superheroes have it easy. When they get in a tight spot, they just summon up their superpower and blast out. For action heroes it's not that simple. Problem solving is never just about firepower and muscle; these characters have to use their intellect to outsmart and outwit their adversaries. No one used his intellect to better advantage than the Victorians' own action hero: Sherlock Holmes. The epitome of the analytical approach, Sir Arthur Conan Doyle's master detective trusted his acumen in observation (data collection) and logical reasoning (analysis) to see himself and his clients through many a crisis. In all of his investigative endeavors, Sherlock Holmes applied the scientific method, which involves three forms of logical reasoning (AID):[1]

- **Abductive reasoning** formulates the most likely explanation (cause) based on incomplete observations of an event (effect).
- **Inductive reasoning** uses specific observations (patterns or trends) to create a probable, generalized conclusion (hypothesis).
- **Deductive reasoning** supports or refutes a general rule (hypothesis) with a specific conclusion (evidence).

"Men love to wonder, and that is the seed of science."

– Ralph Waldo Emerson

Acting as digital detectives, web analyst action heroes seek to solve the mysteries that are troubling their company's online business. In this chapter, you'll explore how the scientific method relates to online analysis and learn an analysis process for more effective data sleuthing.

Online Analysis Meets the Scientific Method

The scientific method is a systematic process that scientists use to explore observations, solve problems, and test hypotheses. This approach provides a valuable framework of discovery that is also applicable to online analysis, not just testing. Consider the high-level steps in the scientific method and how they can be applied to online analysis (**Figure 5.1**):

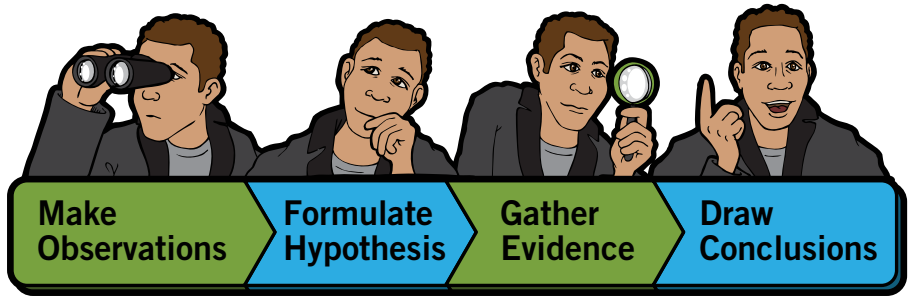


FIGURE 5.1 Online analysis follows a path similar to the scientific method.

1. **Make Observations.** When you begin your analysis, you may not necessarily know what you're looking for, but you should at least be guided by some goal, business question, or rough hypothesis in your data exploration. At this early stage, you're leveraging your experience, context, and knowledge of the online strategy to make high-level observations and ask questions. After orienting yourself within the available data, you start to carefully narrow your focus to specific areas and drive toward a potential optimization opportunity. For example, because one of your key business objectives is to increase online sales, you may review reports on your campaign landing pages, looking for trends or irregularities.

2. **Formulate Hypothesis.** After stumbling upon a particularly interesting observation, you'll make a prediction or educated guess based on the online data. For example, you may surmise that your landing pages are broken (cause) because the average bounce rate is 81% (effect). Rather than pressing forward with just an unfocused feeling or impression, you should work toward confirming a clear hypothesis. Make it official and write down your hypothesis so you remember what your analysis objective is. Essentially, you now have a target where you will concentrate your analysis. In some cases, you may jump directly to this stage (skipping the observation stage) whenever you're handed a hypothesis by an executive or business team to prove or refute.
3. **Gather Evidence.** Your next step is to validate or invalidate your hypothesis, which may require a simple or complex analysis to find the necessary evidence on the cause-and-effect relationships within the data. Prior to forming your hypothesis, you performed exploratory analysis in an *inductive* manner, identifying generalizations based on specific observations such as patterns or anomalies in the data. Now you're taking *abductive* and *deductive* approaches, analyzing root causes and general propositions to arrive at specific conclusions. With this type of deep-dive analysis, you're drilling into the data and methodically breaking down different aspects of an area to understand what's happening. You'll also consider various contextual factors that could be influencing the problem or opportunity you're evaluating.
4. **Draw Conclusions.** After all your analysis, you decide whether the data supports or refutes your hypothesis. In some cases, you may be able to draw very clear conclusions from your analysis results. Other times you may need to infer what the results mean, choosing the most probable explanation from the available facts. Sometimes you might not be able to arrive at a conclusion because you're missing a key piece of data. Regardless of the outcome of your analysis, you should have clear next steps around driving change, avoiding change, gathering more data, or not performing any further analysis.

NOTE Your hypothesis may require specific insights that the collected online data can't provide. You may need to perform an experiment to test your hypothesis, using A/B or multivariate testing. Only once you have the testing evidence will you be able to show a causal relationship. A web analytics manager at a major software company shared a great analogy for the relationship between testing and web analytics. If testing is the rifle, web analytics is the gun scope. Although you can shoot without a scope, your aim is more accurate when you use a rifle and scope together.

An ad hoc analysis process can be nebulous, time-consuming, and haphazard at best. If you're not using a systematic approach in your analysis, you're probably not going to reach your full analytical potential as an action hero. A scientific approach empowers you with a rigorous problem-solving framework and mind-set that will maximize your analysis time. A methodical approach may feel cumbersome at first, but if you approach it properly, you'll actually save time and stress. As you pursue a scientific approach, however, be mindful of three factors that can interfere with your analysis: bias, errors, and assumptions.

Battling Biases

"Fortunately for serious minds, a bias recognized is a bias sterilized."

– Benjamin Haydon

One of the challenges when using the scientific method is to minimize the influence of personal or social bias. As a web analyst, you may have formed strong opinions about different aspects of online marketing. You may believe that social media is an overhyped marketing channel, for example, and as a result, when you're performing an analysis on a new Facebook campaign, you may have a preference for one outcome over another. A form of personal bias known as confirmation bias could lead you to the exact result you expect if you're not careful. Being objective and open-minded to the facts within the data is important. You need to ensure your prejudice doesn't slant your analysis or interpretation of the data.

TIP Before you start a new analysis, perform a quick mental inventory of what relevant biases could affect your analysis. When the biases are unconscious or emotional in nature, they can be more difficult to detect. You can consider various factors such as your past experience, personal beliefs, current motivations, and relationships. Just being aware of your biases can be a helpful safeguard in analysis scenarios.

In addition, you may have social bias from various individuals pressuring you to "find something" that will support their position. For instance, a marketing manager may want more funding for mobile apps and is counting on you to find the support she needs to increase that budget line. In the course of your analysis, you may ignore or downplay unflattering data that indicates customers aren't really using the current mobile apps. Strive to analyze and interpret the data in a consistent manner irrespective of the circumstances, and let the insights fall where they may. Once you have a clear picture of what's happening—good or bad—you and the interested parties can then determine the best course of action. By inadvertently giving the marketing manager what she wants, you will just be setting up her and your company for future failure.

Eradicating Errors

Another factor that can undermine the effectiveness of the scientific method is error. The three general types of errors found in scientific experiments and online analysis are

- Systematic
- Random
- Human

Systematic error is related to how *accurately* your implementation and web analytics tool measure online performance. In other words, systematic error is about how close the measured values are to the true values of what is being measured. For example, the display ad click-throughs in your web analytics tool may always be 10 to 15% lower than what your ad serving system shows for clicks.

Random error is related to how *precisely* your tagging captures the same values over time. It represents the degree to which repeated measurements show the same values when nothing has changed with the actual implementation. Random errors

are typically introduced into the reports by such environmental factors as cookie collisions, JavaScript rejection, website downtime, and so on. As a web analyst, you need to have confidence in the data that it is reasonably accurate and precise (no data is perfect); otherwise, it will continue to undermine whatever analysis you're performing. However, although you can monitor and recognize the influence of systematic and random errors, they aren't something that you, the web analyst, can necessarily directly control.

Human error is something that you *can* control. Human error falls into three main types: mistakes (planning), lapses (memory), and slips (execution). *Mistakes* occur when analysts take the wrong approach believing it to be the right one. For example, you may analyze all of the online marketing campaigns not realizing that your analysis should have focused on campaigns for specific product categories only. *Lapses* happen when web analysts fail to do something due to forgetfulness or lack of attention. After attending an unexpected meeting during the middle of your analysis, you lose your place and miss a key step in your process. *Slips* occur when actions were not carried out as intended. For example, you might accidentally mistype a key value (63 instead of 36) when calculating a conversion rate.

"In all science, error precedes the truth, and it is better it should go first than last."

– Sir Hugh Wadpole

VILLAIN PROFILE: THE PERFECTIONIST

Background

She insists on having everything just perfect—numbers matching internal systems to four decimal points. Analysts waste weeks meticulously fine-tuning dashboards for her. Nobody can take any actions on the data until she feels perfection has been achieved.

Tips to Defeat

- Set expectations early for why there will be data differences between systems.
- Determine how important timeliness or speed is to making key business decisions.
- Shift the focus from accuracy (exact number) to precision (repeatable).
- Establish an acceptable and realistic threshold for imprecision (5%? 10%?) and clear rules of action.
- Evangelize the usefulness of directional data in decision making.
- Highlight wins other teams have been able to accomplish with less than perfect data.

ADDRESSING THE ACCURACY GAP

Typically, the higher the level of accuracy that is required, the greater the investment of time and effort that is needed to calibrate your web analytics platform to other systems (**Figure 5.2**). Your company's targeted level of accuracy may require a quick cost-benefit analysis. Rather than blindly pursuing more accuracy, your organization needs to weigh the costs (resources, time, opportunity cost) of achieving greater accuracy with the benefits (executive confidence, user adoption, external reporting). In some cases, small incremental changes in the margin of error can be a big deal. In other cases, they can result in diminishing returns, delaying or wasting time that could be spent on analysis, testing, or benefiting from optimizations.

In most cases, you're dealing with an explainable and unexplainable margin of error. You typically want to reduce high amounts of unexplained margin of error. If you have explainable margin of error, you have two options: close the gap or acknowledge the gap.

For example, a retailer knows that its real-time web analytics data is consistently 10% higher in terms of revenue than its backend system. Its backend system removes fraudulent orders and product returns from its final revenue numbers. In this case, the retailer can make the decision to close the gap between its web analytics tool and its backend system by feeding in post-sale data. Or the retailer can acknowledge the gap and move forward with optimizing its website and campaigns based on the understanding that its web data doesn't factor out fraudulent and returned orders.

Various experts have advocated for precision over accuracy. Precision focuses on reproducibility and repeatability compared to accuracy which focuses on obtaining the exact number. As long as your web data consistently falls within an acceptable threshold of accuracy, your business should be able to act on the data's directional insights with confidence.

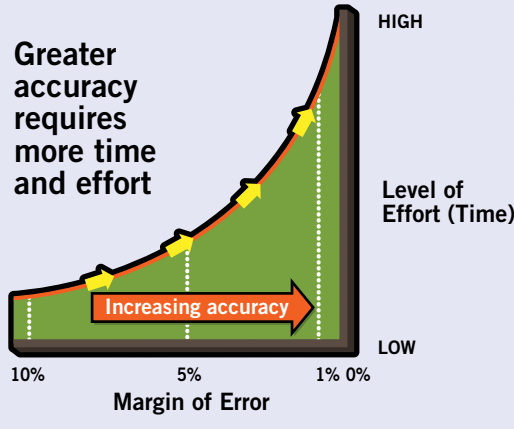


FIGURE 5.2 Increasing the accuracy and reducing the margin of error requires a higher level of effort with diminishing returns.

Human error can jeopardize all of your hard work on a project but also affect your credibility. You don't want to be the reason that your analysis fails and isn't adopted. You can minimize potential errors from creeping into your analysis in the following ways:

- Repeat back to the stakeholders what the business challenges or questions are before determining the best approach.
- Try to schedule solid blocks of time for analysis and attempt to minimize the interruptions or distractions that can lead to mental lapses.
- Monitor your fatigue and stress levels. Recognize when it will be better to step away from a project, take a break, and come back refreshed and refocused.
- Document your methodology as you go (reports, metrics, date ranges, segments, and so on) so that you can easily reproduce an analysis if needed. Documentation can also come in handy when you need to go back and look at something else.
- Identify when and where you typically commit errors during the analysis process. Be extra attentive and double-check your work in these error-prone areas.
- Share your analysis findings with a colleague to catch any errors that you may have missed before presenting them.
- Consider doing a post-mortem assessment of a key analysis with someone who you respect (manager, more experienced analyst). After the pressure of the project has passed, you can evaluate and get feedback on how you can improve your technique.

Annihilating Assumptions

One of the main benefits or outcomes of taking a scientific approach with your analysis is that you will question assumptions and think more critically about them. Assumptions—both explicit and implicit—enable individuals, teams, and companies to move forward in the absence of having perfect data for each and every decision. These presumptions or beliefs can be based on varying degrees of supporting information; they can also be correct or incorrect. Action heroes seek to remove false assumptions that are obstructing or impeding their company's online performance.

"The harder you fight to hold on to specific assumptions, the more likely there's gold in letting go of them."

– John Seely Brown

The Japanese e-commerce division of a multinational company had a problem with one of its shared assumptions. Reacting to a 40% decline in year-over-year revenue, many people within the division felt it was due to currency fluctuations. Using statistics, an analyst on my consulting team determined that currency fluctuations between Japan and the United States had almost zero effect on revenue. This was

a huge win for the Japanese e-commerce executive, who could now hold his entire team more accountable without the currency excuse. With the marketers being held more responsible for more effective acquisition and conversion campaigns, we were able to work with them to identify an email marketing optimization that ended up generating more than $300K in incremental revenue per week. The currency fluctuation assumption would have blocked this optimization from ever happening.

INSIDER INSIGHT

TIP: Don't shy away from poking sacred cows.

Laura MacTaggart is the senior manager of web analysis and testing at Salesforce.com, where she leverages web analytics, social, survey, and offline data to improve the company's website to drive more leads and opportunities.

What was the optimization opportunity?

Management was focused on improving the perceived high bounce rate of the salesforce.com homepage after the survey data revealed that some visitors sought more clarity in learning about salesforce.com and easier navigation to help them find the right products. We needed to address these problems to reduce the bounce rate. A long-standing part of the homepage was the hero banner, which took up about one third of the above-the-fold space, and whose three to five coveted rotating ad spots were managed by a web team. After some analysis and deliberation, our team made the bold, and somewhat controversial, decision to test swapping out the rotating banner for a simple, one-sentence elevator pitch. We faced many conflicting opinions about what would happen: Some teams were very concerned about the effect that removing the banner would have on the customer experience, while others were worried that their products or events wouldn't be discoverable.

What was the result of the test?

The test generated a 19% lift in leads for our prospects, which was huge. The switch to the simple elevator pitch also decreased the bounce rate by 9%. Because the test results had a high level of confidence, we decided to roll out the new homepage experience to our prospect traffic. We continued to serve the rotating banner to our existing customers so we could provide them with different offers for other products. This single high-profile win helped increase awareness of the power of data and testing at salesforce.com. We've been able to gain more leverage within the organization to suggest testing ideas before they go to market.

Many organizations have "sacred cows" grazing peacefully within the business, which aren't open to interpretation and are shielded from interference. An executive or business team may have had success with a particular approach, channel, practice, or principle in the past, earning the sacred cow its special status within the company. However, most of these have never been subsequently re-evaluated to see if they are still equally effective or relevant. Sacred cows often make great burgers for analysts and are an excellent source of optimization nutrients. Any time you identify something in the data that contradicts or is inconsistent with established beliefs, you should start questioning the related assumptions and look for high-impact optimizations to unlock.

When Analysis Isn't Scientific

In his book *Moneyball* (W.W. Norton & Company, 2003), Michael Lewis shared an interesting story of how the Houston Astros asked sabermetrics consultants to analyze the effect of moving the Astrodomes' fences closer to home plate. Team executives believed more home runs would sell more tickets and closer fences would mean the Astros would hit more home runs. After performing the analysis, consultants found that the Astros would actually lose more games—never good for ticket sales—because visiting teams tended to hit more long balls than the Astros. Suddenly, the Houston Astros wanted the consultants to cover up the information; as Lewis explains, "They didn't want the information to inform the decision. *They'd already made the decision.*"

"A point of view can be a dangerous luxury when substituted for insight and understanding."

– Marshall McLuhan

The same practice of justifying or defending a decision with data also affects web analysts. This form of analysis violates the scientific approach and is an unproductive use of your time. Although you're probably not going to turn away a C-level executive in these justification-seeking situations, whenever there's only one acceptable answer for an analysis, you have a problem. While you encourage people to inquire about the results of a decision, selectively backfilling analysis that should have preceded a decision is completely unscientific. This type of perverted analysis brings to mind the famous line by Scottish poet Andrew Lang: "He uses statistics as a drunken man uses lamp posts—for support rather than for illumination." For best results, analysis should inform marketing decisions, not the reverse.

VILLAIN PROFILE: THE JUSTIFIER

Background

She's got an axe to grind with another manager, the data needs to prove she's right and he's wrong. If the data doesn't prove her point, it's got to be wrong. She often comes to you for data that justifies her decisions—after they've already been made.

Tips to Defeat

- Ensure there is agreement on the business objectives and KPIs across key stakeholders.
- Strive to understand key motivations that are causing this type of behavior.
- Anticipate and analyze business problems before decisions are made.
- Regardless of findings, always share what is found (an opportunity to learn).
- Inform future decisions by exploring other related areas beyond what is requested.
- Share data globally so no teams are at a disadvantage and can work together.
- Push back on time-consuming, wasteful requests with your manager's support.

HEROIC Approach: Turning Over Rocks Strategically

With the scientific method in mind, you're now ready to discover the treasure buried within your online data. Like a good investigator, you'll want to leave no stone unturned, but looking at your web analytics reports, you may feel as though you're staring at the rock-strewn surface of Mars. Investigating every option to find the hidden nuggets of business insight will be a time-consuming, painful exercise. Instead you need to approach the analysis process in an efficient and systematic manner. If you don't have a plan for your analysis approach, you may end prematurely, become paralyzed, or get lost—in each case coming up empty-handed. You need the six essential steps of the HEROIC analysis approach to turn over rocks strategically:

- Have a hit list.
- Evaluate data and its context.
- Recognize opportunities.
- Obtain deeper insights.
- Inspect monetary value.
- Choose the best options.

This approach will help you to answer three key questions during your analysis (**Figure 5.3**). *What* happened? *Why* did it happen? *So what* if it happened? Leading you through various steps to answer these questions, the HEROIC method will guide you toward valuable insights that will ensure your success as an action hero in web analytics. Along the way, you'll use the three analysis techniques of abduction, induction, and deduction.

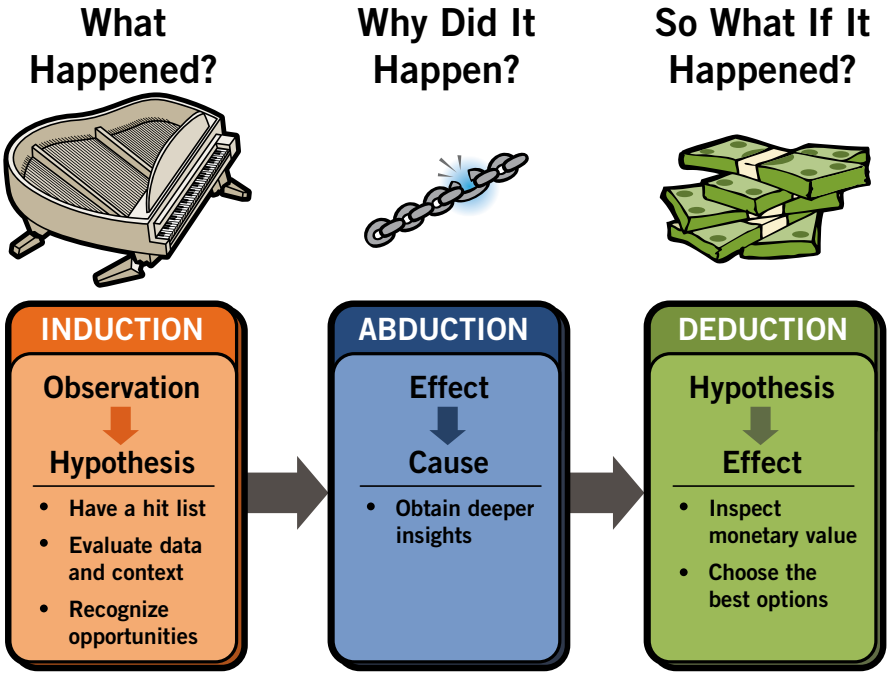


FIGURE 5.3 The HEROIC analysis approach will answer three key questions.

Have a Hit List

"When you're curious, you find lots of interesting things to do."

– Walt Disney

During the Prioritize phase, you already defined your analysis mission with some general boundaries by prioritizing your analysis focus around a key optimization opportunity or set of opportunities (see Chapter 4 , "Prioritize for Impact"). Because of this, you have a general sense for which rocks to target and which ones to ignore. For example, if you've decided to optimize your website's internal search, you're not going to worry about bounce rates for landing pages or browser conversion rates.

You can focus even more by creating a hit list of metrics, reports, and segments to explore during your analysis; don't just keep it in your head, but actually write it down. You may also want to include key pieces of context or other data sources that you need to gather for your analysis. At this stage, you're going to brainstorm all of the possible rocks to look under related to your specific area of investigation. For instance, if you were going to evaluate your website's internal search, you may create a hit list similar to the following:

1. Determine aggregate search behaviors and trends (average searches per visit, search conversion rates, average number of search refinements, and so on).
2. Evaluate how often internal search precedes the main end conversions (purchases, leads).
3. Identify top overall search terms from both volume and conversion perspectives.
4. Investigate the quality of the search results for the top 10 to 50 search terms for volume.
5. Identify which search terms experienced the biggest changes month over month (week over week).
6. Ascertain which search terms are resulting in "no results."
7. Understand where high-volume searches originate from on the site.
8. Identify search term sequencing ("boots" to "burton boots").
9. Evaluate search user segment's patterns and behaviors.
10. Evaluate and compare with non-search user segment.
11. Evaluate how search usage and keyword phrases differ by key segments (purchasers and non-purchasers).

The hit list becomes your analysis plan of attack, and it provides three benefits. First, web analysts can become one-trick ponies where their first idea may be the first *and only* approach tried or their favorite approach becomes a hammer where every problem is a nail. By having a list of possible approaches to work through,

you're going to explore more options and gain deeper insights into the issue at hand. Second, analysis paralysis can strike at any time if you're not careful. You can become overwhelmed by the data, various analysis options, and conflicting data, not knowing where to go next or second-guessing your approach. By having a hit list, you don't need to get hung up on a particular analysis that isn't working out; just keep moving steadily down your list. Third, you never know where your analysis will take you. Just like Sherlock Holmes' cases, your analyses can lead to some interesting and unexpected twists. Rather than chasing every new idea as they appear during the analysis process, add them to your hit list and finish the analysis you started. Don't think of your hit list as static; let it evolve during your analysis journey.

Evaluate Data and Its Context

"Data! Data! Data! I cannot make bricks without clay."

– Sherlock Holmes

With your hit list in hand, evaluate or inspect the data before you perform any analysis. First, confirm the data you need for your analysis has been *collected*. Does your implementation have all of the right buckets in place? Are the buckets capturing anything? I recommend going into the actual reports rather than trusting the report names in your tool's menu because the reports can be misnamed or empty. Second, verify that the data within the reports is *usable*. Are the buckets in the right places? Is the data that's flowing into the buckets any good? You're not looking for perfection. A report doesn't need to be perfect for the data to be useful. As one executive stated, "It needs to capture the behavior, not the totality of it."[2] Even if you have only partial information, as long as a report contains what you need, you can move forward with it. After walking through all the relevant reports, you may need to adjust your hit list to reflect some of the gaps you've identified.

One of the central themes of this book has been the importance of context. Action heroes need context to function normally as web analysts. Before you start any analysis, gain as much context on the data you're analyzing as possible. With web data you have the unique opportunity to "go native" and experience online what your customers experience. As you familiarize yourself with the mobile app or microsite you're analyzing, you may find additional ideas to add to your hit list. Getting some initial impressions of the navigation, workflow, look and feel, page layout, content, and so on can pay dividends later on in your actual analysis. If you're analyzing internal search, for example, perform some simple searches on the website to see how the search engine works and how the results are displayed. Don't be tempted to start performing analysis yet as you're still gathering intel before your mission.

TIP One of the best ways to assess the quality of your implementation is to perform analysis on the data. Nothing shines a light on implementation problems like actual analysis. On the surface, reports can look fine until you attempt to extract actual insights. As a web analytics practitioner, you may be unsettled when a simple analysis turns up basic errors or gaps in data collection—issues that should have been easily spotted if people were using the data. Be careful that you don't let these inevitable data problems derail or distract you. The best approach is to make a quick note of the issue that you can later pass on to your technical lead.

Beyond just the user experience, think of other contextual factors that could affect your analysis. Get plugged into the tribal knowledge at your company, and be aware of seasonal factors, new campaign launches, site performance issues, platform changes, and so on that could impact your data. Being aware of what's happening at your company before you start your analysis can save you time and better target your analysis. Anomalies in the data can be explained and dismissed in seconds rather than hours. A software company I was working with noticed a drop in the unique visitors to its small business–focused website. After analyzing what was going on, I noticed a drop in traffic from one search engine in particular, but interestingly the visitors were not search-related (no keywords). After I shared my analysis findings, the marketing manager remembered a corporate sponsorship deal had recently expired on the search engine's news portal, which explained the decrease in traffic. Context came to the rescue, and the dots finally connected.

Although most of the data for your analysis may come from your web analytics tool, you shouldn't limit your analysis to just one data source. For a particular analysis, an action hero may need to look beyond his trusted web analytics data and use other forms of data to round out his analysis. In other words, you may need a data mash-up that combines data from various sources. With the big picture in mind, consider what other data could further enrich and strengthen your analysis.

VILLAIN PROFILE: SUSPECT DATA

Background

He sabotages the company's confidence with flawed, inconsistent, and incomplete data. Everyone second-guesses the data and prefers to fly blind than trust the reports.

Tips to Defeat

- Review the scope, severity, and frequency of the data discrepancies.
- Evaluate whether the issues are isolated to specific areas or are more widespread.
- Work with the technical team to correct issues causing bad data.
- Hold teams accountable for maintaining data quality.
- Win back confidence in the data through a concentrated re-education effort.
- Ensure standards, processes, and feedback loops (alerts) are in place to avoid future issues.

Action heroes welcome additional ammo from multiple sources if it supports their analysis objectives. Depending on your goals, some of the following information sources might benefit your analysis:

- **Competitive intelligence**. Data on what's happening with your competitors or the overall industry can provide valuable context for your analysis. Industry benchmarks can pinpoint potential areas of improvement, and competitors' external search keywords can highlight opportunities for your own company's keyword strategy.
- **Surveys.** Web analytics data can cover the *who*, *what*, *when*, *how*, and *where* questions, but it can never answer *why* someone is behaving a certain way on your website. You can form a hypothesis around why people may be abandoning a particular online process, but you won't really be certain unless you have voice-of-customer data. Qualitative data can take your analysis in unexpected directions when it's combined with your web analytics data.
- **Usability testing.** Many companies conduct usability tests on their web interfaces to pinpoint areas of improvement (primarily pre-launch). Problems identified in usability testing can be explored and substantiated through web analytics data. The qualitative findings from the usability side can add invaluable context to your analysis and credence to your recommendations.
- **Social media.** Surveys can capture the opinions of visitors to your site. Social media data gives you insights into what conversations people are having about your company, your products, and your competitors outside of your website. The additional insights gained from social media channels can help your analysis in determining how to best address key problems and seize market opportunities.
- **Offline data.** In some cases, just as your web analytics data begins to get interesting, you may run up against the proverbial online cliff. Understanding what happens after a lead is generated, an application is submitted, or an order is placed can completely change the course of your analysis. Suddenly you realize what would optimize online success might actually conflict with offline success.

If your analysis doesn't require any additional data, don't needlessly complicate your life with it. Be selective about what other data sources you need. If the data is relevant, available, and won't be too time-consuming to analyze, add it to the mix. Bridging the various data silos can quickly become a secret weapon in your analytics arsenal and critical to gaining greater context. You need to complete all of the necessary preparations before you start exploring the actual data.

TIP As you go through a website, use a debugging tool like Charles or Firebug to watch how the data is being captured by your web analytics tool. It can give you better insights into how the data is collected as well as help you to spot potential issues before they trip up your analysis. For example, you need to verify that events or goals are being measured at the right places within an online process. Capturing them in the wrong places could throw off your entire analysis.

TIP When integrating your online and offline data, you always need to have some kind of shared key (customer ID, transaction ID) to tie the two worlds together. Without it, the best you can do is just data correlations.

KNOW YOUR DATA AND ITS LIMITATIONS

Action heroes need to have a thorough understanding of their web analytics platform. Knowing how your tool has been set up, customized, and deployed can make all the difference when it comes to properly interpreting your data. Simple settings related to campaign detection, expiration, and attribution as well as internal filters and paid search detection can have a significant impact on your analysis. Although you don't necessarily need to become a web developer, you should be familiar with how data is collected and aware of any pre- or post-collection processing that occurs. On a few occasions, the data I was analyzing didn't make any sense until I understood the manner in which it was being captured and processed.

Each web analytics tool will have its own unique set of limitations, and you want to be aware of them so that you can prevent time-consuming fire drills. For example, you should be aware of whether your tool reports your entire visitor population or just a sample of the population. You'll also want to know how "real-time" your tool really is. If you fail to understand your tool's limitations, you could also draw incorrect conclusions from your dataset. Beyond product-specific limitations, all the web analytics platforms share several inherent challenges:

- **Visitor identification issues.** Cookies are both device-specific and browser-specific, which means one person could end up being multiple visitors (work versus home, tablet device versus mobile phone, Chrome versus Internet Explorer, old PC versus new PC).
- **Unwanted site traffic.** Previously bots and spiders couldn't execute JavaScript logic, but they have evolved to the point where they can be difficult to distinguish from their human counterparts. Be aware that performance monitoring agents (Gomez, Keynote) can also cause unwanted spikes in traffic.
- **JavaScript support.** Approximately 5 to 10% of visitors don't support JavaScript, which makes it difficult to robustly track this segment of visitors. For perspective, marketers in other channels would kill to have rich information on 90 to 95% of their channel's prospects and customers.
- **Referrer issues.** Campaign tracking is often dependent on capturing the referrer to the page. As companies make extensive use of redirects, they need to be set up in an analytics-friendly manner so that the original page referrer data isn't stripped. Redirect issues can occur with Flash and secure pages (HTTPS) as well.
- **Browser issues.** Every so often web browsers introduce new features that can interfere with web analytics tracking. For example, Safari's Top Sites feature provides a quick graphical thumbnail overview of sites, but it can artificially inflate traffic to those sites. Internet Explorer has a longstanding URL/URI request limit of 2,048 characters that can truncate web analytics data.

Although some people like to dwell on these imperfections, they fail to mention that no data is perfect. For example, visitor identification issues aren't unique to the Web. In offline database marketing, the address/household is often treated as a single customer even though the household may contain several people with very different purchasing behaviors. It is important to know your data and its limitations for your analysis and data interpretation. When James Bond's gun jams, he doesn't give up; the fight continues with whatever means he has at his disposal.

Recognize Opportunities

With a list of analysis options and a familiarity with the data and context, you can now start the fun part. Although online data exploration might not be as exciting as thwarting an evil mastermind and faking your own death, it certainly beats many other responsibilities that web analysts are given. Most of the web analysts I've spoken with want to be doing *more analysis*. Sure, it can be stressful when you're under a time crunch or senior management attention is focusing a lot of attention on your analysis results. However, any analyst worth his or her salt relishes the actual analysis.

"Success is where preparation and opportunity meet."

– Bobby Unser

For me, the allure of analysis is finding the unexpected insights within the online data that can have a positive impact on the business. When you're turning over rocks, you never know exactly what you'll find or where your analysis will take you. During an analysis project, you perform analysis in two ways: *exploratory* and *deep dive*.

Initially, you explore the surface-level data looking for anything that stands out as interesting or unusual, anything that might translate into an optimization opportunity. To pinpoint potential opportunities, you perform lots of *comparisons*. Mostly you compare the data against each other, some cross-section of the data, or some kind of standard (mean, target, or benchmark). At this stage in your analysis, you take an inductive reasoning approach, making generalizations based on specific data points you've observed. For example, you might see a sustained increase in average page views per visit for a particular content section, and surmise that some kind of change occurred within that site section that increased content consumption. Was this effect caused by a particular article? Was the site section's page layout redesigned? The answer will have to wait for the deep-dive stage. Your exploratory analysis is just focused on identifying any noteworthy effects (what happened) and not on finding the probable causes (why it happened). Essentially you're marking the rocks for further investigation.

NOTE Individuals within your company may consider a poor-performing marketing campaign or registration process to be a problem. Action heroes react differently, however, and see problems as opportunities. If something is broken, it can be fixed. Companies are often more responsive about fixing things that are broken than improving things that are already working.

Once you've found a potential opportunity in the exploratory analysis phase, you can take two different paths. With the *Find-and-Dive* approach, you dive immediately into each opportunity as you find it. After you've completed your deep-dive analysis, you move on to the next item on your hit list. In the *Prioritize-then-Dive* approach, you set each observation aside and continue exploring until you go through your entire hit list (or as much of it as you can in the time you budgeted for exploratory analysis). You then prioritize which opportunities look the most promising and rewarding before shifting to the deep-dive analysis phase. Both approaches have their pros and cons (**Table 5.1**). Time, scope, and personal preference will factor

NOTE How much time should you budget for each phase? You'll generally spend between 30 and 40% of your time on exploratory analysis and the rest on deep-dive analysis.

into your exploratory analysis approach. If you have ample time for your analysis, you can choose either approach; however, when time is limited, you need to go with the approach that will be most efficient and effective for you.

TABLE 5.1 Exploratory Analysis Approaches

APPROACH	PROS	CONS
Find-and-Dive	You already have the data at hand and get to quickly satiate your curiosity. It can be more fun and exciting to shift into deep-dive mode.	Drilling into the first opportunity may mean you spend an inordinate amount of time on a less promising or rewarding opportunity. Your deep-dive analysis might be siloed.
Prioritize-then-Dive	You understand all of your options and can determine which opportunities to dig into by priority. You might find some opportunities are interrelated and can be combined.	It can be inefficient to have to revisit and reorient yourself to each opportunity. If you don't manage your time effectively, you can be left with observations and no real insights.

Statistician John Tukey compared exploratory data analysis to detective work, using both numerical and visual means. Descriptive statistics are very important in the exploratory stage because they summarize the raw data, enabling you to quickly familiarize yourself with the data and perform comparisons on different values. When you perform analysis on a particular web analytics report, you'll typically be working with a data table or graphical chart. Starting with the basic data table, there are a number of ways to identify potential insights through numerical comparisons.

Techniques for Analyzing Numerical Data

Whether you're studying the interface reports from your web analytics tool or a simple Excel spreadsheet, you can coax more potential insights from the data than you might initially think. Using the right technique, you might be able to isolate something quickly and easily without the extra time needed to create visuals. By default, tabular reports feature at least one dimension and at least one metric with the items and their numerical values sorted from largest to smallest. The key to unlocking meaningful insights from this default format is to add comparisons. Specifically, the comparison methods described in the following sections will help you shed some more light on your tabular data.

PERCENTAGE OF TOTAL

Individual counts don't convey much meaning on their own. Try adding the percentage each value represents of the total amount to provide a simple but effective comparison. Recognizing that 40% of your visitors come from one particular referring domain might catch your attention faster than the actual raw count of visits will.

RATIOS

Calculating a ratio establishes a level playing field for different items (regardless of volume) and helps you to see how they compare against each other. For example, you may know that your website receives ten times as many visits from Japan compared to those from Germany. Once you add a calculated metric for page views per visit to your report, however, you discover that visitors from Germany average 10.1 page views per visit compared to only 2.3 page views per visit for Japanese visitors. Looking at just the total page views and visits for Germany and Japan, you wouldn't easily discern that German visitors consume more content per visitor; the ratio brings it into focus.

NOTE Even though ratios are helpful when it comes to simple comparisons, you still need to complement them with counts as a magnitude or volume check. For example, while evaluating a page report by bounce rate (single page visits/entries) to find your worst performing pages, you discover a page with a 100% bounce rate, meaning that everyone who lands on it leaves immediately. Without knowing the volume of visits, however, you fail to realize you are about to fix a page that received only three visits last month! Avoid this scenario, and sort your data by the metric that reveals volume (largest to smallest) rather than by a ratio.

MEANS OR AVERAGES

When you have ratios, you can compare individual values against the site-wide mean or average. Knowing which items differ greatly from the website average can highlight problems or opportunities for further investigation. For example, if you know that the average bounce rate for landing pages is 65%, you now have a standard by which to evaluate all your landing pages and pinpoint specific pages that are struggling with higher bounce rates.

TARGETS OR BENCHMARKS

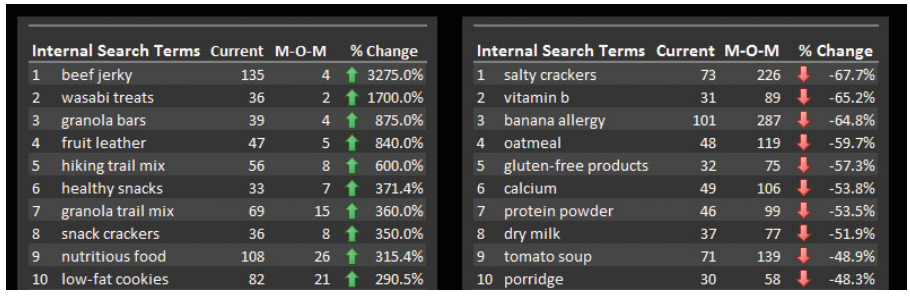
Another simple technique is to compare results against a target (attainment of a goal) or benchmark (internal or industry). Once you've identified which items are underperforming and over-performing against a target, you can then start contrasting what makes one item more or less successful than another.

PERCENT CHANGE OVER TIME

For a specific time period (week over week, month over month) you can compare values for two equivalent time ranges to see the percent change (positive, negative, or neutral). You'll want to ensure the earlier range is in the first column followed by the most recent so that your percent change figures have the right signs. Frequently the most popular, high-volume items in reports don't change dramatically from week to week or month to month. For example, your top ten

web pages or keywords probably haven't changed very much at all throughout the past six months to a year.

As a result, you want to look beyond the "head" into the "long tail" to isolate the items that have experienced significant changes during a specific time period. Focusing on items with sufficient volume, take the top 500 to 1,000 items and calculate the percent change over the time period you're evaluating. Rank the percent changes in terms of biggest percent increases and decreases. Finally, create new tables for both biggest increasers and decreasers, which will give you better insights into the trends occurring below the surface of your top results (**Figure 5.4**).



	Internal Search Terms	Current	M-O-M	% Change
1	beef jerky	135	4	3275.0%
2	wasabi treats	36	2	1700.0%
3	granola bars	39	4	875.0%
4	fruit leather	47	5	840.0%
5	hiking trail mix	56	8	600.0%
6	healthy snacks	33	7	371.4%
7	granola trail mix	69	15	360.0%
8	snack crackers	36	8	350.0%
9	nutritious food	108	26	315.4%
10	low-fat cookies	82	21	290.5%

	Internal Search Terms	Current	M-O-M	% Change
1	salty crackers	73	226	-67.7%
2	vitamin b	31	89	-65.2%
3	banana allergy	101	287	-64.8%
4	oatmeal	48	119	-59.7%
5	gluten-free products	32	75	-57.3%
6	calcium	49	106	-53.8%
7	protein powder	46	99	-53.5%
8	dry milk	37	77	-51.9%
9	tomato soup	71	139	-48.9%
10	porridge	30	58	-48.3%

FIGURE 5.4 By isolating the biggest percent changes (positive and negative) for the top 500 internal search terms, you can spot potential shifts that can translate into opportunities.

CONDITIONAL FORMATTING

Just because you're analyzing tabular data doesn't mean you can't cheat a little with some visual cues to highlight what's important in your Excel worksheet. You are probably using conditional formatting in your reports and dashboards; however, this Excel feature can be very valuable in your exploratory analysis as well. Whether you use data bars, color scales, or icons to highlight differences in your data table, you'll be able to more efficiently scan multiple values and pinpoint potential nuggets hidden within rows and rows of data.

PIVOT TABLE REPORTS

Less of a technique and more of an Excel-based tool, pivot table reports enable web analysts to quickly summarize and analyze vast amounts of data in a flexible, drag-and-drop approach. The dynamic capabilities of pivot table reports make them a very powerful tool when you're exploring your online data looking for opportunities.

Your detective work is just getting started with the numerical data and basic comparisons. At some point you will exhaust the limited options for finding analysis opportunities within data tables, and you'll need to shift to a more potent form of exploratory data analysis.

Techniques for Analyzing Data Visually

Analyzing and interpreting complex data sets and the relationships between various variables can be difficult without data visualizations. For instance, variations, patterns, and trends are nearly impossible to spot just using numerical data in tables. As Tukey stated, "The greatest value of a picture is when it forces us to notice what we never expected to see." This is especially true in the exploratory analysis phase, and you can rely on a number of data charts and graphical approaches to help you recognize optimization opportunities.

TIME SERIES (TREND ANALYSIS)

Many web analytics reports are time-based, showing the value of a particular metric across specific, uniform time periods. A time series is usually plotted as a line or vertical bar chart. Trending a KPI over time enables you to appreciate the patterns (cyclical changes), trends (increasing, decreasing), and variations (spikes, dips) within the data. When looking over a trend analysis, consider

- **Outliers.** Extreme observations in the data are typically associated with one-time events (new product launches, major announcements, tagging errors, and so on). While these extraordinary values will need to be explained, you also need to decide if they should be factored into your trend analysis or removed.
- **Time intervals.** Depending on the length of time displayed (30 days, 12 months) and interval chosen (daily, weekly, monthly), spotting trends may be more difficult. For example, for a graph showing the last 12 months, you might want to use weekly intervals instead of daily intervals to smooth out the data and make it easier to see the overall trend.
- **Moving averages.** Another approach to smoothing the data is to calculate a moving average (7- or 28-day), where you take the average of the last 7 days, for example, and graph it on the same chart. It helps to smooth out the fluctuations to isolate overall trends. There are several different types of moving averages (exponential, centered, weighted), but start with a simple moving average and then experiment with others as needed.

TIP To perform statistical analysis in Excel, you need to install the Data Analysis Toolpak, which is a free add-in provided by Microsoft. If you don't already have it installed, you're missing out on several great features for descriptive statistics, hypothesis testing, regression, correlation, and time-series forecasting.

- **Control limits.** Using some basic statistics (mean, standard deviation), you can add three lines to your time-series chart: UCL (upper control limit), LCL (lower control limit), and mean. For web analytics, the control limits are typically 1.5 to 3 standard deviations below and above the mean. Control charts help you to spot when fluctuations in the data are significantly out of the ordinary and need to be evaluated in more detail (**Figure 5.5**).

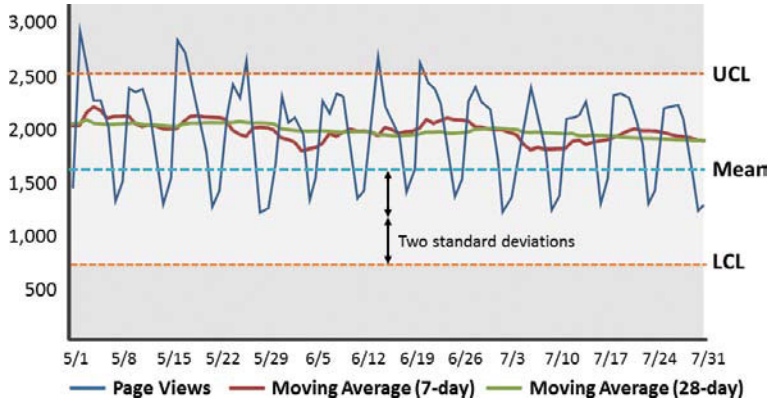


FIGURE 5.5 In this time-series chart, the control limits help to show what is out of the ordinary that should be investigated. The two moving averages also smooth the data and isolate specific trends.

- **Time overlays.** Seasonality and days of the week (weekends versus week days) can mess with your trend analysis. Overlaying data for the previous 7 days (week), 28 days (month), or 365 days (year) can help to show how your data is trending against a relevant time period (**Figure 5.6**). Just be cautious with time overlays because variations in the past (large campaigns, website performance issues) can come back to affect future comparisons.

FIGURE 5.6 In this chart, time overlays (prior 4 weeks and 52 weeks) provide more context for how the selected month (blue) is performing.

- **Metric overlays.** Sometimes it can be helpful to compare over time the trends of two related KPIs (conversion rate and total visits), which don't share the same scale. In Excel, you can create a chart with two y-axes (different units or scale) so that you can observe the combined trend of the two metrics over the same time period. Some web analytics tools also offer a normalized view of different metrics so you don't necessarily need two y-axes.
- **Segment overlays.** You've looked at the overall trend but nothing has caught your attention. It might be time to break down the trends by different relevant segments. For example, you might graph the conversion rates for various browsers (Firefox, Chrome, IE) to get a specific insight into a particular segment of your visitors.

DEVIATION COLUMN CHARTS

Whenever you're comparing values against some kind of standard (average, internal benchmark, target), it can be helpful to clearly see the positive and negative deviances from the standard. Using a vertical bar chart, you can show the percentage difference from the average time spent on site across multiple site sections (**Figure 5.7**).

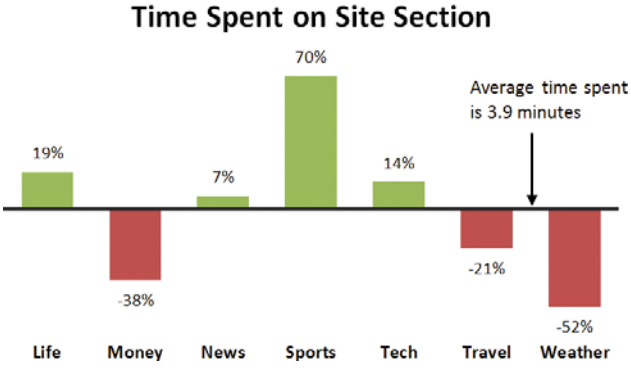


FIGURE 5.7 The deviation column chart for time spent on site sections shows at a glance which site sections are above and below the average time spent per section.

SCATTER PLOT CHARTS

Frequently, you want to compare the relationship between two paired sets of KPI values for particular items (articles, products, channels, campaigns, or segments). You want to understand if there's a positive or negative correlation, and the strength of the relationship. Typically, the independent variable (potential cause) goes on the horizontal x-axis, and the dependent variable (potential effect) goes on the vertical y-axis. If you're evaluating different products, for example, product views would be the independent variable and revenue would be the dependent variable. When analyzing your scatter plot consider the following:

NOTE We've all heard it: "Correlation does not imply causation." Too often detractors dismiss correlations with this statement. True, web analysts must guard against assuming a strong correlation is causation. One variable could be causing the other or vice versa, but in some cases a third variable may be causing the effect. In the ice cream-shark fallacy, ice cream sales and shark attacks are strongly correlated, but warm weather is actually the cause. As Edward Tufte stated, "Correlation is not causation, but it sure is a hint." Don't back away from strongly correlated data; either find the third variable or stick to your guns on the relationship if you've done your due diligence.

- **Trend line.** Using linear regression, you can place a trend line on the chart to represent the best statistical fit (linear, exponential, logarithmic) or relationship between the two metrics. The trend line helps you to better understand both the direction and strength of the relationship. If the data points band together from the bottom left to upper right, then you have a positive correlation (top left to bottom right for negative). If the data points are close to the trend line, then you have a strong relationship (weak if an indiscernible cloud of values).
- **Averages.** By adding average lines for each metric, you essentially have cross-hairs that reveal the concentration of values around the averages as well as highlight extreme values.
- **Targets.** You could also add target or goal lines to your scatter plot graphs to show the distance between results and targets.
- **Quadrant analysis.** You can use scatter plots to create custom two-by-two matrices where each of the quadrants represents a different type of opportunity. For example, using a matrix for products with two metrics (product views and conversion rate), you could identify whether you have any high-converting products with low product views, which could benefit from being featured more prominently on your website (highlighted in red in **Figure 5.8**).

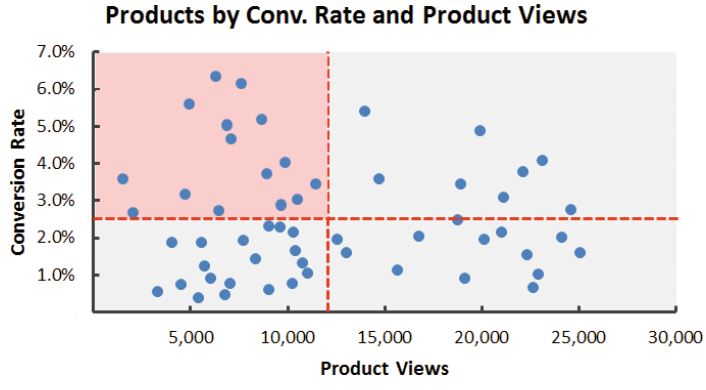


FIGURE 5.8 A scatter plot can be divided into quadrants to isolate different types of behavior and types of opportunity.

BUBBLE CHARTS

When you have three relevant metrics or variables, turn to a bubble chart to show the relationship between them. You have the same x- and y-axes of the scatter plot combined with the third factor, which controls the size of the bubble. For example, you could create a bubble chart for your marketing campaigns, incorporating click-through rate, conversion rate, and total impressions (**Figure 5.9**).

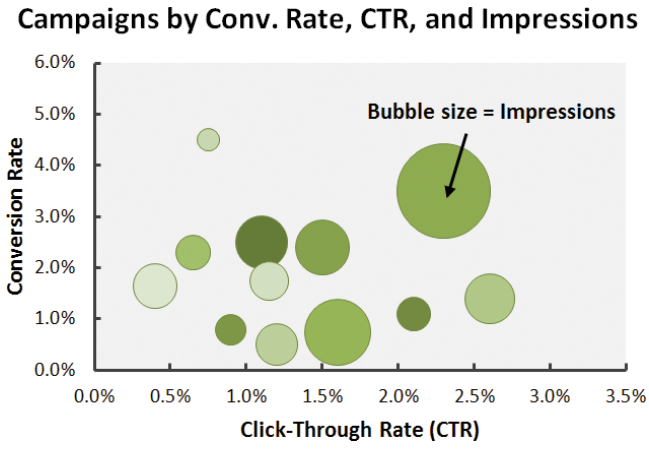


FIGURE 5.9 The bubble chart is one of the few charts that can show three variables at one time.

MATRIX VIEW

While you can't plot multiple variables on a scatter plot graph, nothing is stopping you from viewing and comparing multiple scatter plots at the same time. When comparing multiple related data sets and multiple independent variables (keeping the dependent variable the same), you can more easily spot opportunities when comparing graphs—opportunities you wouldn't have seen looking at each graph individually (**Figure 5.10**).[3] Use no more than a three-by-three matrix, however, as you'll start to be overwhelmed if you go beyond nine graphs at one time.

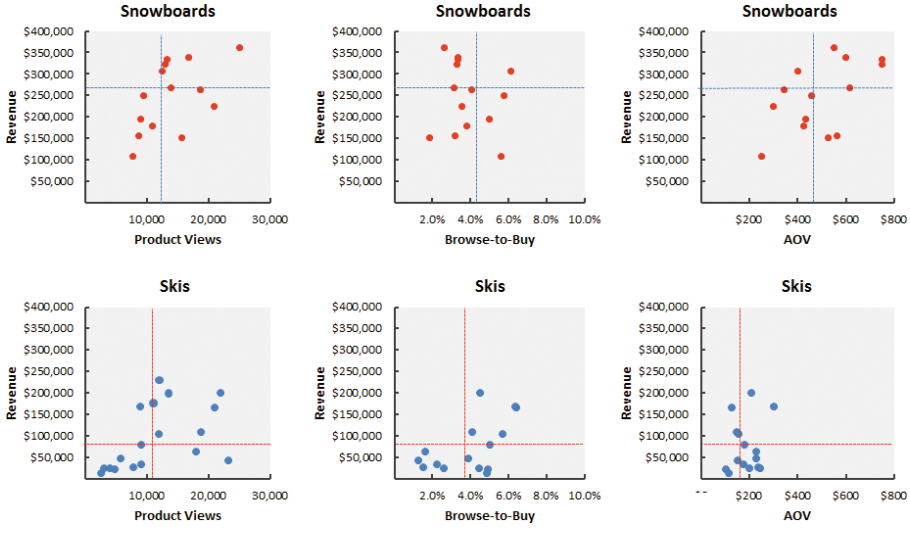


FIGURE 5.10 Viewing multiple scatter plots in a matrix allows you to observe and compare multiple independent variables at the same time.

NOTE The chart options in this chapter are some of the common weapons of choice for action heroes. Other chart types, such as histograms, box plots, and so on, can be useful, but in more limited cases. The key point is to choose the right tool for what you're trying to visualize. For more suggestions on chart types and their uses, see http://extremepresentation.typepad.com/files/choosing-a-good-chart-09.pdf.

No Strategic Stone Left Unturned

NOTE If the focus of your exploratory analysis was very narrow or limited by time, you may not have found anything. If so, you need to make a judgment call: Do you continue exploring the current business question or move on to the next one that might be more fruitful (with a different hit list)? In my experience, however, analysts almost always find at least one opportunity to dig into more deeply.

During the exploratory phase of your analysis, you kicked and turned over a lot of rocks. Going through your hit list, which probably expanded during your data explorations, you discovered some interesting opportunities that need further investigation. Now you need to form a hypothesis statement around each potential opportunity. For example, based on your observations, you propose: "When visitors search by specific product colors they are not finding what they are looking for." You don't know at this stage what you'll uncover beyond your surface-level observations, but write down your hypotheses to keep your deep-dive analysis focused.

If you thought the exploratory analysis was interesting, just wait until we get into the deep-dive phase where the heavy-duty analysis happens.

Obtain Deeper Insights

"He who would search for pearls must dive below."

– John Dryden

Like Sherlock Holmes you combed through the crime scene looking for clues as to what happened to your online marketing campaigns and why they suddenly imploded. During your investigation, you discovered some interesting and unusual details that lead you to believe you know who the guilty party is; however, you still need to confirm your suspicions. Now your curiosity, intellect, and creativity shift into full gear as you commence your deep-dive hunt for the missing evidence. Whereas before you were taking an inductive approach in the exploratory phase, you're now going to follow an abductive approach as you seek to connect the identified effects back to probable causes. Through a process of elimination, your deep-dive analysis will drill into what lies below the surface of each opportunity and determine if you've truly found a meaningful insight.

TIP The German philosopher Arthur Schopenhauer stated, "The alchemists in their search for gold discovered many other things of greater value." The same thing can happen during your analysis. You may actually stumble across something that's unrelated to but more important than what you're currently analyzing. Make sure to keep a record of all of your notable off-topic discoveries for possible future analysis. Be flexible if you feel you need to take an emergency detour.

While many of the same techniques used in the exploratory phase also come in handy during the deep-dive phase, the emphasis switches from *what* happened to *why* did it happen. You're trying to explain and interpret the effects as well as isolate the probable causes. All of the exploratory analysis you performed earlier helps you to connect the dots in the deep-dive phase and bring together various insights into a cohesive picture. Each opportunity for deep-dive analysis is unique and different, and you can investigate an opportunity in a variety of ways. This level of analysis becomes a blend of both art and science, so try to avoid being too rigid or inflexible in your analysis approach. On the other hand, you can spend hours and hours performing deep-dive analysis with little to show for your efforts if you're not careful. Therefore, you still need to be strategic and systematic in your deep-dive approach. Fishbone diagrams and the Five Whys method are two

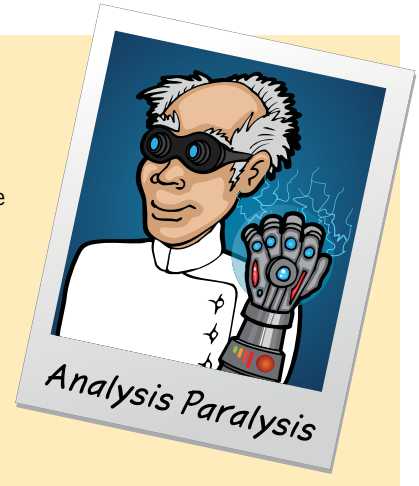
valuable root-cause analysis techniques that can help you to be more efficient and effective in your deep-dive analysis.

Using Fishbone Diagrams to Find Causes

During the deep-dive phase, your analysis can go in literally any direction. If you feel as though there could be several potential causes, you should first brainstorm and build a game plan for your analysis rather than diving immediately into whatever is top-of-mind. If you skip the brainstorming step, you could end up spending a great deal of time fixated on one area and not leave enough time to explore other areas on the fringes of your radar. Trial and error can be very time-consuming, and it is not a good use of an action hero's energies. Invented by Japanese professor Kaoru Ishikawa, Fishbone diagrams are an excellent tool for brainstorming and mapping cause-and-effect relationships.[4]

To use the Fishbone technique, start by defining a specific problem or opportunity and then brainstorming its potential causes. **Table 5.2** encapsulates some of the main categories that can yield potential causes of problems. (You can apply the same categories for identifying sources of opportunities as well.) Use these Fishbone categories in your brainstorming process, but don't feel as though you

VILLAIN PROFILE: ANALYSIS PARALYSIS



Background

He immobilizes his victims with an overwhelming amount of data, multiple analysis options, and conflicting data. He leaves them stuck in a rut unable to find meaningful insights, make coherent decisions, or take action.

Tips to Defeat

- Step away from the problem, and then hit it with a fresh outlook.
- Share your progress with a colleague, and brainstorm new ideas.
- Revisit the main business question to refocus efforts.
- Go back to basics, and try a simpler approach.
- Focus on one primary metric instead of multiple ones at the same time.
- List your best options, and systematically attack them.
- Establish a deadline, and be brutally honest with yourself about your progress and momentum.

need to represent each one in every Fishbone diagram you create. The categories aren't intended to confine or restrict your brainstorming, but only to provide a bit of structure and inspiration. You might want to avoid using the categories upfront if they end up limiting your ideas; instead, review them afterward to see if you missed anything obvious.

TABLE 5.2 Web Analytics Fishbone Categories

CATEGORY	DESCRIPTION
Content	Online content (campaign, website, app) can create problems if it is incomplete, poor quality, broken, off-target, and so on.
External Environment	Shifts in industry, market, consumer, social, and public policy trends can generate problems for companies and their online initiatives.
Measurement	The quality and completeness of the implementation, tool configuration (expiration and attribution settings, filters, and so on), and timeliness can cause problems.
People	Individuals and teams can create issues when they are inexperienced, inadequately staffed, poorly trained, demoralized, or mismatched for the responsibilities.
Process	Marketing, IT, business, or web analytics processes may be generating inefficiencies if they are missing, poorly designed, or too rigid.
Strategy	Ill-defined, misaligned, inadequate, or poorly executed online strategies can create issues for various parts of the business.
Technology	Technical problems can be caused by performance and incapability issues in a company's online infrastructure (content management systems, email marketing systems, e-commerce platforms, and so on) and other related internal systems.

After you've identified four to six primary causes, you're ready to build a Fishbone diagram, which looks like a fish skeleton and features each cause assigned to its own part of the spine. You then focus on each primary cause in turn and brainstorm secondary causes (bonelets) for it (**Figure 5.11**). At this stage, seek out additional context around the potential causes you've identified. Checking in with the business team at this point may fuel additional ideas around relevant primary or secondary causes you hadn't considered. Because you have exploratory data only at this stage, you want to tactfully focus your conversations on contextual factors, not on premature data interpretation. A completed Fishbone diagram provides an effective roadmap to guide you in the deep-dive analysis phase. Just like the hit list wasn't static, your Fishbone diagram can evolve as your brain synapses start firing and revealing new ideas.

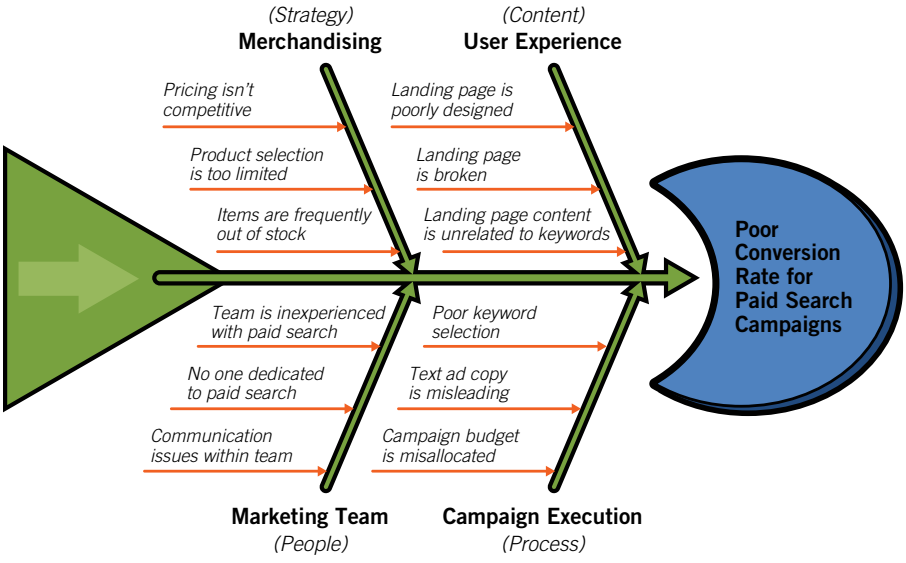


FIGURE 5.11 A Fishbone diagram can help to organize your brainstorming process for your deep-dive analysis.

Drilling Deeper with the Five Whys Method

As you drill into the data to find root causes, another Japanese root-cause analysis technique might be helpful. The Five Whys method is a problem-solving approach developed by Sakichi Toyoda of the Toyota Motor Corporation.[5] With this method you ask a succession of five why questions in order to dig into the root cause of a problem. While a Fishbone diagram provides a helpful mind map of the potential causes for a particular problem or opportunity, the Five Whys approach complements it by drilling deeper into specific areas of the Fishbone diagram. One danger of the deep-dive phase is to end your analysis prematurely and attempt to treat symptoms, which can lead to bad business decisions. As you leverage the Five Whys method in your deep-dive analysis, you'll use different reports, analysis techniques, and context to explore each subsequent why question and isolate the root causes.

Imagine you've been tasked with analyzing the online marketing campaigns for a bicycle e-commerce site. As you dig into the multi-channel campaign data, you notice the following:

- Even though sales revenue is similar to last year, paid search's conversion rate has dipped below the year-over-year average. *Why?*
- The overall conversion rate for the Google Adwords campaigns has fallen while other paid search options appear to be performing slightly better. *Why?*

- Specifically, the high-volume mountain bike ad campaign appears to have been floundering for the past month compared to your road bike and other major campaigns. *Why?*
- Within the mountain bike category, keywords related to your two most popular brands (Cannondale and Specialized) are converting extremely poorly. *Why?*
- The keywords for these two brands are being directed to the homepage instead of a dedicated landing page like the other campaigns. The homepage is currently featuring Cervelo road bikes, which doesn't match the mountain bike keywords. *Why*? (You might stop here because you have something you can fix, but you decide to keep digging.)
- It looks as though the marketing intern who was helping to manage the mountain bike keywords on Google Adwords decided to drop visitors on the homepage because it was featuring a sale on Cannondale and Specialized mountain bikes. At the end of his internship he forgot to mention this setup, and the homepage subsequently changed to featuring other unrelated merchandise. D'oh. It looks as though some process improvements are needed to prevent this from happening again in the future.

You're not always going to have to drill five whys down during your analysis, and you might even have opportunities to keep drilling deeper. View the five as a guideline and not a rule; the goal is find the root causes and continue following the trail until you can't drill any farther or the scent goes cold. Between the Fishbone, Five Whys, and other root-cause analysis approaches (cause maps, logic trees, and so on), you may identify a few different root causes. Throughout the deep-dive phase, be mindful of the principle of parsimony or Ockham's Razor in which "the simplest explanation that fits all of the data is the most likely (and therefore the best) explanation."[6] The key will be to zero in on the root cause that is the simplest of the bunch.

As you venture into the deep-dive analysis, you're still using a lot of the same data that you used in the exploratory phase. Now you're examining the data more closely and drilling into specific data points and dimensions within the reports. You're also looking for connections between various data points and patterns that will better explain what's happening. In many ways, it's still all about making comparisons, but the analysis process becomes increasingly iterative. In the deep-dive analysis phase, two key techniques play a larger role in your analysis: segmentation and user experience checks.

Divide and Conquer Your Data Through Segmentation

> **"Segmentation is God's gift to analysis."**
>
> **– Avinash Kaushik**

Playing a key role in most deep-dive analyses, segmentation is the technique of breaking down your aggregate online data into subsets to gain deeper insights. In the exploratory phase, you may have dabbled with simple segmented views of reports (browser type, return visitors, purchasers, geography, and so on), but once you enter into the deep-dive phase, you can, and should, use the advanced segmentation features of your analytics tool to slice and dice your data in all kinds of illuminating ways. What doesn't jump out at you in the aggregate level will suddenly reach up and slap you in the face if you have the right filter or segment in place. You'll like this type of slap because it gets your attention and opens up more opportunities for exploration.

Segmentation has one major benefit, as well as one significant drawback. Its main benefit is that you have infinite possibilities in terms of how you can segment your data. Although a basic report may shed some light on important conversion behaviors, applying a segmented view to the same report can suddenly transform interesting information into actionable insights. For example, knowing which products are most popular is helpful; however, knowing which products are being purchased by repeat customers can fuel a successful loyalty marketing campaign. The main drawback of segmentation is also *that you have infinite possibilities in terms of how you segment your data*. Where do you start when you have limitless options? By better understanding your key segmentation choices.

TWO MAIN TYPES OF SEGMENTS

Traditional consumer marketing focuses on four main types of customer segmentation: geographic, demographic, psychographic, and behavioral. By comparison, web analytics data has only geographic (IP-based) and behavioral data. Demographic data is primarily available if it's captured through a registration process, and psychographic data is collected mostly through online surveys, which may not be integrated with your web analytics tool. As a result in web analytics, segments are typically based on the *attributes* and *behaviors* of the visitors (**Figure 5.12**). A visitor's attributes are immediately captured when the visitor enters a website, and they don't change during a session or visit unless the visitor leaves and re-enters the site. Once visitors are on your website, you can capture their behavioral data and use it to segment users by their actions.

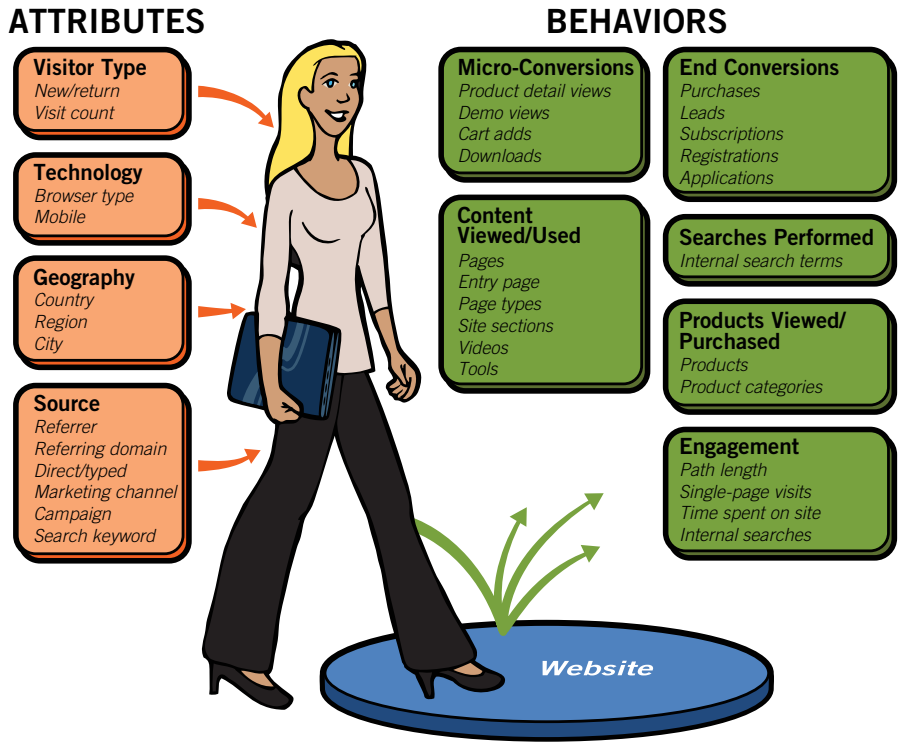


FIGURE 5.12 You can segment visitors by their attributes and behaviors.

You may be wondering which type of segment you should use. The standard business school answer comes into play: "It depends." Your analysis can start from either the attribute or behavioral perspective, but segmentation is not about haphazardly guessing which segments or profiles might be interesting. Instead you rely on your business knowledge (context!), exploratory findings, and Fishbone diagram to guide you through the segment analysis process. Depending on what you're analyzing, you should isolate which attributes and behaviors are most relevant to your focus and cross off the ones that aren't. One key difference between the attribute and behavioral factors is that every visitor will have at least one value for each of the attribute categories (visitor type, technology, geography, and source). In some cases, however, only a small number of your visitors will exhibit a particular behavior (1.5% purchase), making a particular behavioral segment difficult to analyze due to limited data.

SEGMENTATION TIPS

Segment analysis is an iterative process, in which you continually tweak and refine your segments on the fly until you either hit a brick wall or unlock a passageway to great insights. Follow your instincts when you're performing your segmentation. If you run out of ideas, try these four segment combinations:

- **Rock star/loser.** Build a profile of your ideal visitors or most profitable customers as well as another profile of your most costly or poorest performing visitors. Segment and understand where these two polar extremes are coming from and what they're doing differently.
- **Minority/majority.** In some cases, you'll have a large proportion of your visitors who exhibit certain key attributes or behaviors in your reports (85% search traffic). Instead of focusing on the masses, look at what the rest of your visitors are doing.
- **Below/above average.** Your understanding of your site averages (average order value, average page views per visit) can point you to a couple of interesting segments: those that perform below or above your site averages.
- **Before/after.** If a significant event or change occurred, you may want to create time-based segments for before and after the incident. Some web analytics tools even allow you to compare time-based segments side by side.

As you navigate through your segmentation analysis, here are some additional tips for a smoother journey:

- Determine upfront whether you're interested in a single-visit segment or a multi-visit "visitor" segment. Without this crucial distinction you may misinterpret what your segment data is telling you. For example, evaluating a purchasers segment for the specific visit in which they purchase will be different than looking at a series of visits where they might have purchased at some point. Both segmentation scenarios provide interesting insights, but the underlying data will be very different, which can affect your interpretation.
- After you exhaust all of the single-factor segmentation options, combine different attribute and behavioral factors to create more complex segments. The key to success at this stage is a good grasp of the differences between the Boolean operators: OR, AND, and NOT. Each web analytics tool has its own nuances, so I encourage you invest time in learning your tool's. As you can see in **Figure 5.13**, each operator creates a very different type of segment, especially when you leverage more than two factors.

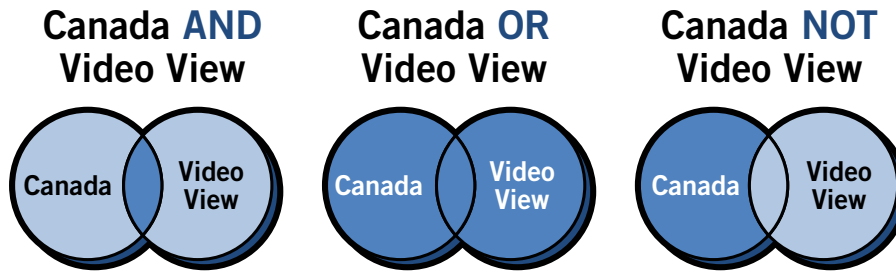


FIGURE 5.13 In the case of these two dimensions, you can see how the three Boolean operators change the entire segment.

- Whenever you alter a segment, make sure you save it with a new name and version. You may go down a particular path and then realize you may need to backtrack three versions and take a different fork in your analysis path.
- Having good contextual knowledge can be an invaluable guide as you build and rebuild different segments. Knowing that your company had a large marketing campaign running during the timeframe of your analysis might be a crucial clue to explaining any anomalies that you discover on the site. As a result, you might look at creating campaign and non-campaign segments to explore potential differences.
- Use segmentation to remove noise in your data. One retailer was receiving a lot of suspected bot traffic to its site, which was lowering its conversion rate and masking the real behaviors of its customers. By segmenting out the telltale behaviors of suspected bot traffic, the company's analysts were able to get a clearer picture of how the website features and marketing campaigns were actually performing.
- In terms of traditional marketing, market segments need to be measurable, meaningful, unique, actionable, substantial, and sustainable. With web analytics–based segments you can meet most of these criteria, but you need to be sure that you don't whittle down your segment so much that it represents a very small portion of your total population. You also need to be careful that a segment doesn't become so obscure or convoluted that your company wouldn't know how to act on the data. Don't waste your time with unactionable segments that are disconnected from the meaningful activities at your company.
- Document which segments were used for each insight and conclusion so that you can easily reproduce the results if needed for further analysis. Nothing can be more time-consuming and frustrating than trying to determine which specific segment was the basis of your analysis findings.

Segmentation is a powerful tool in your analysis arsenal. As with the rest of the deep-dive analysis phase, you need to be conscious of how much time you're spending on a particular segment or area of analysis. Sometimes during your analysis, the best thing you can do is step away from it for a moment. Subconsciously your brain continues to process the information you're analyzing and the problem you're trying to solve. Some of the best breakthroughs I've had have come while I'm driving, taking a snack break, or showering the next morning. Sometimes there's just nothing in the data despite what we feel should be there. As C.S. Lewis stated, "We all want progress, but if you're on the wrong road, progress means doing an about-turn and walking back to the right road; in that case, the man who turns back soonest is the most progressive." An action hero is finely attuned to his capabilities, pain thresholds, and when something just isn't working. Turning back and trying something different is a mark of determination, not of defeat.

Experience It Firsthand

"Nothing ever becomes real till it is experienced."

– John Keats

You've been staring at the data for the past few hours. You've tried various means of torturing the truth out of it, but it continues to stare blankly back at you, its false innocence seemingly insulting your very intelligence and skills as an analyst. One of the magical things about analysis in the world of web analytics is that nine times out of ten you can actually experience firsthand what you're analyzing. In most other fields, analysts don't have that same luxury. Even with this advantage, web analysts can get so focused on the data they often forget to experience the problem or opportunity for themselves. If there's a problem with your registration process, go to the website and register. If there's a problem with your checkout process, get a test credit card number and try it out for yourself. Putting yourself in your customers' or visitors' shoes can provide invaluable context and can be far more productive than having a staring contest with your data to see who'll blink first.

My friend Joel Wright shared an experience at a previous employer where he was pulled into an urgent meeting when the marketing team was reviewing what went wrong with a major campaign that had launched two days earlier. He didn't have any specific responsibilities during the meeting, so as the marketing team formed its action plan, Joel decided to visit the campaign landing page. The campaign offered a series of daily deals and when people clicked on the call-to-action button, they were supposed to be presented with a calendar of deals. Joel found, however, that when the pop-up window opened, it wasn't sized properly and none of the rich promotional content was visible in the window. He quickly jumped into his web analytics tool and found that more than half the visitors never progressed past the pop-up window page. He interrupted the meeting and shared his insight on the pop-up window problem. A marketing VP who happened to be in the

room requested an immediate fix. While the data-driven marketing team was dutifully focused on the big picture number (online sales), only Joel thought to check the user experience.

Sherlock Holmes was not only known as a skilled analytical thinker but also as a master of disguise. He concealed his identity several times to trail suspects and elude enemies, but mainly to obtain more insights. As you're performing your deep-dive analysis, you'll want to conduct a user experience check as if you were a visitor or customer on your website. Obviously you won't always be analyzing things that make sense to inspect online (or have changed since the timeframe of your analysis), but more often than not it will be a very useful approach for identifying problems. Some problems—broken images, broken links, missing buttons, 404 error pages, and even undersized pop-up windows—are clear user experience problems. Beyond these obvious issues, however, lies a category of more subtle problems that can interfere with the effectiveness of a web page or mobile app and take more investigating to track down. Because it's difficult to remain objective when evaluating online content, you should concentrate on the less subjective, more pragmatic rules of thumb when you're exploring various user experiences. Although I'm by no means a usability or design expert, I've seen the following five web design heuristics violated repeatedly:

- **Above the fold.** Usability expert Jakob Nielsen notes that web users spend 80% of their time viewing information "above the fold," which is the part of the page that can be seen without scrolling.[7] In many cases, key call-to-action messaging and buttons ("Sign Up Now") can fall below the fold and out of the view of most visitors, reducing the page's effectiveness. To figure out what your visitors are actually seeing, determine the average monitor resolution of your visitors and use a monitor resolution simulator to experience their experience. Important calls to action may fall just below the fold.
- **First impressions matter.** People are extremely fickle when it comes to web content. A study conducted by Microsoft Research found that you have less than ten seconds to convince visitors to stick around.[8] You will lose more visitors if a web page is poorly designed, takes a long time to load, or appears outdated, or if the content is confusing. When you're looking at pages with high bounce rates (or exit rates), put on your customer hat and try to evaluate the first impression you have based on the associated keywords or referrals (check out the external referring page to see how the page is being positioned).

- **Keep it simple.** When a web page is packed with too many options, too much text, or unnecessary images, visitors can have a hard time seeing through the noise and become distracted. A minimalist approach ensures your key message is prominently displayed and the next steps are obvious. When you encounter a busy page, you can analyze path behaviors to better understand the confusion that your visitors are experiencing.
- **Clear navigation.** Frequently online experiences involve multi-page processes, such as e-commerce checkout or credit card applications, in which visitors are expected to proceed from one page to the next. If the navigation or flow is unclear, inconsistent, unconventional, or overly complex, visitors won't know how to proceed in the process. Poor placement and naming of navigation options can wreak havoc on your conversion rates.
- **Communicate trustworthiness.** At a certain stage in an online process, visitors may be required to provide personal or financial information. Wherever visitors might show some hesitation (registration process), the web page needs to convey trust and reassure the visitors that their privacy will be protected. Even sharing just an email address can invoke fears of endless spam and become an unnecessary roadblock to conversion.

Usability is an extremely deep subject with many best practices and principles. In general, I'm a strong believer in usability expert Steve Krug's simple law: *Don't make me think.* Many of the web design problems you'll encounter will violate your common sense, forcing you and, more importantly, your site visitors to think. By blending user experience exploration with your deep-dive analysis, you'll be able to pinpoint specific problems and provide highly actionable insights that can be shared *visually* with executives and marketing teams. Walking your audience through a broken user experience and coupling the problem with its financial impact will speak volumes. Even small changes can lead to big optimization opportunities. For example, a major e-commerce site made a simple change to its checkout process by removing an optional Register button. This minor optimization streamlined the checkout process to the tune of $300 million (45% lift in conversion). One button. $300 million.[9] Small adjustments in key places can make a big difference. The data will point you to where you need to look, but you may need to check it out in person to find the prize.

Inspect Monetary Value

"Money's a horrid thing to follow, but a charming thing to meet."

– Henry James

You've spent hours investigating all kinds of promising opportunities. The good news is all your hard work has paid off and you've found some actionable insights. So what? Even if you only found only one insight, you still need to ask this simple but vital question before you proceed. Does what you found even matter? Congratulate yourself on your mad analysis skills for pulling off the find, but then weigh that nugget to see if it truly measures up.

Monetizing your analysis findings is a critical step in the HEROIC analysis approach and will help you answer the inevitable "So what?" question. It's better that you first ask this question before your internal customers do. When you monetize or quantify your analysis insights, you're essentially attaching an estimated dollar amount to each optimization opportunity that indicates the estimated amount of value it will generate. Monetizing your insights is important for two reasons. First, it puts insights on an equal footing with each other and even with past insights. Without a common standard of comparison, you might play favorites with low-value optimizations and accidentally pass over high-value ones. Second, sharing the anticipated financial impact of a recommendation will spark more interest in your idea than anything else will. Nothing will resonate with your key stakeholders like a specific dollar amount. No web analytics knowledge or expertise is required to understand what saving or making an additional half million dollars means to your business.

Each optimization may require slightly different monetization calculations. Your approach will vary greatly depending on how directly or indirectly the optimization affects revenue or costs. Your calculations will typically be more straightforward if the optimization is related to online activities that have a direct effect on revenue or costs such as online purchases, ad revenue, subscriptions, or marketing costs (**Figure 5.14**). If you're calculating the optimization's impact on indirect areas such as partner referrals, product demo views, customer satisfaction, and Facebook fans, however, you're going to have to invest more effort in quantifying the impact. Just because you're not optimizing an e-commerce site or something that doesn't directly affect revenue doesn't mean you're off the hook.

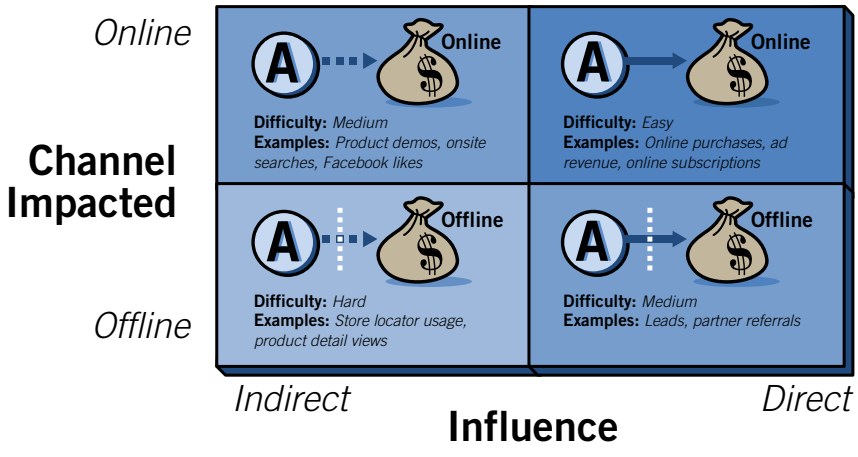


FIGURE 5.14 Depending on the channel that is affected and the directness of the influence, it may be more or less challenging to monetize the potential results of your analysis (A).

The Three Amigos of Monetization

Your monetization strategy will depend on what you've analyzed. I've identified three valuation scenarios that take slightly different approaches in the calculations and also exhibit decreasing levels of confidence. You may run into other kinds of monetization scenarios, but these three approaches should be fairly common across many different situations.

REALLOCATE ASSETS OR RESOURCES

Rather than continuing to give weak-performing assets opportunities to perform, replace them with higher-performing assets that can maximize those same opportunities. For example, the homepage of your travel website may feature different hero ads for various travel destinations. Rather than continuing to give the poor-performing Bermuda page exposure on the homepage, you're going to replace it with the better-performing Costa Rica page (**Figure 5.15**).

	Destination Page	Path Views from Homepage	Revenue Participation Yield	Revenue Participation
Current	Bermuda page	56,500	$0.55	$31,075
Proposed	Costa Rica page	*56,500*	$3.65	$206,225

Estimated Monthly Revenue Increase	$175,150
Estimated Annual Revenue Increase	$2,101,800

FIGURE 5.15 The Bermuda page received 56,500 path views from the homepage last month. Assuming that featuring a Costa Rica hero ad spot would generate an equal amount of traffic from the homepage, its higher revenue participation yield would lead to significantly more revenue.

NORMALIZE AGAINST COMPARABLES

You can estimate the expected return from an optimization by assuming it will achieve the same level of success as other comparable items. After discovering one of your campaign's landing pages is still using an old template, you estimate once the problem is fixed the campaign will convert at the same average rate as other campaigns for similar healthcare services.

	Clicks	Conversion Rate	Leads	Estimated Revenue
Campaign A	5,000	2.36%	118	$944,000
Campaign B	3,500	2.06%	72	$576,000
Campaign C	2,000	2.10%	42	$336,000
	Average	2.17%		
Old Campaign	3,500	0.66%	23	$184,000
Updated Campaign	3,500	2.17%	76	$608,000
			Estimated Monthly Revenue Increase	$424,000
			Estimated Annual Revenue Increase	$5,088,000
			Average Revenue per Lead	*$8,000*

FIGURE 5.16 You use the average conversion rate of similar campaigns (2.17%) to estimate what impact updating the landing page's template will have on this campaign.

In order to show the potential improvement, you assign the updated campaign the average conversion rate for the other similar campaigns (2.17%). In some cases, you might want to use the average of the total population rather than a subset of values. In the **Figure 5.16** example, you know the average revenue per lead is $8,000, which came from your CRM team that captures the final offline sales.

TIP If possible, share your monetization calculations with a co-worker to verify you haven't oversimplified or overcomplicated the valuation of your optimization opportunities. As you explain your logic to someone else, you might not even need the other person's feedback before you realize you still have a gap in your reasoning.

GENERATE AN EXPECTED LIFT

By making a specific change to a website or marketing campaign, you forecast an expected percentage increase in value. The strength of this type of monetization will depend on the supporting evidence for the percentage increase. For example, through your research you might find that adding a guided search feature to self-service sites typically reduces call center volumes by at least 15%. You use this external benchmark in your proposed lift calculations (**Figure 5.17**).

You should always attempt to monetize the value of any optimization. If you don't have the numbers you need, as these examples have shown, someone in another department probably does or you might leverage external benchmarks in your

calculations if no internal numbers exist. The inputs, assumptions, and math might get more creative and interesting (don't forget Ockham's Razor), but regardless of the challenges you need to make the potential impact as concrete as possible. Sometimes you're simply not going to find the exact figure you need, and you'll have to rely on a well-reasoned, defensible estimate (leap-of-value value). That's okay. Be prepared to share, discuss, and defend your calculations. There is typically more than one way of monetizing any analysis insight. Just make sure to *always be conservative in your estimates* as overly optimistic numbers can not only kill your ideas but also hurt your credibility.

Monthly search tool cost	$12,500
Monthly support visits	120,000
Monthly web support calls	45,000
Cost per call	$14
Projected % decrease	15%

Monthly net savings	$82,000
Annual net savings	$984,000
Annual ROI	656%

Monthly net savings = Monthly web support calls
* Cost per call * Projected % decrease - Search tool fees

FIGURE 5.17 Based on your calculations, you estimate that the guided search tool will save about $984,000 per year (656% ROI). A couple of the data points (average cost per call and monthly web support calls) come from your accounting and call center teams.

Choose the Best Options

After all of your detective work and data sleuthing, you need to decide which online optimizations you're going to pursue. If you have multiple options and only a limited time window to present your recommendations, choose wisely and don't get too greedy. Sure, you might have discovered lots of good actionable insights, but you want to do them justice by having the insights properly weighed and considered by your key stakeholders. Packing all of your insights into a single presentation or discussion will end in failure. You need to choose.

"It's easy to make good decisions when there are no bad options."
– Robert Half

Having a dollar value fixed to each opportunity helps you in the decision-making process. Although the monetary value is a key consideration, it is still only one among many. Once you have your options in front of you, the following considerations may help you shape which opportunity becomes your best option:

- As always the action hero is a pragmatist. The highest value opportunity might also be the most costly, controversial, and time-consuming one to implement.

Action heroes would rather knock out several quick-and-easy optimizations in the same time it takes to complete one massive project. If you can get a $50,000 optimization up and running in less than a week and repeat the process several times, you might actually exceed the aggregate value of a larger project that takes months to deploy.

- If all your options are more or less equal, go with the optimization that you're most passionate about. As you'll learn in the next chapter, your enthusiasm and energy for what you analyzed and discovered can pay dividends when you seek to convince decision makers to act on your findings.
- Again, if you have to choose and the options have similar values, also think about which optimization opportunities are most conducive to data storytelling. Some opportunities may be more difficult to explain and build a story around, whereas on others you're already negotiating the movie rights to them.
- The highest value opportunities might not always be the most strategic ones. In other words, a "strategic" opportunity with a lower dollar value might outweigh a more valuable one that is less strategic. Don't fight against the political current within your organization. Go where there's an appetite for your insights and ideas.

NOTE The real deduction occurs after your optimization has been implemented. It essentially becomes the experiment of your analysis hypothesis. You analyze the optimization's results to determine if your hypothesis was correct or not. In other words, did the optimization pay off as expected? Like a good scientist, you want to learn from your experiment so that any meaningful insights can be applied to future analysis projects.

In one sense, web analysts have a fiduciary duty to their organizations to identify and share valuable insights regardless of the repercussions. The goal, however, is not to alienate yourself from the rest of the organization. You need to be adept and shrewd if you want to influence and inspire your organization with data-driven insights. You also need to study the next chapter, which will show you how to translate your findings into tangible actions.

ENDNOTES

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3 Milton, Michael. *Head First Data Analysis.* O'Reilly Media, 2009.

4 http://en.wikipedia.org/wiki/Ishikawa_diagram

5 http://en.wikipedia.org/wiki/5_Whys

6 www.visionlearning.com/library/pop_glossary_term.php?oid=3905&l=

7 www.useit.com/alertbox/scrolling-attention.html

8 www.useit.com/alertbox/page-abandonment-time.html

9 www.uie.com/articles/three_hund_million_button

CHAPTER 6

MOBILIZE FOR SUCCESS

"The value of an idea lies in the using of it."

– Thomas Edison

You've completed your analysis and found some impressive optimization opportunities—now how do you mobilize your company to seize them? The formula for success is simple. To create value as a web analyst, your analysis needs to effect a change. Change requires action. Action is dependent upon your company recognizing that a significant gap exists between the current state and the ideal state. Someone needs to be compelled to act on closing the gap. If your internal teams don't recognize the gap or opportunity, they won't implement any changes. They'll either suspend their decisions or decide to not act.

Consider for a moment that resourceful action hero with the menacing mullet: MacGyver. He knew a certain amount of activation energy, a catalyst, was required to spark timely explosions. A catalyst substance lowers the energy threshold required to ignite a particular reaction. Without a catalyst, chemical reactions take significantly longer to occur or just never happen, which would have left MacGyver in a serious predicament on several occasions.

You can be that special agent of change, *that catalyst for action*. Each business decision has a specific level of resistance that needs to be overcome before triggering any action (**Figure 6.1**). In web analytics, action heroes recognize their success is ultimately defined by the actions and subsequent value they are able to drive. If they can lower the resistance to change, they will be able to

increase the likelihood of action being taken—the precursor to value. No analysis mission is complete until action happens; no mission is successful unless value is created. In this chapter, you'll learn how you can lower the threshold for action based on a more strategic delivery approach, increasing your chances of becoming an action hero to your organization.

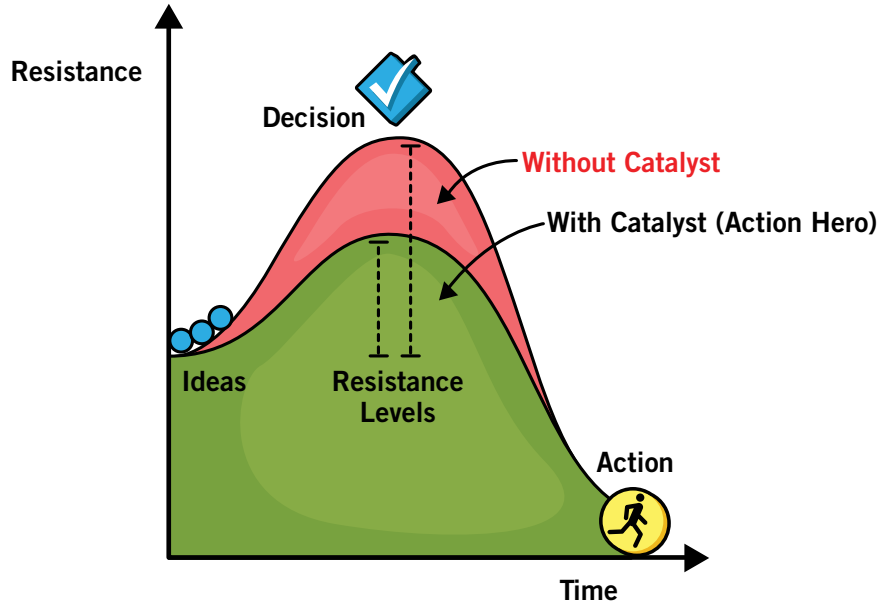


FIGURE 6.1 You can be a catalyst for action by lowering the resistance to change through your delivery approach.

The Action Hero Mind-set

"Action is the foundational key to all success."
– Pablo Picasso

One of the first things you may need to do is adjust your mind-set about analysis and action. If I were to ask web analysts to define success for their role, "providing actionable insights" would be a popular response, but it falls slightly short of the mark. Instead of defining success by *how many analysis recommendations are delivered* to the organization (the number of bullets fired), the action hero mind-set focuses on *how many recommendations are executed and the value those ideas generate* (the number of bullseyes).

As web analysts we talk about conversion funnels all the time. We map out how different activities precede a key conversion, such as a registration, purchase, lead, and so on. We can apply this approach to our own work product (**Figure 6.2**). Just like an online retailer, you don't stop at how many product views occur (reports created), how many products are added to the cart (analyses performed), or how

many visitors make it to the checkout process (presentations delivered). You manage the entire process through to the final purchase (ideas shipped).

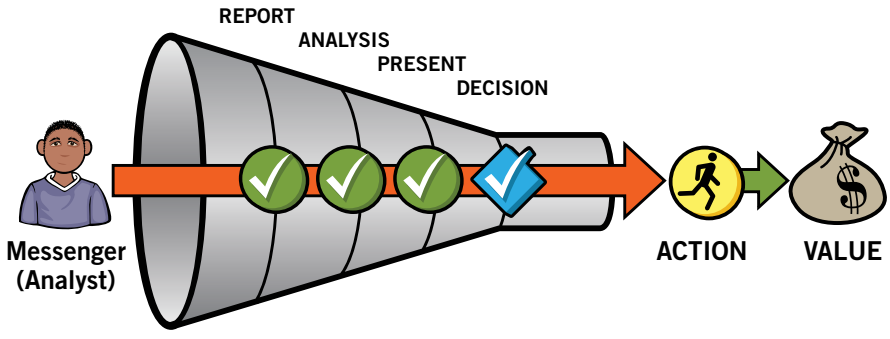


FIGURE 6.2 Follow analysis all the way through every step until it's shipped.

An action hero needs to be the protector or guardian for a proposed idea because nobody else will defend it. Until your recommendation is acted upon (executed, not just presented), all of your incredible analysis work hasn't created a single ounce of value for the organization. And when the idea finally ships, you still need to monitor the revenue it subsequently generates; this ultimately defines your success as an action hero. If you're not already, you need to start operating with this type of mentality. It's critical to becoming an indispensable catalyst of change within your company.

Overcoming Resistance

"Change is the only constant. Hanging on is the only sin."
– Denise McCluggage

As your insights and ideas challenge the status quo and make people uncomfortable, you're going to run into some level of resistance. In fact, often the bigger the opportunity (or fix), the greater the resistance. Companies adapt to change all of the time as they are forced to evolve in response to new challenges or opportunities. Your company may be adapting to its shifting environment, but that doesn't mean individuals and teams within your organization aren't struggling with the change. People inherently want to protect their self-interests. A 2003 research study by Prosci[1] found the top six reasons for manager resistance to change were

- Loss of power and control
- Overload of current tasks, pressures of daily activities, and limited resources
- Lack of skills and experience needed to manage the change effectively
- Fear of job loss
- Disagreement with the new way
- Skepticism about the need for change

When people's jobs, reputations, egos, opinions, responsibilities, resources, budgets, power, and influence are at stake, naturally resistance will occur. The vast majority of the changes you'll be proposing as a web analyst won't be of the career-threatening, life-event variety. Most online optimizations are small bets, which can be course-corrected. Along the way, however, entrenched opinions will be shaken, and emotions will be stirred. The four major resistance points that web analysts commonly encounter are

- I don't get it.
- I don't like it.
- I don't trust it.
- I don't trust you.

NOTE When I refer to how much someone likes something, I'm not referring to superficial preferences or popularity. I'm referring to a deeper form of liking in which the listener could actually hate to hear what you're saying ("all your investments in producing YouTube videos are wasted"), but ultimately appreciate the fact that the company can optimize its approach and move forward in a new and better direction.

All analysis delivery and execution scenarios consist of three main elements: the audience, the message, and the messenger. The *audience* members have experience, knowledge, opinions, and interests that influence how challenging it will be for them to actually get it, like it, and trust you and your data. Liking and trusting the data can often bleed together. People may not like what the data is saying so they question its validity. Or the data may look too good to be true and is likewise questioned. The central purpose of the *message* is to help the audience to get the idea and like it enough to act on it without raising concerns about the data. If done right, the message can also build your credibility. Finally, the *messenger*, or web analyst, must establish relationships and build trust, which may require time and patience.

If you head into an analysis presentation armed only with solid data and a firm belief that sound logic and reason will prevail, you're in for a rude awakening. To increase your odds of winning, you're going to need a strategic plan or approach that will rally the organization around your ideas. Action heroes couple the right mind-set with a complementary approach to drive execution. With your precious cargo (insights) in tow and the launch pad (action) in your line of sight, you can display action heroism at this critical late stage in your mission by following a four-step process (**Figure 6.3**).

Against an action hero, resistance is futile. Action heroes see their missions through to the very end and find a way to come out triumphant. With the final destination of your strategic analysis approach in sight, it's time to finish strong. Think MacGyver, not MacGruber.

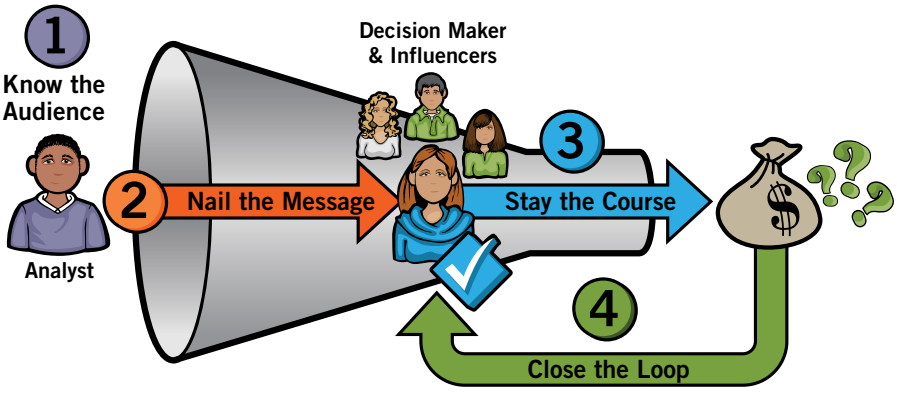


FIGURE 6.3 The four-step process targets resistance throughout the entire analysis adoption process.

Know the Audience

Early in my consulting career, I visited a company that managed several online dating services to discuss their online measurement strategy. During the meetings, one individual stood out as someone who really knew the business. He slipped in late, and I wasn't able to gather anything more than that his first name was Mike. I was glad he was able to join the morning meetings; Mike impressed me with several insightful comments. I had the impression that he was an internal rock star who probably managed some aspects of the online marketing efforts. Wrong. Mike was actually the CEO. As we drove to lunch in his luxury sedan, I tried to recall if I had been too casual or blunt with Mike, the CEO who could fire a careless consultant. That morning I learned a valuable lesson: Always know your audience.

"Never treat your audience as customers, always as partners."

– Jimmy Stewart

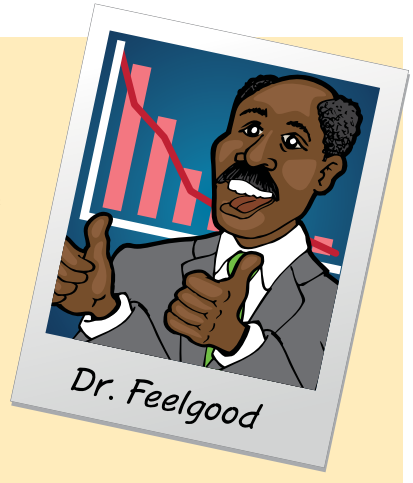
When it comes to presenting your analysis findings and recommendations, success begins with knowing your target audience. First of all, you want to make sure your insights and ideas are being shared with the *right* audience, the people who care about the topic you've analyzed and who have the authority or influence to pull the trigger on your recommendations. Don't make your presentation your first encounter with your audience. During the Prioritize phase as you evaluate your analysis options, meet with team members to learn more about their part of the business and better understand their key business questions.

One of the main challenges when you're presenting externally is accurately determining the motivations, interests, domain knowledge, and expertise of your audience. Within the walls of your own company, you have the advantage of being able to gain more insights into your audience. Even if you don't know everyone who will be joining your meeting, you should be able to obtain intelligence on their positions,

backgrounds, pain points, and so on from other attendees or contacts. As part of that discovery process, you need to determine which members of your audience are the decision makers and influencers for your recommendations. Within the group of influencers, try to determine beforehand who your allies and adversaries will be; being prepared is better than being surprised. Allies can be leveraged, and adversaries need to be pacified. Neither should be ignored. In terms of the four resistance points, knowing your audience helps you in the following ways:

- **Get it.** By knowing your audience's current expertise and understanding of the topic, you'll have a better sense for how much time should be spent on explaining your findings before jumping to your recommendations.
- **Like it.** Determining in advance whether your audience is going to like your message will determine how much effort you'll need to put into selling your recommendations.
- **Trust it.** If your audience is already wary of the data, you'll need to devote time in your presentation to restoring their confidence in the numbers within your analysis.
- **Trust you.** Getting to know, understand, and interact with your audience before presenting any ideas is the first step toward building credibility and trust.

VILLAIN PROFILE: DR. FEELGOOD



Background

Even if the data shows the entire business is heading off a cliff, he encourages everyone to get along and ensures no one has hurt feelings.

Tips to Defeat

- Establish a clear definition of success across the entire organization.
- Educate people on the benefits of learning and improving performance (overcome fear of failing).
- Share success stories of how individuals or teams were able to learn from mistakes and improve.
- Proactively provide unbiased feedback on how different initiatives performed.
- Work with your champion to infuse more accountability for quantitative results.

When it comes to online optimization, a number of key individuals will have a vested interest in your insights and recommendations. Your success is dependent on your ability to understand and persuade these individuals to adopt your ideas. While each company and industry has its own unique set of stakeholders, web analysts interact with five main roles on a frequent basis: executives, marketers, IT professionals, user experience (UX) designers, and product/content owners. As you'll learn in the next few sections, these individuals differ in terms of their interests and motivations, and their perceptions may initially put them for or against your recommendations.

Executives

Regardless of their area of responsibility (marketing, IT, e-commerce), all executives share several common traits. They generally have a lot on their minds at any one moment as they are responsible for achieving various business goals and managing several strategic initiatives. Your insights and ideas may not always align to their top priorities (although if you've prioritized correctly they will). Despite their best efforts, executives can't monitor everything. They don't have time to learn each subject area in great detail, and they mostly want to know how they can help move things forward.

Executives are experts at finding holes in your logic or analysis. They want to be sure you understand the consequences or implications of your analysis and recommendations, especially if they endorse your ideas. They will be privy to more contextual information than you have access to, some of which they may be unable to share for political or confidential reasons. Although most executives welcome data, they also place a high value on the intuition they've developed during their careers. Their buy-in is essential as they control the budget and resources.

- **Support ideas that:** Solve key business problems, identify attractive new opportunities (ROI), sharpen business insights about customers and business performance, enhance reputation, align with intuition, and so on.
- **Resist ideas that:** Reduce political power or influence, hurt personal reputation, conflict with intuition, don't align with priorities, don't generate sufficient ROI, appear to be too risky, aren't well thought out, and so on.

Marketers

Marketers spend most of their time on the day-to-day responsibilities of creating and managing marketing campaigns across various online channels (email, affiliates, paid/natural search, display ads, and so on). They may be heavily focused on optimizing a part of the marketing program and less focused on the bigger picture. They compete with others within their department for a larger share of the same

marketing budget. Marketers feel the pressure to perform as a decent portion of their compensation is tied to hitting various targets.

Marketers, especially data-driven marketers, can provide valuable insights into areas for possible optimization as well as the feasibility of different solutions. Be aware, however, that not all marketers are so enlightened. Some may still rely primarily on their intuition, viewing analysis as a nonessential afterthought and data as possibly threatening (especially if it shows they are underperforming). Using small wins, you can demonstrate how a data-driven approach will make these marketers look good in the long run. You'll need the marketers' buy-in to create and implement the tactics around any changes that will impact their marketing programs.

- **Support ideas that:** Improve marketing effectiveness (ROI), make marketing more efficient, free up bandwidth, sharpen business insights about customers, enhance reputation, align with intuition, and so on.
- **Resist ideas that:** Reduce marketing budgets, shift resources, increase workload, hurt reputation, conflict with intuition, don't align with priorities, introduce change that is difficult or impractical to implement, and so on.

IT Professionals

Frequently changes require assistance from the IT department to implement. The IT team juggles multiple projects and therefore must prioritize their time and resources. If your project receives a relatively low priority, however, the department may seem more a barrier than a help, adding cost and slowing turnaround times. Performing a service role within the business, the team may not always fully appreciate the business value and urgency associated with each project.

IT professionals typically follow rigid processes for planning and execution as well as inflexible policies that can frustrate the faster-moving business groups within the company. They are cautious about leveraging untested technologies or vendors. As the primary architects and implementers of a technical solution, IT professionals need to thoroughly understand the business requirements so that they can build and deliver the right solution.

- **Support ideas that:** Don't require significant effort to implement, leverage existing technologies, fill a gap in the current technology portfolio, have adequate lead time, don't require specific IT resources, don't require ongoing IT support, adhere to the release cycle schedule, and so on.
- **Resist ideas that:** Require significant effort to implement, leverage unfamiliar technologies, introduce redundant technologies, demand a quick turnaround, happen outside of release cycles, require ongoing IT support, raise security or privacy concerns, and so on.

UX Designers

Responsible for creating the online user experience, UX designers are focused on understanding and improving the online interactions of customers. These user-centered designers rely on usability testing, personas, focus groups, and other qualitative methods to better understand online customers and design more effective experiences for them.

Although web analytics data is viewed as complementary to their other data sources, UX designers typically underutilize the quantitative data and view it as inferior to qualitative data. The voice of customer (VOC) data can explain *why* users are behaving a certain way, whereas web analytics data can show only *what* they are doing. The web analytics data can also be intimidating to UX designers who aren't numbers-driven. UX designers have strong opinions about web usability and design, which may not always agree with what the web analytics data is saying. They don't want their creativity and design decisions to be constrained by the data. You need the UX team's buy-in in terms of generating ideas and tests around how to fix user experience problems identified in your analysis.

- **Support ideas that:** Improve user experience, sharpen business insights about customers and their online experiences, align with usability best practices, verify current user insights, support design decisions, streamline design process, and so on.
- **Resist ideas that:** Negatively affect user experience, depart from usability best practices, weaken UX control over user experience, impede creativity and flexibility, complicate the design process, and so on.

Product/Content Owners

Basically, these individuals create and own the content for particular sections of a website or online app. Their actual titles depend on their business specialties: editor or journalist for a media company, product manager or product marketer for a technology firm, category manager or merchandiser for a retailer, brand manager for a consumer goods manufacturer, and so on. Product or content owners want to attract and engage visitors with their online content. A content owner's scope of focus is limited to how well her specific content is performing. You need the content owner's buy-in as changes to site or app content will need to be run through her, and she may need to create or modify content depending on the optimization opportunity.

- **Support ideas that:** Improve content effectiveness (ROI), increase content consumption, free up bandwidth, sharpen business insights about content consumption, enhance reputation, align with instincts, and so on.

- **Resist ideas that:** Require the creation or modification of content, decrease perceived content effectiveness, decrease content consumption, lose resources, increase workload, hurt reputation, conflict with intuition, don't align with priorities, introduce change that is difficult or impractical to implement, and so on.

Beyond these five key roles, you may encounter other critical roles that are particular to your company or industry (advertising sales team in media companies). Don't neglect them as you consider how best to motivate your company to adopt your ideas. Identifying which roles make up your audience is your first step; next you need to understand how they make decisions.

Demystifying Decision Making

In web analytics, a lot of emphasis and importance has been placed on data-driven, fact-based, or rational decision making. At the same time, intuition- or faith-based decision making is frequently looked down upon as inferior and unreliable. Regardless of how hardline your position is on data-driven decision making, you have to acknowledge that intuition is *involuntary*, *automatic*, and *pervasive*.[2] It cannot be switched off and often factors into every individual or group decision. Both logic and intuition are needed and equally important to the decision making process. In fact, they can act as valuable checks and balances to each other. Rational analysis can reveal when your gut feeling is far askew, and intuition can ground your high-flying calculations in relevant past experience.

TIP Watch out for individuals with highly concentrated levels of intuition. Frequently, the more senior the manager, the more likely they'll be accustomed to depending on intuition. In addition, entrepreneurs and managers working in fast-growth companies are also more intuitive by nature. Be prepared for situations where their past experience is ill-suited or irrelevant to new circumstances or situations. Spot potential cognitive biases or simple heuristics that they may use, and challenge their position if you have their trust. Encourage a test of their hypothesis and report back on the results. Keep score of how their intuitive decisions perform (to educate, not embarrass).

Some people have proposed that being *data-informed* is sufficient. I disagree. Being informed doesn't go far enough. Consider the metaphor of the Elephant and its Rider put forth by Chip and Dan Heath in their book, *Switch* (Crown Business, 2010). The Elephant represents our emotional side and the Rider, our rational side: "Perched atop the Elephant, the Rider holds the reins and seems to be the leader. But the Rider's control is precarious because the Rider is so small relative to the Elephant. Anytime the six-ton Elephant and the Rider disagree about which direction to go, the Rider is going to lose."

If the Rider is reduced to being a back-seat driver or an informed passenger, you know who is ultimately going to decide the path. In my view, a data-driven approach needs to respect the strengths of the Elephant (speed, energy, creativity, and relevant experience) and be cautious of its weaknesses (biases, fears, simplistic heuristics, and mismatched experience). In most cases, the Elephant and the Rider want to get to the same destination; they just disagree on the route sometimes. Working together with a data-driven emphasis will ensure the Elephant's intuition receives the proper rigor, scrutiny, and discipline from the Rider in order to safely and efficiently reach the final destination. Essentially, a rational approach can

help to calibrate a decision maker's intuition over time and increase awareness for when gut feelings should and shouldn't be followed, increasing the likelihood of successful outcomes.

The decision-making process is further complicated by other contributing factors that can shape a final decision. Frequently, when a manager decides against following a web analyst's recommendation, the web analyst's reaction will be to immediately blame the manager's faith-based decision making when it may have had nothing to do with the manager's intuition or gut feelings. A six-pack of other influential factors can lead to an unexpected decision (**Figure 6.4**) as you'll learn in the following sections. Understanding how these dynamics can impact the decision-making process will enable you to navigate around potential land mines that could end your mission prematurely.

"Whenever you see a successful business, someone once made a courageous decision."

– Peter Drucker

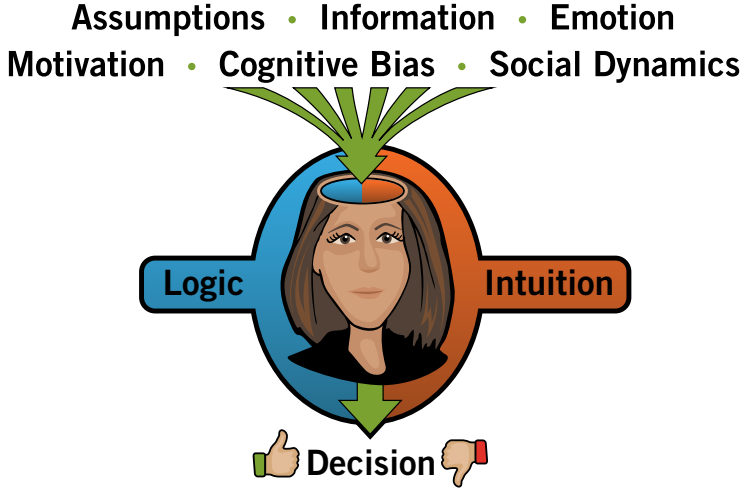


FIGURE 6.4 Multiple factors influence decisions. Both rationality and intuition should be combined to make good decisions.

ASSUMPTIONS

When you don't have all of the necessary information because it is difficult, costly, or impossible to gather, then executives will commonly use assumptions to fill in the blanks when making decisions. Problems occur, however, when assumptions are not clear, shared, agreed upon, or even necessary. For example, a manager may assume that redesigning a particular landing page on short notice will be too difficult or disruptive. Meanwhile you previously confirmed that the small change will be no problem for the web design team to accommodate, but you failed to mention it. You're operating with the knowledge that it's feasible while the manager is deciding based on the false assumption that it's not. Always try to anticipate questions so that executives don't need to make any assumptions.

INFORMATION

Web analysts can't presume that they've provided all the necessary information for a business decision. Executives may rely on other data, besides web analytics data, to form their decisions. For example, feedback from a recent customer survey that you weren't aware of may conflict with your recommendations and lead to an unexpected decision. Management also has access to confidential strategic or organizational information that executives aren't at liberty to share. Only after some time has elapsed and the information goes public do you realize why the company wouldn't pull the trigger on your great idea. For instance, only after a business division is downsized do you realize why none of your recommendations for the division were ever pursued.

EMOTION

A study by University of Southern California (USC) neuroscience professor Antonio Damasio found that emotions play a key role in decision making; specifically, emotion almost instantaneously sways us in one direction or another (positive, negative, or indifferent), pairing with logic to help us to make faster decisions.[3] Of equal importance to web analysts seeking to drive change, Harvard professor Jennifer Lerner classified two types of emotions that impact decision making.[4] *Integral emotions* are the feelings that the people get about the decision at hand. For example, a decision maker may have a positive, happy feeling about a particular alternative because it represents something he's been evangelizing for at the company for some time. *Incidental emotions* are the feelings that someone is having at the particular time of the decision that are irrelevant to the actual judgment. For example, the executive may have had a car accident on the way to work or lost his new cell phone just prior to evaluating your proposal. Incidental emotions are beyond your control (unless you can reschedule your discussion), but well-crafted presentations can sway integral emotions in your favor.

MOTIVATION

Decision makers may have different intrinsic and extrinsic motivations that are influencing their decisions. Often we expect managers to be altruistic and make the best decision for the customer, team, or company. Self-interest, however, is frequently the most powerful influencing factor. Individuals evaluate the risk-reward aspects of options from a team and company perspective but also frequently from an individual standpoint. For example, rather than going with the best option that may upset other groups, a politically minded executive may choose a less potent but safer option that will instead strengthen her network of internal allies. Knowing your audience's motivations will help you navigate these situations.

COGNITIVE BIAS

The phenomenon of cognitive bias is as a pattern of "perceptual distortion, inaccurate judgment, or illogical interpretation"[5] that occurs in specific situations. Intuition can be susceptible to cognitive bias; and emotion, motivation, and social factors can also introduce cognitive biases. Web analysts need to be on the lookout for several decision-making biases:[6]

- **Anchoring effect.** Relying too heavily on one trait or piece of information when making decisions; a team could focus so much on reducing the bounce rate for a particular landing page, they don't realize the overall conversion rate and return visits are dropping significantly.
- **Bandwagon effect.** Doing and believing things merely because many other people do and believe the same things; a team may feel the need to develop a Facebook app because other companies have done so.
- **Confirmation bias.** Searching for or interpreting information in a way that confirms personal preconceptions; an executive may not like the current marketing campaign and fixate on its weaknesses even though it is performing well overall. Alternatively, a manager may feel early positive data confirms his decision was right when either it's too soon to say whether the decision was ultimately successful or the success had anything to do with his preconceptions.
- **False consensus bias.** Overestimating how much everyone else thinks, responds, and acts like you do; a manager may feel the homepage should be designed a certain way and assume the customers would agree.
- **Information bias.** Seeking information even when it cannot affect action; managers may feel as though they don't have enough data to make an informed decision even though what they already have is sufficient.
- **Mere exposure effect.** Expressing excessive liking for things merely because of familiarity with them; an executive may be familiar with paid search and may overlook less familiar channels.
- **Primacy or recency effect.** Weighing initial or recent events as being more important than subsequent (primacy) or earlier (recency) events; an executive remembers how effective the first SEO campaign was as opposed to all the subsequent ones that haven't been very successful.
- **Sunk cost fallacy.** Being influenced by the cumulative prior investments with the expectation that they can be made successful and are not wasted efforts (throwing good money after bad); a group may have formed several online partnerships that never yielded much traffic. They may feel the need to continue

investing in these partners with the belief that their prior investments were not in vain and a surge in traffic is just around the corner.

- **Wishful thinking.** Making decisions according to what might be pleasing to imagine instead of justifying decisions with data; a manager might believe a new promotional offer will be "the one" even when several similar offers have crashed and burned in the past.

Once again, awareness is your best defense against these tendencies.

SOCIAL DYNAMICS

A group approach to decision making introduces unique social dynamics that can lead to unanticipated decisions. Even though you may be working with a clear decision maker, that individual may have one or more confidants or influencers who are behind-the-scenes decision makers. Groups can also run into peer pressure where individuals are coerced to agree or compromise with the group. In addition, a group decision can be influenced by a couple of key group biases:

- **Groupthink.** Individuals try to minimize conflict and reach consensus but end up discouraging creativity or individual responsibility. For example, the group decides to push forward with the new social media project despite many individuals privately feeling as though the dollars being invested could be better spent in more meaningful ways.
- **Group polarization.** Groups can end up making more extreme decisions than the members would as individuals. Rather than identifying ways to improve weak-performing display ads, the team decides to stop doing banner ads altogether.

Compromise can turn potent ideas into lame or bad ideas. By appeasing the wishes or feelings of certain group members, the very elements that originally made an idea appealing can be inadvertently removed. As the analyst, make sure you highlight how changes to your recommendations will actually alter and undermine what you originally proposed. If the idea fails, it will still be labeled as being your idea.

PIECE TOGETHER THE PROCESS

As you can see from all of these different factors, decision making is not as simple as just weighing alternatives and their consequences against specific criteria to arrive at a final decision. Maybe your manager's refusal to give up on the poor-performing marketing content isn't entirely irrational. His reasoning can begin to make more sense when you consider how much money has been invested in the content (sunk cost fallacy), that it was the first content his newly formed team

launched (emotional attachment), or he knows his manager loves this particular type of content (self-interested motivation). Understanding how different dynamics can impact the decision-making process enables you to sidestep potential booby traps that could jeopardize your analysis mission.

Don't Hate the HiPPO

If you're like most of us in web analytics, you've encountered at least one HiPPO ("highest paid person's opinion), who makes decisions solely based on gut feelings rather than data. It may not have been a pleasant experience, but don't hold the executive in derision as you'll only hurt yourself in the end. At first the HiPPO term seemed playful and harmless, but I've since sworn off using the H-word once I woke up to the real damage it can do.

Using the term HiPPO erects an adversarial wall between you and the very people who can make a significant difference in your success as an aspiring action hero. It presumes that the executive's opinions are baseless and only driven by intuition, not a combination of factors that could actually include data. Not only is this viewpoint unhealthy, it can become toxic in terms of your attitude, internal relationships, and overall success. At the end of the day, web analysts need key decision makers on their side to drive meaningful change. True, some of your decision makers may depend more on their intuition than on data. If, however, you work *with* them to gain their trust and confidence, you can guide them along the enlightened path of data-driven awesomeness. As you obtain their trust, you can challenge their opinions and hypotheses. Never embarrass them, however, as that won't gain allies or extend your influence. You could win the point, but ultimately lose the match. Nobody wins intellectual jousting matches, especially when things get personal.

The real problem is not the person or the role, but the undesirable *behavior* of being governed by uninformed theories. You can run into resistance from uninformed, faith-based opinions at any level, not just the highest paid person. For advice on how to handle this behavior, see the sidebar "The GUT (Governed by Uninformed Theories)."

Knowing *and respecting* your audience is the first step in becoming a catalyst for change. Having the micro context on your audience and decision making will give you an inside edge as you move to the next step where you craft the right message.

VILLAIN PROFILE: THE GUT (GOVERNED BY UNINFORMED THEORIES)

Background

His intuition senses something isn't right about the numbers. Somehow the GUT wields a lot of mysterious power, which allows him to ignore any data points that conflict with his intuition-based opinions.

Tips to Defeat

- Don't try to embarrass him. (You may win the point but lose the match.)
- Share data early to enrich the decision-making process.
- Identify that gut instinct may have been based on incomplete or old data.
- Leverage all forms of data: web analytics, competitive, survey, internal benchmarks, and more.
- Educate him that data can steer him both toward better decisions and away from costly wrong ones.
- Encourage a scientific approach where the manager's intuition can be tested and validated.
- Pump his ego and get him excited about data that augments his business acumen.

Nail the Message

"Numbers have an important story to tell. They rely on you to give them a clear and convincing voice."

– Stephen Few

You may have delivered presentations in the past that you felt were going to have a significant impact on your company, but for whatever reason nothing changed. Surprisingly, your expertise in web analytics might actually be getting in the way. In their book *Made to Stick* (Random House, 2007), Chip and Dan Heath introduced the interesting paradox of the Curse of Knowledge: *It is difficult for us to imagine what it is like to not know something.* As an illustration, they cited a 1990 Stanford psychology study that divided people into two groups: tappers and listeners. Tappers tapped out the tunes of well-known songs (*Happy Birthday to You*, *The Star-Spangled Banner*), while listeners tried to guess the songs. Tappers predicted that listeners would guess 50% of the tapped songs, but they actually guessed only 2.5% of them. The reason for this big difference is the Curse of Knowledge: Tappers hear the song in their heads, but can't imagine the listeners' experience of hearing just a random bunch of taps with no context.

Web analysts sometimes forget to put themselves in the position of their audience, who don't have the same analysis tune playing in their heads. Your audience hasn't spent hours upon hours in the analytics data like you have. They may not be aware of all the upward and downward trends affecting the online KPIs, they might not fully grasp the meaning of all the different web analytics reports or terms, they might not remember all of the insights that you've gleaned from past analyses, and their knowledge of statistics might be a little rusty (just a little). In other words, you need to be careful how you convey your ideas; otherwise your audience may not grasp their importance.

You may be tempted to dump everything you've analyzed into your PowerPoint slides. A shotgun approach to presenting your analysis findings and recommendations will go over as well as a real shotgun would. Instead, the Heath brothers recommend six key principles for making your ideas stick:

- **Simple.** Your audience will not remember ten great takeaways or key points. Strip away all the unnecessary noise that just interferes with your message, and leave your audience with the essential core of your idea.
- **Unexpected.** Through surprise you grab their attention at the beginning, and then through interest and curiosity you hold their attention.
- **Concrete.** Remove the ambiguity and focus on making your ideas clear if you want your audience to remember and act on them.
- **Credible.** Vivid details from the online data can make your idea seem more real and believable.
- **Emotional.** You won't convince your audience through just sound logic and reasoning. You need to make them care about your insights.
- **Stories.** Telling a story with your data is one of the most powerful ways to ensure your audience will act on your ideas.

All six principles are critical to your success at this crucial stage where you want your ideas and insights to stick and have an impact on your organization. Throughout the rest of this section, you'll learn how to leverage these six principles in different ways to make your message stick and be acted upon.

TIP You've slaved hours and hours on your analysis. You painstakingly turned over countless rocks to find two or three nuggets. It's tempting to show all your hard work that didn't translate into anything, but don't do it! Keep it simple. Don't show your sweat unless it's relevant; otherwise you'll just distract attention away from your real nuggets. If it makes you feel better, you can park the information in an appendix in case you get any related questions (but you won't).

Speak the Universal Language of Money

Imagine you're a senior web analyst for a major airline, and you've discovered the online check-in process appears to be broken. You explain to your manager that only 5.3% of customers are currently using the online check-in tool and 82% of those customers abandon before completing the process. You then share your key finding that most of these visitors are using smartphones that are incompatible with

"Money alone sets all the world in motion."

– Publilius Syrus

your current website. You make the bold recommendation to create a mobile site to streamline the online check-in process for this valuable segment of customers. Your manager is impressed and asks you to send her your recommendation slides so she can share them at her next managers meeting. She's hopeful that she'll be able to encourage the development team to consider taking on a new project, but she can't promise anything.

Her reaction is good, but it could be better. Rewind this scenario, and add one more juicy detail: Based on your calculations, you anticipate that a mobile-friendly check-in process will *save $21 million annually* in reduced gate agent costs. By monetizing the opportunity, you suddenly have your manager's full attention, and she wants you to follow her directly to her manager's office.

One of the most powerful weapons in your action hero arsenal is monetization. *Nothing is more concrete than money.* Nothing will grab the attention of your audience more than an unexpected, substantial gain from a particular optimization. In their book, *Actionable Web Analytics* (Sybex, 2007), Jason Burby and Shane Atchison illustrated how money is the universal language that all managers understand and how having a common yardstick makes it easier to prioritize different types of optimization projects. All of your online KPIs are beautiful and important in their own right, but money is what really encourages organizations to act.

NOTE Monetization not only helps during the decision process, but also after an optimization has been approved and is added to the web development queue. When your web development team clearly understands the monetary value of an optimization, the project can be prioritized in terms of how it stacks up against other projects in the queue. If the level of effort is similar, the higher-value projects should take precedence. Fixing a dollar value to optimization projects can remove the arbitrariness of internal pet projects and the inefficiency of a first-in, first-out queue approach.

If you followed all of the steps within the HEROIC analysis approach introduced in Chapter 5, you will have already monetized your recommendations. You'll now want to introduce a couple of *action figures*: an annualized dollar amount and a monthly dollar amount (or another short-term amount). The total annual gain or saving is the carrot that catches everyone's attention and imagination. The monthly amount (the stick) reveals the opportunity cost of *not* introducing the optimization in a timely fashion. The carrot for the online check-in example is the $21 million in annual cost savings and the stick is the $403,850 forgone each week ($1.75 million per month) that the optimization isn't in place.

When the financial impact of your recommendations grabs your listeners' attention, you'll typically see one of two reactions: excitement or skepticism. If your audience is excited, your job just got easier; use their energy to propel the rest of your presentation and drive your recommendations into action. Carpe diem! When you encounter a skeptical audience, however, you need to be prepared for some rapid-fire fact-checking as they'll want to scrutinize your interpretation of the data and monetization calculations. The more prepared you are, the more likely your ideas will survive and the more credibility you'll gain.

It all comes back to knowing your audience and *anticipating* their questions and concerns. While you may not have perfect information for all of the variables in

your calculations, as long as you have a well-reasoned, defensible estimate you can overcome initial disbelief and doubts. If you anticipate skepticism from your audience, plan on explaining how you came up with your numbers. Revealing how you quantified the impact of your recommendations may become the cornerstone of your presentation. Once executives understand how you arrived at your estimates, their additional knowledge and intuition can help them decide if certain values in your calculations need to be adjusted, strengthened, or verified. For example, the management team might decide your conservative revenue per lead estimate is too low and ask you to adjust it to a level they feel is more realistic (knowing the actual number will be difficult to obtain).

Alternatively, having a better understanding of your monetization model may convince executives that they need the actual value of a particular input instead of just a decent estimate. They use their organizational clout to get another department to respond with the value you need for your calculations (which may be the exact same team that ignored your requests prior to your presentation). While adjustments to your monetization model may reduce an optimization's estimated value, you still come out ahead with a concrete dollar amount that, if it's still attractive to your audience, can drive change.

Simplify to the Core

With the Curse of Knowledge hanging over your head, all of the complexities of the business environment, implementation setup, analytics tools, and analysis techniques need to be checked at the door. Somehow all of it has to be distilled down into a simple, actionable set of business insights for your less informed audience. Writer and aviator Antoine de Saint-Exupery once said, "A designer knows he has achieved perfection not when there is nothing left to add, *but when there is nothing left to take away*." Complex doesn't have to be complicated; it can be simple or elaborate. Simplicity doesn't necessarily mean dumbing down or diluting your insights and ideas either. Chip and Dan Heath recommend making your ideas as simple as possible, stripping them down to their core essence. You do this by removing all of the distracting and nonessential information that doesn't serve your main objective of driving action and value.

Here are some examples for how you can simplify your next analysis presentation to help your audience *get it* and *like it*:

- Limit your presentation to no more than five key points (fewer equals more memorable). Too many insights can overwhelm your audience, so be strategic and choose your best shots for impact and action.

NOTE The one reaction you don't want to see is indifference. To guard against it, do your due diligence in the Prioritize and Analyze stages of the Action Hero Framework and make sure you're presenting to the right audience. In addition, carefully follow the suggestions in the rest of this section to increase your chances of grabbing your audience's attention.

TIP If you know different aspects of your monetization calculations will most likely be challenged, bring along a spreadsheet so that you can demonstrate the impact of any tweaks to your model in real-time. Don't lose an opportunity to move your recommendations forward simply because you're not able to re-crunch the estimate on the spot.

"Things should be made as simple as possible, but not any simpler."

– Albert Einstein

- Remove nice-to-know information that serves no immediate purpose. Focus on the need-to-know information that will drive change.
- Don't show your work if it serves only to reinforce how hard you worked or how smart you are.
- Skip background information that your audience already knows.
- Avoid confusing or vague web analytics jargon (bounce rate, unique visitors, you know the terms).
- Keep the bullet points to a minimum (no walls of text please).
- Question every slide's role in supporting your main points and trim the weak or unnecessary ones.

TIP As you seek to simplify your content, you don't want to cut something that will inadvertently raise unnecessary questions about the data or be misinterpreted as trying to manipulate the data, which could impact your credibility.

Simplifying your content effectively comes back to knowing your audience. How much detail is too much or too little will differ by audience. If you provide the wrong level of detail you can potentially bore, insult, confuse, or lose your audience—none of which will lead to the outcome you're seeking. Tailoring your message to the right level of detail can be complicated, however, when you have audience members at different levels of knowledge and expertise. Just remember if a decision maker doesn't get your idea, the outcome most likely won't be what you wanted.

Simplicity typically becomes increasingly important as you present your analysis higher and higher within your organization. In **Figure 6.5**, lower-level employees will expect more detail than executives who may be interested in high-level takeaways only. At the end of the day, if you're fortunate enough to have an executive audience, you'll want to adjust your presentation to their lower threshold for analysis minutiae. Although you're not presenting everything, you still need to be prepared to answer very specific questions from executives that will test your confidence and thoroughness.

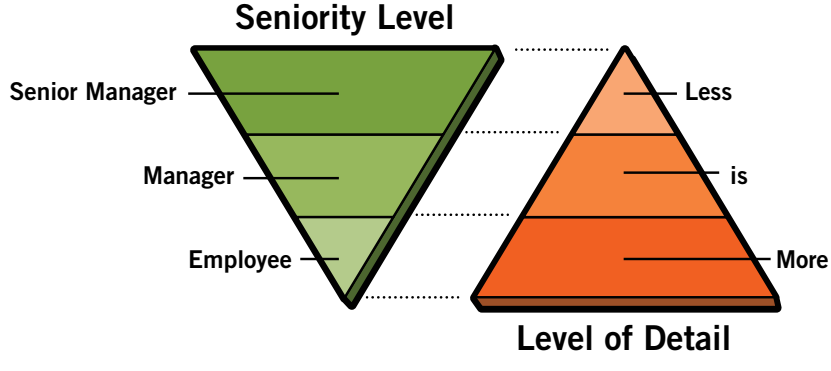


FIGURE 6.5 As the seniority level increases, the level of detail typically decreases.

While performing some analysis work for a retail client, my consulting team found several insights that excited the marketing director. Slowly the presentation ballooned to more than 60 slides as she kept asking us to add "one more" slide. A reality check came when her VP recommended cutting the final presentation back to 12 slides before he would share it with any other executives at his level. Save time and effort (and in this case consulting hours) by determining the appropriate level of detail beforehand.

INSIDER INSIGHTS

TIP Master the art of the executive summary.

Joel Wright is a business consultant at HP. He has more than eleven years of experience in high-tech web analytics.

Why is an executive summary important?

If you're presenting to senior executives, you may only have 15 minutes to present your analysis so it's vital to invest time in building a solid executive summary. The executive summary answers three important questions: What's happening? Why should they care? What should they do about it? I'm a firm believer that web analysts need to be storytellers, and the executive summary plays a central role in your storytelling by tying everything together. The best analysis I ever delivered in person resulted in my 15-minute time slot generating important discussion that filled the entire hour-long meeting, and more than 50% of that time was focused on the executive summary.

What's your technique for distilling down the key points?

Start by going through your presentation to identify one key takeaway on each slide. Your main points should always be facts from the data that will hold up under fire. Limit each to just one line at no less than a 20-point font (no widescreen template either). This approach forces you to ruthlessly economize your words. Make sure to translate your "analysis speak" to "exec speak," minimizing the jargon and acronyms. Stay out of the details and summarize the main idea as succinctly as possible. For each main idea, add an accompanying assessment line that indicates why the point is important or what action should be taken. I like to use icons to highlight these assessment lines. You're looking for a theme to emerge that becomes the basis of your story. Once you have a central theme or thesis, you can remove points that no longer fit and move less relevant slides to your appendix. Letting go of great insights and slides that no longer fit is hard. Be strong. Your executive summary should be no more than one slide if possible. This is where your writing skills are put to the test as your insight-to-word ratio should be extremely high. ■

Data Visualization Matters

"Excellence in statistical graphics consists of complex ideas communicated with clarity, precision, and efficiency."

– Edward Tufte

Online data is the lifeblood of web analytics. Believing the data will speak for itself, too many analysts dismiss data visualization as merely polish or pointless eye candy. I couldn't disagree with them more. Without proper data visualization your insights will remain muted. Today's web analysts need to be skilled in all areas of communication, especially *visual* communication. In many of the analysis presentations that I've delivered, success often hinged on a particular chart or diagram that supported a major finding and recommendation. In just a few seconds, an effective data chart can crystalize a new insight or idea in the minds of your audience, becoming the cornerstone for your entire presentation. The same concept would have taken minutes or even hours to explain verbally. On the other hand, ineffective data visualization can leave your audience dazed and confused, hurting rather than helping your opportunities for success.

To be successful, one key distinction that web analysts need to grasp is that the data is secondary to the *meaning* of the data. The pie chart, trend graph, or table in your presentation isn't the evidence for your recommendations. The meaning embedded *within* the data chart is what you need to highlight and share with your audience. Data visualization guru Edward Tufte advocates that a persuasive visual display answers three basic questions: compared to what (context), what is the cause, and what is the effect.[7] Better data visualization can help you to communicate these key relationships within the data more clearly and efficiently so your audience can better understand and agree with your main points. Four techniques can significantly enhance your visual communication skills and strengthen your message:

TIP Pie charts are weak at communicating insights. When they contain too many slices or the slices are similar in size, distinguishing the differences between them is difficult. Stephen Few recommends using a bar chart instead because it communicates the same information much more clearly and efficiently. Wean yourself off your pie chart dependency!

- **Choose your chart wisely.** With so many types of data charts available (pie, bars, scatter plot, trend, and so on), take care to select the right graph for the task at hand. A poorly chosen graphic can ruin or hide your great insight. Visualization expert Stephen Few identified seven main types of data relationships and recommended effective chart types for each scenario. **Figure 6.6** summarizes his recommendations.[8] Starting with the right graphic is half the battle.
- **Remove chartjunk.** Too many decorations within your charts can clutter or create noise that detracts from your key information. Tufte and other experts encourage minimizing the amount of *chartjunk*, those nonessential elements and markings that aren't required for comprehending the data (**Figure 6.7**).[9] The default settings of Microsoft Excel charts automatically introduce many chartjunk elements that you need to remove to improve your visual communication. Think like a minimalist and strip away the background colors, gridlines, borders, axes, labels, legends, images, excessive scaling, and so on.

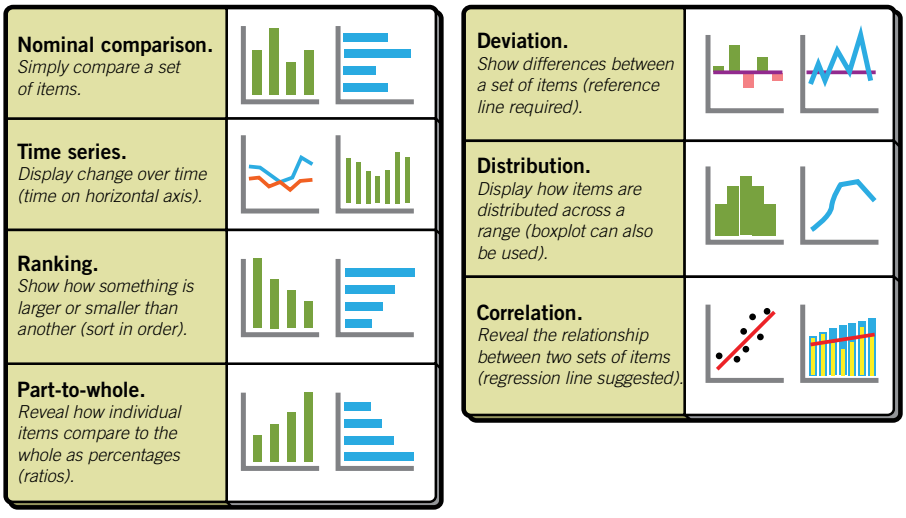


FIGURE 6.6 Choose a graph type that pairs well with the data relationship you're trying to show.

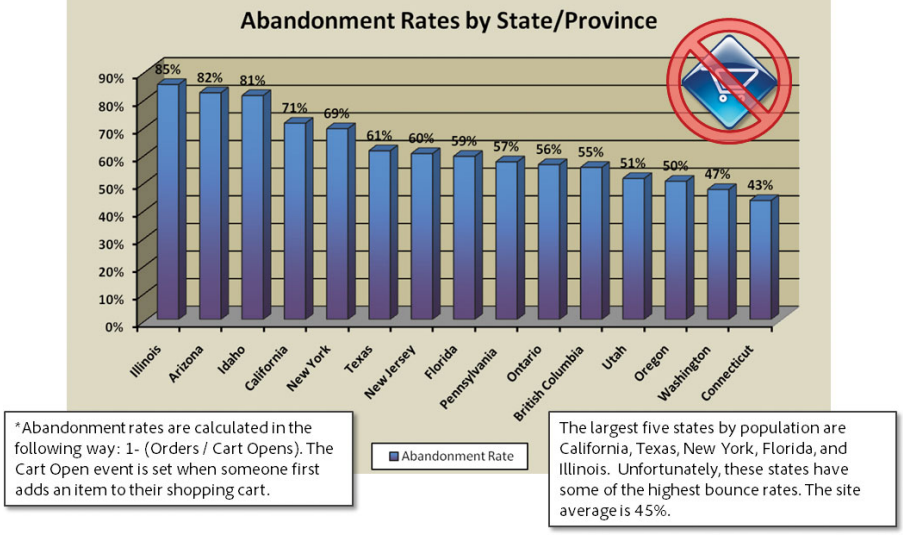


FIGURE 6.7 What chartjunk can you spot in this chart? Find the answers on the next page.

- **Avoid 3D.** A particularly troublesome form of chartjunk is the three-dimensional chart. Although movies and next-generation HDTVs are fueling a 3D craze, web analysts should avoid using 3D in charts. In *Show Me the Numbers* (Analytics Press, 2004), Stephen Few points out that the 3D perspective can obscure the data's values and make charts more difficult to read (**Figure 6.8**). Rather than using "3D fluff," he recommends sticking with the less exciting but more informative two-dimensional charts.

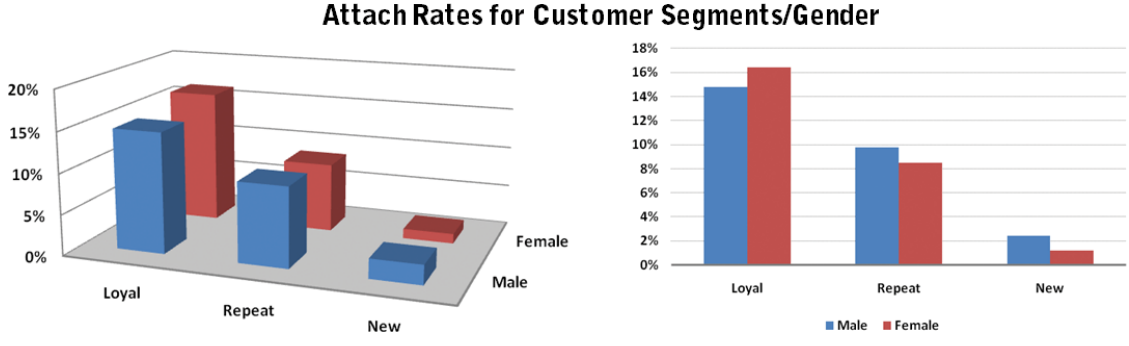


FIGURE 6.8 Notice how the 3D perspective makes it difficult to compare the data sets for males and females. The 2D chart may not be as fancy but it communicates the differences more effectively.

NOTE Figure 6.7 contains plenty of chartjunk: background color, border color, 3D perspective, gradient fills, thick box outline, bold gridlines, unnecessary legend, two large text boxes, tick marks, two bold axes, gratuitous clipart, long labels, excessive labeling, and a useless chart title to boot.

- **Add Emphasis.** Most data points are just the supporting cast to your leading actor. You need your most important data to stand out. In *Presentation Zen Design* (New Riders, 2010), Garr Reynolds suggests two simple ways to emphasize what's most important. First, use contrast to highlight the data you want your audience to focus on; **Figure 6.9**, for example, uses a single bar of color. Second, use a declarative statement for your chart title. For example, rather than a typical chart title, such as "Ad type by click-through rates," use a statement that reinforces your key takeaway: Social media ads had higher than expected click-through rates.

Data visualization is really just one part of effective visual communication. Not all of your presentation content will focus on data. As you explain key concepts, processes, problems, and solutions, insightful diagrams and images can be important to your success as well. If your audience can effortlessly grasp your content, you'll have removed a potential stumbling block from the path to adopting your recommendations. In your quest to become an action hero, translating data into action will frequently depend not just on how solid your evidence is but also on your ability to communicate it visually in an effective manner.

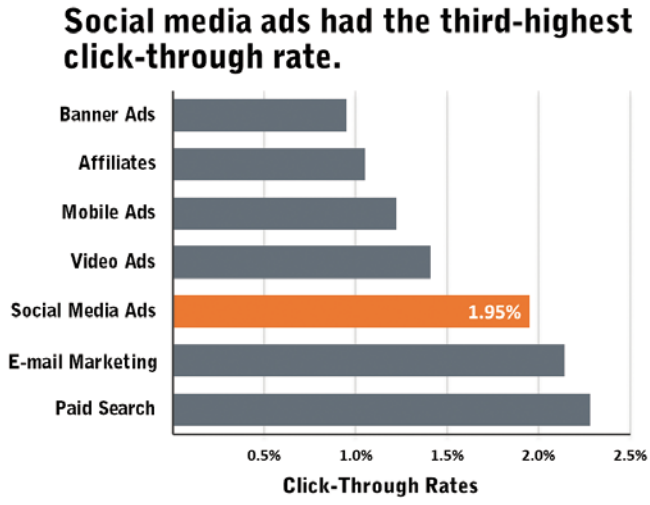


FIGURE 6.9 The declarative title and orange color draw the audience's attention to the highlighted value.

Storytelling with Data

As data junkies, web analysts are ruled and driven by logic and reason. The more facts and figures you have to support your ideas, the better. The sheer weight of evidence you collect convinces you that your insights can't miss. And yet they do. Why? Maybe it's a matter of emotion.

Emotion plays a key role in decisions, as you may recall from the "Demystifying Decision Making" section. On average, your audience members may be more analytical than most, however, their decisions are still based on logic *and* emotion. While not a primary driver, emotion can tip decision makers in favor of moving forward with your recommendations. In her book, *Resonate* (Wiley, 2010), presentation expert Nancy Duarte admonishes analytical presenters to view emotions as a persuasive tool that will help their facts to stand out. "There's a difference between being convinced with logic and believing with personal conviction. Your audience may agree with the thought process you present, but they still might not respond to the call." One of the best ways to complement your facts with emotional appeal is through the use of stories.

Studies have shown that stories can play a persuasive role in the reasoning process and often business people are more convinced by narratives than statistical evidence, which lacks the rich context that stories can provide.[10] When you share stories you're inviting people to participate in your ideas and experience them with you. The stories evoke influential emotions and make your insights and ideas seem more relatable and lifelike, more than just cold, hard facts. Using the "pull" strategy of storytelling rather than a "push" strategy of logical arguments, you can help your

audience reach the same conclusions as you did.[11] Whenever you can make your idea become their idea, you've succeeded in connecting with your audience.

Action heroes in web analytics need to focus on how the combination of data and storytelling can compel organizations to change and people to act. In stories, conflict plays a central role that inspires change. Duarte recommends creating similar conflict or imbalance in your presentations by juxtaposing "what is" with "what could be." Storytelling links your analysis (what is) to your recommendations (what could be) in a more persuasive manner.

INSIDER INSIGHTS

TIP Sell your ideas through stories.

Jonathan "Jed" Elliott is the head of web analytics at UniCredit where he's spent eight years building its worldwide web analytics and testing program.

What do you mean by selling your ideas?

For a particularly challenging project, I realized that I needed to meet the marketing team in person so I could better explain the data, answer questions, and sell my ideas. At the time, online marketing and web analytics wasn't yet a top strategic initiative for the organization. The expense of the two-hour train ride up to Milan was viewed as an extreme act when most people felt a phone call or email would suffice. From a cultural perspective, this trip was a turning point for our web analytics program. By interacting with the users in person and selling my insights like a consultant, I was able to shift the perception of the web analytics team from being report providers to being strategic advisors. My team and I now spend 60 to 70% of our time away from our desks, participating in meetings; we're now part of the planning phase, not just the post-launch monitoring phase.

How have stories helped you to sell your ideas?

For a major redesign project, I did a deep analysis of a site section and found a key problem was how a new account page was packed with links to information on our online banking services scattered across different parts of the website. We expected people who were trying to open a new account to find their way back, but most were getting lost halfway across the site and not converting.

During my presentation, no one was understanding this problem so I stepped away from my slides and switched to a real-life story: You go into a big-box retailer for a new DVD player, but the salesperson drags you over to the HDTV section, doesn't answer any of your questions, then leaves you. Then I went back to my presentation numbers and showed how a similar experience was happening on our website every day. The analogy helped the marketing team better grasp how the distracting links and content were actually causing people to abandon the site. Stories and real-life examples like this one are valuable in helping to explain and promote your ideas. ■

In addition, context helps to set the stage for your data stories. Context can help to connect the dots between seemingly unrelated data points to tell powerful stories. Storytelling with data requires imagination and creativity as you're probably not going to have a personal anecdote handy for every situation. To supplement your supply, the follow sections present three pragmatic approaches to data storytelling that can amplify the appeal of your message and ensure your outcomes are action-packed.

THE CUSTOMER HERO APPROACH

> **"If I look at the mass, I will never act. If I look at the one, I will."**
>
> **– Mother Teresa**

If any single individual can grab the attention of most executives at your company, it is one of your customers. When looking at web analytics data, you can easily forget that it represents the online experiences of hundreds, thousands, or even millions of people. Each individual had a particular reason for engaging with your business online; some of those experiences were successful and others were not. In *Making Your Presentation Stick*, Chip and Dan Heath remind us that "Data are just summaries of thousands of stories—tell a few of those stories to help make the data meaningful." [12]

Online marketers and web designers are accustomed to working with *personas*, fictional characters used to represent different customer segments. You can take a similar approach with your analysis presentations and tell the story of your data through the eyes of a customer or visitor to your website. For example, you might have isolated a problem in the checkout process related to the Safari browser. By segmenting out the Safari browser users, you're able to create an interesting profile of a typical user: where he came from, where he lives, what products he added to his shopping cart, and so on. All of these details along with a dash of creativity can lead to a more meaningful story like this one:

"*Mark works as an associate creative director at a small online advertising agency in New York. He has been using Apple computers ever since he was in college. Recently, he was searching for new rock climbing equipment on Google for an upcoming trip to Yosemite National Park with a bunch of his friends. He found a nice pair of climbing shoes after clicking on one of our paid search ads and was about to purchase the shoes when this error occurred in the checkout process.* (Show screenshot.) *After a couple of attempts to purchase the shoes, Mark gave up in frustration and went somewhere else. Although Safari users like Mark only represent 15% of the total visitors, their average order size is 56% higher than the site average…*"

Most people find it easier to relate to stories told about other people, even fictional, fact-based personas. It's easier to question or ignore numbers than it is human beings. You can leverage qualitative data from online surveys or testing results to add even more color to your analysis personas. Making your customers the heroes of your analysis is one great way to build support for your ideas.

"The more successful the villain, the more successful the picture."

– Alfred Hitchcock

THE VILLAIN APPROACH

Sometimes you need a hero for your data story; other times you need a villain. No one is more evil than your company's competitors. Weaving your rivals into your data story can incite your audience to follow your recommendations out of indignation and ire for your competition. One approach is to leverage competitive benchmarking from various vendors such as Compete, Hitwise, and Quantcast, which provide competitor and industry averages for different online metrics such as visitors, average time spent on site, and conversion rate. You will have a rapt audience as many executives love to benchmark their online performance. Everybody has a natural tendency to want to know how they are performing compared to their peers.

As a web analyst, you can definitely use their interest in benchmarking to illustrate how the industry (us against everyone) or specific companies are outperforming your company online. Executives will be motivated to close the perceived gap. What happens, however, if you know your conversion rates can be improved, but you're already outperforming the industry averages? Your executives aren't going

VILLAIN PROFILE: THE LEMMING

Background

She goes along with what everyone else is doing. If her competitors are looking at bounce rates, she definitely needs to look at bounce rates. She eats sugar-coated best practices for breakfast, never questioning if she's even hungry, if she likes their taste, or how nutritious they are.

Tips to Defeat

- Question why new metrics or reports need to be created.
- Push back on unreasonable or unnecessary requests, but educate why they don't make sense.
- Ask other key stakeholders to weigh in with their opinions.
- Provide an alternative approach that is better tailored to the needs of the business.
- Prioritize these requests against more important needs.
- Proactively evaluate the impact of what is being tracked.
- Hold people accountable for acting on the data.

to be motivated to invest in changing anything. For this reason, competitive benchmarks are really a two-edged sword. Just as they can inspire action, they can also lead to complacency. While online competitive intelligence can be useful (paid search keywords), nobody wants to acknowledge how pointless most external benchmarks really are. As an example, consider all of the variables that can significantly influence a particular retail conversion rate: product type (computers or flowers), target customers (retirees or college students), retailer type (manufacturer with support-related visitors or pureplay retailer), global focus (US only or worldwide), level of website investment (high or low), seasonality factors (back to school, holidays), and so on. Even when you're comparing superficially similar companies I recommend using competitive benchmarking cautiously, and remember that benchmarking against your own past performance (year over year) is often be the best approach for continual improvement.

NOTE Comparing teams, categories, divisions, or regions within your own organization can be challenging for benchmarking purposes. Without proper context, the timing of different seasonality effects and campaigns can create more unnecessary questions than actual insights.

Another approach for leveraging your rivals in your data story is to juxtapose your company's online initiatives with what your competitors are doing on their websites, apps, and online marketing campaigns. Obviously you won't know exactly how successful your competitors' efforts are, but examples of what they are doing can provide a stark contrast to your company's efforts. It could also illustrate that nobody within your industry has figured out the problem you're seeking to address, and your company could gain the first-mover advantage. Besides your competition, almost anything can be transformed into a villain: an outdated, bureaucratic process, a costly but weak-performing marketing channel, or an erroneous organizational belief. Using your data to create a villain can focus and rally your organization around your recommendations.

THE ANALOGY APPROACH

Analogies and metaphors can complement and streamline your data storytelling. When you give your audience a glance behind the web analytics curtain, they can be overwhelmed by the vast amounts of data, new concepts, and technical complexities. Analogies and metaphors provide a valuable frame of reference to shorten the distance for comprehension. Metaphors are the quick hit variety where simple comparisons are made between two unrelated objects (baseball and web governance). These figures of speech rely on the associated context of one word to help the audience quickly grasp the new concept. Analogies go beyond just being catchy phrases, and attempt to show how a new concept actually resembles something your audience is already familiar with. For example, you might want to associate an online concept (shopping cart cross-sell) to a common offline situation (combo meal).

"One good analogy is worth three hours discussion."

– Dudley Field Malone

Metaphors and analogies provide a mental shortcut for people to quickly grasp new concepts and ideas. In addition, analogies provide greater opportunities for building more visually appealing, memorable messages. Chip and Dan Heath emphasized how unexpected ideas such as an eye-opening analogy are more likely to stick because surprise makes your audience pay attention and think. When you're trying to decide on a particular analogy, consider the following criteria:

- **Can your audience relate to the analogy?** Just because you can, doesn't mean that your audience can as well. For example, analogies that are appropriate for a younger generation can backfire for older generations.
- **Does your analogy clarify your concept?** Be careful that your analogy doesn't end up being equally confusing or even more confusing than just a straightforward description of your new idea or concept.

ACTION-PACKED INTERACTIONS

Driving action through web analytics doesn't happen in formal presentation settings only. In fact, more action may actually result from the various informal conversations and interactions that happen throughout your week. During these face-to-face, phone, and email interactions, you have an opportunity to apply this chapter's techniques but in slightly different and subtle ways.

For instance, while walking out to the parking lot with a marketing director, you might share an analogy of how when you go fly fishing, you need to choose the right fly to entice the brook trout to bite. You could then share some salient, top-of-mind insights from your recent campaign analysis into how your company could do a better job of targeting its offers to specific customer segments. Data stories can be shared in a hallway conversation or during the middle of a marketing meeting. At any moment, you have the ability to share insights from the online data that *pique interest, spark discussion, influence decisions,* and *drive action*.

Many times you don't need a large presentation to prove your point or create value. Sometimes even a one-dimensional chart can get right to the heart of a matter. An analyst shared an example of how her team was asked to provide data in support of a new executive's 100-day plan. After listening to the executive stress the importance of increasing investments in mobile and video initiatives, she created a very simple chart that showed page views by desktop, mobile, and video. She emailed the chart to her new leader with no additional thoughts, analysis, or trending. The chart alone spoke volumes—so much so that he put the chart in his presentation to the board of directors with the title "Desktop is still king." Her point wasn't to dissuade investment in video or mobile, but to ensure the business didn't lose its focus on today while it admired its shiny object projects of tomorrow. A simple and small interaction can still have a big impact.

- **Is your analogy short and simple?** Try not to be too clever. If your analogy is too long or complex, your audience may lose interest before you can introduce all the connections.
- **Is your analogy boring?** If you have fun with your analogies, more people will remember them. The greater the contrast on the surface level between two things (exit pages and marshmallows), the more dramatic and interesting the connections will be for your audience as you bring them together (just remember the two previous criteria). In addition, avoid clichéd, overused analogies ("it's like learning to drive"). Try to be unique when possible. Current events and pop culture can be great material for analogies that stand out.
- **Can you use strong visual images with your analogy?** Some analogies lend themselves to better, more impactful images than other analogies. Keep the visual nature of possible analogies in mind as you decide which ones you're going to use for your presentation.
- **Can your analogy go the distance?** You may need a "marathoner" analogy that you can carry through your entire analysis presentation as a theme. A "sprinter" analogy needs only one or two strong connections to support one key concept, whereas a marathoner analogy needs several good connections. Make sure you use the right analogy type depending on what you're trying to do.
- **Is there loose wiring in your analogy that prevents it from communicating effectively?** Sometimes a key defect in your analogy can obscure otherwise great connections in other areas. Be prepared to abandon an analogy if you can't ignore or fix obvious flaws.

As in life too much of a good thing can be bad. If you overuse analogies in your presentation, the overall effectiveness of your analogies will be diluted. Your audience will struggle to absorb and tie them together. I recommend carefully selecting the analogies that will have the most impact on your message and save the rest for another day.

Coming Through Loud and Clear

To effect change within your company, your message needs to connect with your audience. Great analytical insights that are not communicated effectively are as good as wasted. Just as much effort needs to be put into communicating your insights and ideas as formulating them. By monetizing your recommendations, simplifying your message to its core, leveraging best practices in data visualization, and crafting a compelling story around your data, you're giving your message a

fighting chance to resonate with your audience. Nailing your message will enable you to overcome the resistance points, so that your listeners

- **Get it.** By removing nonessential information and providing easy-to-flow visuals and analogies, your audience will have an easier time following your content.
- **Like it.** The estimated monetary benefits of your recommendations will generate more management buy-in for your ideas as the executives will have a clearer picture of what they stand to gain.
- **Trust it.** Based on your knowledge of your audience's preexisting data concerns, your message will have carefully addressed those doubts during your presentation.
- **Trust you.** The act of sharing stories will build a closer connection between you and your audience. Your credibility will increase as your audience observes your preparation, meaningful insights, and confidence in the subject matter.

Stay the Course

"Discipline is the bridge between goals and accomplishments."

– Jim Rohn

You've delivered your cargo, and it's sitting at the dock waiting for final shipment. Is it time to move to your next analysis mission? Not until a decision is made and your cargo is finally shipped. Just when Indiana Jones thought he was in the clear with the Ark of the Covenant, he suddenly found himself clinging desperately to a U-boat as it raced off to a secret island base in the Mediterranean Sea with his prized cargo. Most action heroes realize they need to stay involved, and their work isn't done until the cargo makes its way to the final destination. You must stay the course, and protect your idea through that critical stage right before a decision is made and the optimization is launched. The sections that follow offer advice on dodging late-stage pitfalls and staying the course until your ideas are shipped.

Encourage Discussion

Many business people make the mistake of using up all of their allotted time presenting and do not budget sufficient time for discussion. In many cases, the *discussion is the most important part* of your whole presentation. This is where your decision makers and key influencers determine the fate of your analysis work and discuss the course of action. I've seen several presenters miss excellent opportunities to get key stakeholders engaged in a discussion about their topic simply because they ran too long on their presentations. You just can't afford to pass up a key opportunity like that and potentially lose momentum for your recommendations. Encourage discussion and budget ample time for it because

- Your audience may provide suggestions that enhance or strengthen your ideas. Several audience members will be experts in their respective fields and can expand upon your ideas, taking them in new directions that you hadn't considered.
- Your audience might have significant concerns about your content and resist your ideas. If you don't hear what their concerns are, you'll miss a valuable opportunity to resolve them.
- You'll be able to pinpoint who your real allies and adversaries are, and better understand their arguments for or against your recommendations, which may come in handy down the road.
- By actively participating in a discussion on your topic, your audience may more readily support and understand what is being proposed.
- The retention of your content will be much stronger with your audience if they discuss it rather than just passively listen to it.
- The conversation may venture into discussing possible next steps, during which you'll be able to gain commitments from your audience for the execution phase.

At the end of your discussion, you'll want to ensure all parties involved have a clear understanding of the next steps in terms of assigned tasks and timing. You may come out of the meeting with follow-up analyses that need to be performed or realize you need to present your analysis presentation to other stakeholders that weren't previously identified or weren't able to join your meeting. Discussion can be a great tool to deepen understanding and generate buy-in; no matter how engaging the discussion, however, the goal is still to arrive at a decision.

Reduce Pre-Decision Friction

Many analysis presentations do not yield an immediate decision. Depending on the number of stakeholders involved, the quantity of alternatives being considered, the amount of investment and risk, and other considerations, the decision may take some time to finalize. Rather than shifting your full attention to new tasks, you don't want to completely take your eyes off the prize. While you don't want to come across as too overbearing at this crucial stage, you must be diligent and as involved as needed until you receive the final go or no-go decision. Before the decision is finalized, you'll want to stay involved in the following ways:

- Be available to answer any new questions during the decision-making process and ensure no concerns or issues remain unresolved.
- Perform quick follow-up analyses to answer any outstanding questions and provide the findings to help the decision-making process.

- Mediate any known disagreements between stakeholders (if appropriate) and schedule follow-up discussions as needed.
- Tactfully follow up with key stakeholders to make sure they are driving toward a decision and have what they need.
- If your relationship with the team is still relatively new, you may want to share examples of past wins with other teams to reassure the decision makers that success is possible.

Sometimes reaching a decision will be simple for your stakeholders, and other times you may feel like you're herding a bunch of neurotic cats. Being so close to a decision, you can't afford to be inattentive or passive. It's not about ramrodding your ideas through the decision-making process; it's about being as involved as needed to reduce any potential friction that could delay the decision or hurt the chances of your recommendations being pursued. One way of reducing pre-decision friction for executives is to test an idea before requiring them to officially leap.

Test the Path

"Risk comes from not knowing what you're doing."
– Warren Buffet

Sometimes you spot problems with obvious solutions—add the missing button or move the call to action above the fold. Fixing these is an easy sell. The more difficult scenario is when you identify a problem but have no clear idea of the cause. Despite all your evidence, management is still daunted by the leap of faith required to place more significant bets on your proposed optimizations. If you can mitigate the perceived risk, then you're more likely to see teams move forward with your ideas. Testing can help you do just that, by verifying what works (and what doesn't), as well as illustrating the potential impact of a change (**Figure 6.10**). Testing isn't necessary for every optimization, but it can provide that extra push needed to propel hesitant decision makers forward when the road isn't entirely clear.

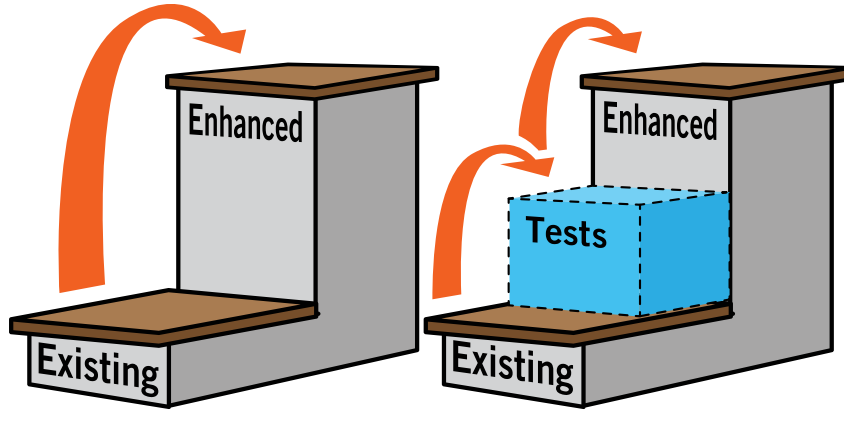


FIGURE 6.10 Testing can lower the perceived risk of introducing a new optimization.

For example, you decide to improve your company's main registration page to generate more leads. Your management team views a wholesale redesign of the registration page as a risky venture. By testing different designs on a portion of your company's visitors (less risky), however, you're able to get management's blessing to move ahead. If the tests are successful, your company will be compelled to run with your optimizations as the testing data will show causation, not just correlation. If you need to test your recommendations, follow a few best practices:

- Avoid performing ad hoc, random tests based on assumptions and opinions. The real goal of testing is to build upon the insights you've gained from your analysis and to approach testing in an iterative, efficient, and disciplined manner.
- Know what your primary success metric will be for each test and use it consistently through all of your tests. If you use different metrics within a single test or across multiple tests, it will be more difficult to determine what you're really learning.
- Promote the success of the test to gain management buy-in by sharing screenshots, key lessons, recognized lift, and monetized value.

Often the tangible results from the testing process can persuade fence-sitting stakeholders to throw their support behind your recommendations. Rather than having to take a leap of faith, the business team now has a clearer indication of the potential business value that can be created by the optimization.

How to Handle a Thumbs Down

What happens if the key stakeholders decide not to follow your recommendations? The outcome isn't the one you expected so you're going to be disappointed. You're not always going to be able to save the day during your adventures as an action hero. In fact, if you don't occasionally run into some strong resistance to your ideas, you're probably not aiming high enough or thinking big enough. You're playing it too safe. These types of analysis setbacks represent an opportunity to learn and improve or test your resolve.

NOTE In the initial stages, you'll want to focus on the safer, smaller quick wins in order to build your confidence and momentum. Once you've gotten some successes under your belt, begin focusing on bigger opportunities that have more upside but also more risk.

Whenever you receive a thumbs down to your recommendations, seek to understand the reasoning behind the final decision. Sometimes you may never receive an explanation or the reasons are too diluted, sanitized, or cryptic to be of much value. If you are fortunate enough to receive clear feedback on your insights and ideas (which may depend on your relationship), you have the option to agree or disagree with various courses of action (**Figure 6.11**):

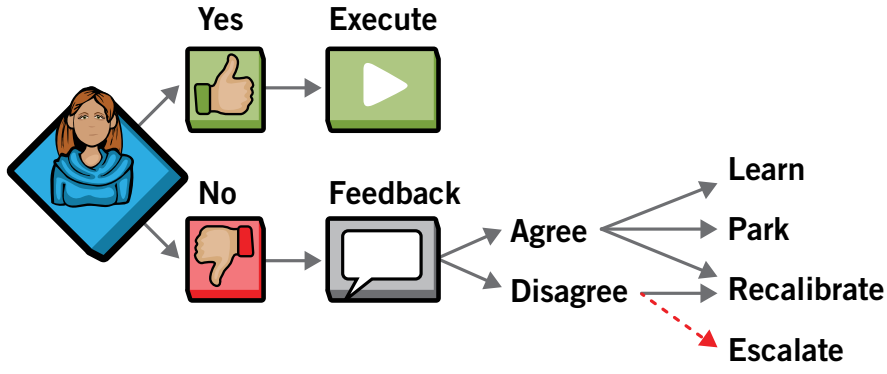


FIGURE 6.11 You have several options after a decision has been made.

- **Learn.** You may agree with the final decision because you realize you lacked a key piece of context, misinterpreted some data, or missed a more promising alternative. In these cases, you learn from the experience and strive to improve.
- **Park.** There may be nothing wrong with the proposed optimization other than the timing. At the present moment, the organization may have more pressing needs in other areas. You agree to park the idea and revisit it in the future as circumstances change. You're now the idea's steward, and you need to watch for the right opportunity to re-introduce it.
- **Recalibrate.** Whether you agree or disagree with the decision, you're given another opportunity to retool your analysis and recommendations based on the audience's feedback. You wouldn't be getting another shot if they didn't see some potential or passion. By reworking your analysis approach, you might be able to generate a more favorable outcome the next time around.
- **Escalate.** There may be times where you passionately disagree with a particular decision and know that your findings and recommendations will never be accepted by a particular group. At this point, you may consider going over their heads to their manager. You need to carefully consider the repercussions of such a move as it can ruin working relationships. Document their resistance and proceed with caution.

In most cases, a thumbs down represents an opportunity to improve either yourself or your ideas. With experience you'll know when to take a potentially career-threatening stand versus when to lick your wounds and move on. Even though you didn't come out with the victory, what's most important is that you gave it your best effort. Otherwise, your greatest regret will come from knowing you could have done more.

How to Handle a Thumbs Up

After learning that the marketing team has decided to move forward with your recommendations, you need to contain your excitement and focus on the next critical stage of your mission: execution. Winning the buy-in of management for your idea is a major accomplishment and milestone. However, business is littered with plenty of great ideas that were poorly executed (such as the fourth installment in the Indiana Jones series). Although you may not be able to completely control the execution of your recommendations, you're still in a strong position to contribute to their success. Here are some suggestions for how you can influence the successful execution of your ideas:

- Verify the technical or business team responsible for implementing the optimization understands its objectives and requirements as well as the estimated value to the business (prioritization).
- Follow up on the project's progress to ensure nothing unnecessarily delays its completion such as scope creep or re-prioritization.
- Be available to answer any questions that arise during the execution phase and keep tabs on any frontline resistance (sabotage) that may develop as the changes are about to be introduced.
- Ensure proper tagging will be in place to measure the success of the optimization and assist with any data validation prior to launch.

Your involvement during the execution stage needs to go beyond mild curiosity as your proposed enhancements are still at risk until they are finally launched (shipped). To borrow an analogy from American football, the pre-decision and execution phases are the red zone of web analytics. You're in an advantageous position where your team should score a touchdown. All your previous hard work will be erased, however, if you're unable to push the football through those last 20 yards and into the end zone. Don't fumble on the one-yard line. Staying the course during this critical late stage will minimize the resistance points in the following ways:

- **Get it.** Answering last-minute questions will help your audience to better understand your findings and recommendations.
- **Like it.** Follow-up analyses and testing can further emphasize the potential benefits of the recommendations and increase the key stakeholders' interest in pursuing them.
- **Trust it.** Clarifying concerns or issues related to the data as well as positive test results will ensure the managers are confident in relying on the numbers to form their decisions.

Close the Loop

"The more you are willing to accept responsibility for your actions, the more credibility you will have."

– Brian Koslow

Once you've mobilized the troops around your recommendations and shipped them, you may be ready to tackle the next challenge. You still have one last task to do, however, to close the loop on the entire process. Some people may consider this stage as optional, but I feel it's fundamental to your success as an action hero: Do a final analysis that isolates the actual impact of your recommendations. After running through your analysis, you may discover that the business value generated by your recommendations is higher or lower than expected. If the difference is significant between your original estimate and how the optimization is trending toward that target, you're going to want to understand why. Digging into the gap early could help to troubleshoot a problem before it becomes a serious issue. On the other hand, if there's an unexpected overachievement, you'll want to drill into it further so you can gain valuable insights that can benefit other projects.

Regardless of the results, the team that approved the optimization will appreciate your diligence in reporting back on its progress. Peter Drucker noted, "Checking the results of a decision against its expectations shows executives what their strengths are, where they need to improve, and where they lack knowledge or information." By showing executives the impact of their decisions, you'll be able to build further credibility with them, credibility that can pay dividends on future projects. You're also ready to discuss the next opportunities for optimization with the executive as you seek to form a mutually beneficial relationship.

Evangelize Your Success

TIP Create a one-slide summary for each new win, outlining the challenge, solution, and benefit. In terms of length, think two-minute elevator pitch, something you can share on a moment's notice. Keep them handy on your laptop or tablet device. Not only will these stories be useful in your annual review, but they can be shared internally easily, go viral, and pave the way for future projects and success.

You're not just analyzing the impact of your recommendations for other people; you've got a stake in the numbers too. Each win or success builds your internal reputation as an action hero, which in time can bring more career options, higher financial rewards, challenging high-profile projects, greater strategic focus, more resources, and more advanced tools. In order to win greater recognition within your company, you'll want to evangelize the successes of each team that works with you. By promoting their success, you're not only cementing your relationship with the team, but you're indirectly promoting yourself.

In the beginning your initial quick wins will cause a small ripple through your organization, but then with each bigger and bigger success your momentum will build until you're a walking legend within your marketing department, maybe even your company. It will be a little awkward when you find your picture sitting on your CMO's desk in front of her family pictures. Such is the fate of an action hero who is *trusted* to be a major catalyst for action. Your work is never done and

in most cases the opportunities will just keep getting larger and larger. In the next chapter, you'll examine some pragmatic analysis scenarios and techniques that can assist you in your online analysis adventures.

ENDNOTES

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CHAPTER 7

ANALYSIS IN ACTION

"Knowledge is of no value unless you put it into practice."

– Anton Chekhov

Each action hero is a master of his or her unique domain. While the movie action hero's areas of expertise span everything from archaeology to forensics to espionage, your domain is the Internet. Although the field of web analytics established its roots with measuring traditional web-related content (websites, banner ad campaigns), it now encompasses the measurement of everything from mobile apps to Internet-connected devices (including your refrigerator). Increasingly you're seeing more offline data tied to online data as well as more quantitative data being combined with qualitative data. It's not your older brother's web analytics any more. In this chapter, you'll learn about the four main zones of online analysis, as well as techniques that will help you to extract key insights from each area.

Get in the Zone

While we can't always anticipate what curve balls the Internet will throw at us (which you have to admit is part of the fun), the fundamentals don't change. The general principles that help us to analyze websites and campaigns can in most cases be applied to emerging domains as well (mobile, social, apps). So

despite the constant evolution of the Internet, most online analysis still falls into four main zones (**Figure 7.1**):

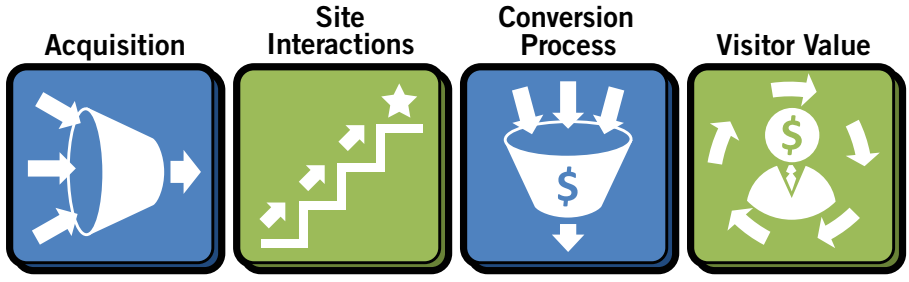


FIGURE 7.1 Most online analysis falls into one of these four major analysis zones.

- **Acquisition.** Whether or not they leverage online marketing, most companies want to know where their visitors come from. Acquisition encompasses all marketing campaigns, referrals, organic search, direct traffic, and so on. If your company is spending money on various marketing channels, it will want to bring the right prospects to your site in the most cost-effective manner.
- **Site Interactions.** When visitors arrive on its site, your company wants to understand what they're doing. What content do they look at? Which features or tools do they use? What paths do they take? What tasks (micro-conversions) do they attempt and complete? Your company will mainly want to understand which content is influencing or driving the desired outcome of the site (end conversion).
- **Conversion Process.** Often visitors must pass through a multiple-step process (registration, checkout) to reach the website's final conversion (lead, purchase). This process frequently represents a critical path within your website that requires special attention. Your organization will want to reduce attrition points throughout the process and maximize the number of end conversions generated.
- **Visitor Value.** Not all visitors and customers are created equal. Rather than focusing on visitors based from a single visit perspective, your company will want to understand the multiple-session behaviors of its visitors as well as their lifetime value. The goal is to maximize the marketing return by focusing on your best customers and driving repeat business.

- In terms of mastering the online domain for your company, you also need an understanding of the unique aspects of your industry and your company's online business model. **Table 7.1** provides a side-by-side comparison of three common business models across the four analysis zones. While the means (approaches) may change or evolve, the ends (goals) will stay the same for these three business models.

TABLE 7.1 Online Business Models by Analysis Zones

BUSINESS MODEL	GOALS	ACQUISITION	SITE INTERACTIONS	CONVERSION PROCESS	VISITOR VALUE
E-commerce	Maximize revenue from orders	Marketing effectiveness (lower acquisition costs, increase revenue)	Product detail views, cart adds, finding methods (browse, search, internal promotion, merchandising, refinements), site features (ratings and reviews, zoom, catalogs, virtual models)	Purchase (orders), cart opens, checkout, basket mix	Return customers, customer loyalty
Publishing/ Media	Maximize ad revenue from impressions	Marketing effectiveness (lower acquisition costs, increase ad revenue)	Page views, video views, time spent on site, engagement, site feature usage (gallery, blogs, social sharing)	Ad/content consumption, registrations, subscriptions	High-value audiences, return frequency
Lead Generation	Maximize qualified leads which convert into offline sales	Marketing effectiveness (lower acquisition costs, increase qualified leads)	Product detail views, downloads, demo views, store locator usage, product configurations, and so on	Lead form starts, lead form completions (inquiries), marketing qualified leads (MQLs)	Potential and closed lead value, lifetime value

Good, Better, and Best

Every company is at a different stage in its data-driven journey. Some organizations may have had web analytics solutions for some time but have only scratched the surface of what it can do for them. Other companies may have refined their online measurement strategies and tactics significantly over the years to the point where they have integrated data from various systems to create clearer and more holistic pictures of online performance. Most likely whatever your company is measuring today can be improved in some way. **Table 7.2** shows how companies with various business models can progress from a good approach with web analytics to becoming best-in-class.

"Good, better, best. Never let it rest. 'Til your good is better and your better is best."

– St. Jerome

TABLE 7.2 Online Business Models by Maturity Level

BUSINESS MODEL	GOOD	BETTER	BEST
E-commerce	Optimize online performance based on revenue, orders, and conversion rates.	Integrate data for cost of goods sold, returns, cancellations, fraudulent orders, and shipping costs. Optimize online performance based on margin.	Create a multichannel, 360-degree view of customers across both its online and offline channels (if applicable), which enables retailers to deliver the right message to the right customer at the right time through the right channel.
Publishing/Media	Optimize audience engagement and content consumption.	Target specific audiences, personalize the content to their interests, and sell these audiences to advertisers.	Maximize ad revenue by delivering highly targeted audience profiles based on advertiser interests at a high CPM premium.
Lead Generation	Optimize online performance based on micro-conversions, leads, conversion rates, and cost per acquisition.	Focus on lead qualification, lead scoring, and automated lead nurturing as well as tying leads to pipeline, closed sales, and revenue.	Focus on potential lifetime value of prospects and customers as well as targeting specific audience segments with the right offers based on their unique attributes and behaviors.

As a web analyst, you're uniquely equipped to help this progression from good to best. A prime way is to be aware of the blind spots in your analysis, which can translate into future opportunities for richer data insights down the road. For example, what if you optimized your marketing campaigns by gross margin instead of revenue or by the anticipated lifetime value of a customer instead of a one-time sale? These simple changes in perspective could dramatically affect how your company approaches its marketing initiatives.

Frequently in web analytics, moving from good to better or better to best requires additional data from transactional, CRM, ad serving, and financial systems. Momentum-building wins from your existing data will help you generate the interest and backing for these types of data integrations. Once your company has extracted significant value from its current data, your leadership team will be more amenable to enriching the existing data through other data integrations.

Learn by Example

Far too many companies are still struggling to build momentum with their web analytics programs, so the remainder of the chapter provides practical analysis examples (good) rather than aspirational ones (better, best). Once you master the

practical techniques in these examples, you'll be within striking distance of entering the "better" realm of Actionland and then progressing to "best."

Each example presents a common problem, illustrated by a typical business scenario. You'll learn specific steps to drill into the particular problem, as well as the sort of observations you can draw from sample data you're likely to find. Finally, you'll learn about potential avenues for deeper analysis or subsequent actions to solve the problem at hand.

As you read through the scenarios, remember

- Although based on practical, real-world scenarios, the examples use fabricated data to expediently illustrate each technique. Applying the same technique in your analysis efforts may require more work, determination, and creativity to find the nuggets.
- The suggested approach isn't the only one. You many want to adapt the steps or go at the data from a different angle entirely to meet your company's specific circumstances and needs.
- The examples use Adobe SiteCatalyst 15, but most of the techniques and solutions are possible with out-of-the-box functionality available in many web analytics tools. Once again, with a little determination you can adapt the technique to your clickstream tool.
- Your website's implementation will also influence your analysis possibilities. With only a few minor exceptions, most of the examples illustrate data that should be obtainable from standard implementations.
- These scenarios will focus exclusively on the analysis techniques. Rather than watching an entire movie, you're going to watch a rapid-fire series of action scenes. All of the key principles of the Action Hero Framework, such as identifying priorities and monetizing your recommendations, still apply but aren't explicitly covered in each scenario.

The main goals of the analysis scenarios that follow are to inspire you in your own endeavors and provide you with practical analysis opportunities that you can leverage immediately at your own company. As you read the scenarios, consider how the concepts and techniques can be extended and applied to other analysis situations or your specific industry. As you work toward becoming a full-fledged action hero, keep some form of these techniques in a handy location in your analyst toolbox.

"In the fields of observation chance favors only the prepared mind."

– Louis Pasteur

TIP If your web analytics team has more than one analyst and you're routinely performing the same types of analysis, you should consider standardizing on a particular analysis technique so that different analysts aren't introducing variance simply because they're using different methods to perform the same analysis.

Acquisition Analysis Examples

Acquisition is all about getting as many of the right people (potential first-time customers) to your website as possible through paid and organic means. Your marketing campaigns and website are interconnected and need to be aligned. If your company's acquisition tactics attract the wrong visitors (mismatched demographic), its website will struggle to convert them no matter how good the site. On the other hand, if viable prospects encounter bad navigation, poor messaging, or weak design, fewer of those visitors will convert through no fault of the acquisition approach. The success of your acquisition strategy depends on effective targeting, timing, and communication.

As a web analyst, your job in the Acquisition zone is to analyze which approaches are working and which aren't. The marketing costs associated with your acquisition efforts are a crucial input when evaluating the effectiveness of different channels. You need to balance the volume of traffic generated with conversion and cost effectiveness. Finally, as different marketing channels touch and influence prospects at various stages in the acquisition process, attributing appropriate credit to the marketing channels may be important. Examining the performance of different channels by purely a last-click attribution model can hide the valuable contributions of acquisition tactics that generate the initial awareness among potential customers. The following acquisition scenarios illustrate four different areas of analysis—marketing channels, marketing campaigns, paid search, and traffic source—that you can use to evaluate the performance of your online acquisition tactics.

NOTE Marketing attribution is a deep topic for which many companies are exploring and developing custom models based on first-click, linear, last-click, and other approaches. With the limited space in this book, I'm not going to delve into this topic other than to recommend that your company settle on a single attribution model for company-wide reporting. You need to establish one version of the truth or else you'll end up with multiple versions that, not surprisingly, make each channel look good. In terms of your analysis, you can explore marketing mix questions with other attribution models to better understand the true relationship between the channels.

How Can I Optimize Our Marketing Channels?

Scenario: You work for a car manufacturer that is gearing up to launch a new hybrid sports car and wants to determine the optimal marketing channels for its product launch campaign. With the average car-buying process taking around six months to complete, you know that your customers will move through different awareness, consideration, and purchase preparation phases.

Matching the right channel to the appropriate stage in the buying cycle is important to your analysis. You've identified desired outcomes for each of the three phases: model homepage views (awareness), product comparisons (consideration), and request-a-quotes (purchase preparation). To understand how your marketing channels are optimized against these key outcomes:

1. Access your Marketing Channel report (last-click attribution), select the appropriate date range, and add the following metrics: visits, model homepage views, product comparisons, and request-a-quotes.

TIP As you'll see, throughout the example scenarios I repeatedly recommend you sort your reports by volume (highest to lowest). If you focus on the ratios only, you can lose valuable perspective on which pages, products, or campaigns can really move the needle.

2. Create conversion rates for each outcome (model views/visits, prod comps/visits, and quotes/visits), and add them to the report.
3. Sort your campaigns by visits to keep perspective on which channels are driving the most traffic volume to your site.

DRILLING INTO THE DATA

Enter term to filter data | Go | Advanced | Add Metrics

Marketing Channels	Visits ▼		Model Views		Model Conv.	Prod Comps		Prod Conv.	Quotes		Quo Conv.
1. Typed/bookmarked	3,403,399	40.0%	258,971	49.6%	7.6%	109,746	21.0%	3.2%	87,541	16.8%	2.6%
2. Natural Search	1,299,656	15.3%	67,125	12.9%	5.2%	62,458	12.0%	4.8%	13,487	2.6%	1.0%
3. Display Ads	1,208,827	14.2%	65,411	12.5%	5.4%	68,951	13.2%	5.7%	14,754	2.8%	1.2%
4. Paid Search	1,108,291	13.0%	43,559	8.3%	3.9%	79,566	15.2%	7.2%	11,478	2.2%	1.0%
5. Social Media	768,501	9.0%	64,879	12.4%	8.4%	22,419	4.3%	2.9%	5,477	1.0%	0.7%
6. Email	456,899	5.4%	21,005	4.0%	4.6%	15,420	3.0%	3.4%	6,144	1.2%	1.3%
7. Mobile Ads	87,390	1.0%	1,249	0.2%	1.4%	982	0.2%	1.1%	214	0.0%	0.2%

FIGURE 7.2 In this report, you can see how different channels drive outcomes for different phases of the car buying process.

In this example, the campaign is concentrated on generating awareness for the new hybrid sports car so the main focus is on generating model homepage views (model views). Looking at the various channels by the model view conversion rate (**Figure 7.2**), you see that social media is the best channel for driving awareness (8.4%). Paid search is the most effective channel in the consideration phase of the buying process when visitors use the vehicle comparison tools (7.2%). Finally, the direct or typed/bookmarked channel is the most effective at driving request-a-quotes (2.6%).

Sometimes you can learn even more valuable insights by breaking a broad category, such social media, into more specific constituents. For example, you decide to dig into the behaviors of visitors coming from specific social sites by selecting the social media channel in the Marketing Channel report and breaking it down by Social Media Site (or Referring Domain). In this case, you have additional metadata on your channels that enables you to drill into the groupings to gain deeper insights.

Enter term to filter data | Go | Advanced | Add Metrics

Marketing Channels by Social Media Sites	Visits ▼		Model Views		Model Conv.
1. Social Media	**768,501**		**64,879**		**8.4%**
1. Facebook	356,877	46.4%	25,428	39.2%	7.1%
2. Twitter	178,569	23.2%	25,104	38.7%	14.1%
3. Youtube	102,456	13.3%	4,974	7.7%	4.9%
4. Flickr	67,451	8.8%	3,511	5.4%	5.2%

FIGURE 7.3 Drilling into the metadata enables you to see the traffic volume and conversion rates for specific social sites.

When you drill into the social media channel (**Figure 7.3**), you discover that both Facebook and Twitter drive about the same percentage of the model views (39%) but Twitter actually has a higher conversion rate (14.1%). In addition, the traffic volumes are decent and should continue to grow. Even if the conversion rates are good, you still might hold off investing in a particular channel if the traffic volume is too small.

TAKING IT FURTHER

Here are some additional ideas for enriching your marketing channel analysis:

- Don't stop at the first level of breakdown (social media site) when there are still insights to be discovered. For example, you could investigate the Tweet Author reports to determine if specific influencers are driving the bulk of the model homepage viewing traffic.
- As a campaign shifts emphasis from one phase to another phase (awareness to consideration), make sure to leverage the appropriate channels (paid search for consideration in this example).
- Consider analyzing the segment of your visitors who have shown an interest in similar content in the past (hybrid vehicles, sports cars). Identify popular marketing channels, keywords, product content, and so on to better target your upcoming marketing campaigns.
- Determine the approximate costs of each channel to identify lower-cost channels that provide greater bang for your marketing dollars.

How Can I Optimize Our Marketing Campaigns?

Scenario: You work for an outdoors equipment company that has made significant investments in various online marketing campaigns this year. You need to determine how your company can better maximize its marketing spend to close out the current quarter strongly.

To assess the performance of your current marketing campaigns, you need cost and potentially ad impression data for your various marketing executions, not just the conversion data collected in your web analytics tool. Starting with the most granular campaign unit, individual tracking codes, you investigate what's happening with your marketing campaigns:

NOTE In most cases, you start at a higher level and then drill down into the more granular data. Here I'm jumping right into the low-level data for illustrative purposes.

1. Access your Campaign Tracking Code report, select the correct date range, and add the following metrics to the report: visits, orders, revenue, and bounce rate (if available).

2. Download the data into a Microsoft Excel spreadsheet, and add the acquisition marketing cost, impressions, and clicks for each campaign tracking code if these metrics are not integrated with your tracking code report.
3. Create calculated metrics for conversion rate (orders/visits), average order value (AOV = revenue/orders), revenue per visit (RPV = revenue/visits), cost per order (marketing cost/orders), and return on ad spend (ROAS), which is (revenue – marketing cost)/marketing cost.
4. Sort your campaigns by revenue (highest to lowest) so that you don't lose focus on the campaigns that are driving the most revenue for your company.
5. Apply Excel's conditional formatting (color scale) to each column in your worksheet. Make sure you inverse the color scale for cost per order (low is green, high is red).

NOTE Although not as potent as ROI, which requires cost of goods sold (COGS), ROAS is the next best indicator of which campaigns are successful. If you don't have the necessary cost data for calculating ROAS, you focus on the three metrics of conversion rate, AOV, and RPV. If your average cost per click ever exceeds the RPV, then you know you're losing money (at least on a per click/visit basis).

DRILLING INTO THE DATA

Looking at the ROAS column (**Figure 7.4**), you notice a couple campaigns are not performing very well (rows 4 and 10). The sem-hiking-j6757 campaign's marketing costs (row 4) are exceeding its generated revenue; that's never a good sign, especially for one of your top revenue-generating campaigns. In turn, a couple of the campaigns stand out as strong performers with high return on ad spend (rows 5 and 7). How can you optimize these campaigns?

	Tracking Code	Revenue	Orders	Visits	Conv. Rate	AOV	RPV	Cost per Order	ROAS
1	ban-oakley-t145	$132,066	1,380	73,671	1.87%	$ 96	$ 1.79	$38	152%
2	ban-cycling-g665	$79,796	903	41,887	2.16%	$ 88	$ 1.91	$42	110%
3	sem-climb-j2334	$26,033	267	13,825	1.93%	$ 98	$ 1.88	$56	74%
4	sem-hiking-j6757	$22,522	295	24,211	1.22%	$ 76	$ 0.93	$80	-5%
5	ban-camping-i112	$20,847	241	13,873	1.74%	$ 87	$ 1.50	$14	518%
6	ban-climb-i343	$13,344	127	10,381	1.22%	$ 105	$ 1.29	$51	106%
7	ban-running-y337	$10,101	91	9,819	0.93%	$ 111	$ 1.03	$23	383%
8	sem-camping-j7881	$9,948	53	5,319	1.00%	$ 188	$ 1.87	$97	94%
9	sem-cycling-j2311	$9,862	93	9,667	0.96%	$ 106	$ 1.02	$45	136%
10	sem-golf-j388	$9,037	86	9,059	0.95%	$ 105	$ 1.00	$85	24%

FIGURE 7.4 In lieu of ROI, ROAS helps you to determine how campaigns are performing.

The two levers that marketers control are the actual ads (creative, placement) and landing pages. You can measure the throughput from your online ads by the click-through rate (CTR or clicks/impressions) and evaluate the performance of your landing pages by bounce rates. In **Figure 7.5**, you notice that the high-performing ban-camping-i112 campaign (row 5) has a low CTR. If the banner ad creative or placement can be improved, the extra visits might lead to more revenue. In the case of the poor-performing sem-hiking-j6757 campaign (row 4), a couple of

things may be affecting its performance. The keyword ad might be misaligned with what you're selling, needlessly wasting ad spend and lowering the campaign's conversion rate. Alternatively, the high bounce rate might indicate there's a problem with the landing page.

FIGURE 7.5 Two levers that marketers control are the ads and landing pages.

	Tracking Code	CTR	Bounce Rate	Conv. Rate	AOV	RPV	Cost per Order	ROAS
1	ban-oakley-t145	1.41%	71%	1.87%	$ 96	$ 1.79	$38	152%
2	ban-cycling-g665	1.12%	56%	2.16%	$ 88	$ 1.91	$42	110%
3	sem-climb-j2334	1.65%	69%	1.93%	$ 98	$ 1.88	$56	74%
4	sem-hiking-j6757	2.90%	86%	1.22%	$ 76	$ 0.93	$80	-5%
5	ban-camping-i112	0.67%	73%	1.74%	$ 87	$ 1.50	$14	518%
6	ban-climb-i343	0.97%	67%	1.22%	$105	$ 1.29	$51	106%
7	ban-running-y337	1.24%	74%	0.93%	$111	$ 1.03	$23	383%
8	sem-camping-j7881	2.13%	81%	1.00%	$188	$ 1.87	$97	94%
9	sem-cycling-j2311	1.79%	69%	0.96%	$106	$ 1.02	$45	136%
10	sem-golf-j388	2.10%	89%	0.95%	$105	$ 1.00	$85	24%

TAKING IT FURTHER

Here are some additional suggestions for augmenting your marketing campaign analysis:

- Propose testing new ad creative or placements for campaigns with weak CTR (ban-camping-i112) to increase the volume of traffic.
- Check on any keyword ads with high bounce rates (sem-hiking-j6757) to verify that they are properly targeted and aligned with the featured products on the landing page.
- Based on the targeted keywords, determine if the landing page appears to have any issues. Explore the paths successful purchasers are taking to identify potential clues to the hurdles that may be causing the high bounce rate among less persistent visitors.
- Test different enhancements to the underperforming landing page to see if the bounce rate can be reduced in order to drive more sales.
- Consider evaluating campaigns by different groupings (metadata) such as channels, product categories, brand/non-brand, offer types, and so on to identify problems and opportunities across multiple campaigns.

NOTE If you haven't set up metadata (classifications) for your campaign data, you're missing out on lots of valuable insights. Metadata enables you to group the campaign tracking codes (and other data) into various aggregations (search engine, ad group, placement, and so on) to provide unique insights into different slices of your campaign data.

How Can I Optimize Our Paid Search Campaigns?

Scenario: Your school uniform company is right in the middle of its annual back-to-school promotions. Paid search advertising is a key component of your marketing strategy. With the start of the school year on the not-too-distant horizon, the competition for various keywords is heating up. As the search marketing

manager, you decide to see how you can improve the Google Adwords campaign results and maximize your company's ad spend. When analyzing the various ad groups you discover the broad-match ad group for "school uniforms" is a good place to start because its conversion rate is 20% below the average rate for other ad groups. When you bid on certain phrases using the broad match setting in Google Adwords, the actual search phrases vary for each visitor ("cheap school uniforms" versus "school uniforms california").

Some keyword phrases might be better targets for a separate exact or phrase match approach and others may contain clues for possible negative keywords that can be used to avoid unnecessary costs. To help identify potential keyword optimizations, try these steps:

1. Select the appropriate Ad Groups report (campaign metadata), select the appropriate date range, and add the following metrics: visits (or click-throughs), orders, conversion rate (orders/visits) and AOV (revenue/orders).
2. Sort the report by visits (or click-throughs) to understand the volume of traffic coming through on specific keyword phrases.
3. Break down the Ad Groups report by your Search Keywords report.

DRILLING INTO THE DATA

Focusing on the top-ten search phrases for the broad match "school uniforms" ad group (**Figure 7.6**), you quickly identify some optimization opportunities.

Enter term to filter data | Go | Advanced | Add Metrics

Adword Groups by Search Keywords - All	Visits ▾		Orders		Conv. Rate	AOV
1. BRD: school uniforms	67,854		1,939		2.9%	$122
1. school uniforms	17,657	26.02%	701	36.15%	4.0%	$115
2. school uniforms for girls	8,762	12.91%	501	25.84%	5.7%	$155
3. cheap school uniforms	7,653	11.28%	370	19.08%	4.8%	$98
4. school uniforms debate	6,541	9.64%	18	0.93%	0.3%	$71
5. nursing school uniforms	6,421	9.46%	4	0.21%	0.1%	$89
6. school girl uniform costume	4,392	6.47%	5	0.26%	0.1%	$102
7. charter school uniforms	4,105	6.05%	175	9.03%	4.3%	$147
8. school cheerleading uniforms	3,219	4.74%	5	0.26%	0.2%	$92
9. school uniforms cons and pros	2,186	3.22%	12	0.62%	0.5%	$65
10. military school uniforms	1,522	2.24%	1	0.05%	0.1%	$75

FIGURE 7.6 Breaking down this broad match ad group by the actual search keywords used, you can identify specific keywords that should be avoided or targeted more aggressively.

First, you notice several low-converting keyword phrases and isolate potential negative keywords (nursing, cheerleading, costume, military) as your company doesn't carry any products that match these categories. You also might consider creating

negative keywords for "cons and pros" and debate (rows 9 and 4) if they had a high cost-per-click (CPC). Second, you notice that some particular phrases convert well and have a high AOV. You might want to consider creating exact phrase match ad groups for these phrases (rows 2 and 7) and creating more targeted text and landing pages to increase the conversion rates and relevancy (something Google actually rewards with lower CPC and higher average positions).

TAKING IT FURTHER

Here are some additional ideas for optimizing your paid search campaigns:

- Review other broad and phrase match ad groups to identify similar ways of reducing pay-per-click costs, increasing relevancy, and maximizing revenue.
- Revisit your broad and phrase match ad groups on a regular basis to find potential candidates for negative keywords or exact match opportunities that have surfaced since your last review of the keywords.
- Based on the keyword phrase analysis, evaluate the opportunity of expanding your company's product line to include other categories that you may not be currently serving. Create targeted ad copy and landing pages for these different markets to increase relevancy and conversion rates.

What Caused the Spike in Traffic on My Site?

Scenario: Your newspaper's technology editor was surprised by a spike in page views on the technology section of the paper's website yesterday (Tuesday, April 5), and she would like you to investigate what happened. The editor made some fairly dramatic changes to the direction of her team's content, and she's very interested in knowing if they're finally starting to pay off.

When you look at trended traffic reports (last 28 days) in the tech site section's dashboard, you notice that the visitors increased by 300% and average page views per visit jumped by more than 55%. What caused this spike, and what insights can you extract from the event for the editor? To begin your investigation:

1. Run the Pages report with the page views (or visits) metric, create a filter or segment for just visits to the technology pages, and run a comparison of yesterday against the same day last week (April 5 versus March 29).
2. Sort the results by the date of the spike (April 5) first to isolate the pages that experienced the highest number of page views. Don't simply sort by change: If the page didn't exist before the spike, then it won't appear in your report (you can't divide by zero). If you know the page existed on both the spike day and a specific previous date, you'll want to see which pages experienced the

biggest change in page views between the two dates (consecutive Tuesdays in the example). As you can see in **Figure 7.7**, a recent article on popular iPad accessories experienced a massive percent change. You've discovered the effect and now you need to find the cause.

	Page	29 Mar. 2011 Page Views		5 Apr. 2011 Page Views		Change ▼	
1.	tech:gadgets:cool-ipad-accessories-you-need	21,099	19.2%	345,678	75.8%	324,579	1538.4%
2.	tech:news:us-consumers-spending-more-on-electronics	17,839	16.2%	5,869	1.3%	-11,970	-67.1%
3.	tech:news:more-tech-ceos-leaving-positions	15,637	14.2%	4,839	1.1%	-10,798	-69.1%
4.	tech:gaming:assassin-creed-brotherhood-review	11,292	10.3%	2,467	0.5%	-8,825	-78.2%
5.	tech:gadgets:overview-of-best-gps-devices	9,087	8.3%	4,322	0.9%	-4,765	-52.4%
6.	tech:apps:five-must-have-android-apps	9,034	8.2%	10,929	2.4%	1,895	21.0%

FIGURE 7.7 By comparing the two dates you can more easily see significant changes in traffic to different pages.

3. Go to the Referring Domain report (instances metric) and use the same date comparison to isolate the change in different traffic sources. You notice a large change in traffic from Typed/Bookmarked (direct traffic) and blogspot.com.
4. Run the Referrers report with the same date comparison and filter the report for just the page that experienced the large increase (iPad accessories). Sort the report by the most recent date (because the specific referring URL might not have been available the week before) to see the largest swings in instances. The data quickly points to a blog post on technobuzzalo.blogspot.com as the source of the traffic spike.
5. Visit the referring URL to learn more about its author, content, and specific link to your company's page, in this case the iPad accessories article.
6. Create a segment for people who entered the site from this referring post on this specific day to better understand their specific site behaviors.

DRILLING INTO THE DATA

Through the Referrers report (**Figure 7.8**), you're able to identify the Technobuzzalo blog post as the source of traffic to your newspaper's technology section. When you check out the Technobuzzalo article, you discover that the author is a prolific technology blogger with a significant following on Twitter. From his recent postings on Twitter, you determine that he tweeted your iPad accessories article before he posted his thoughts on the subject, which explained the increase in Typed/Bookmarked traffic most likely coming from various Twitter clients. Using the segment that you created of the specific traffic coming from Technobuzzalo,

you find that these visitors averaged 3.9 page views per visit (almost double the average for the tech site section).

FIGURE 7.8 The Technobuzzalo blog post was the traffic source that drove the spike on April 5th.

Enter term to filter data | Go | Advanced | Add Metrics

	Referrer	29 Mar. 2011 Instances		5 Apr. 2011 Instances		Change	
1.	http://technobuzzalo.blogspot.com/ipad-essentials-overview.html	0	0.0%	318,382	87.3%	0	0.0%
2.	http://www.google.com/	14,527	13.2%	15,439	4.2%	912	6.3%
3.	http://www.cnn.com/TECH/index.html	11,939	10.9%	10,393	2.8%	-1,546	-12.9%
4.	http://www.gizmodo.com/tech-list.html	6,703	6.1%	7,902	2.2%	1,199	17.9%
5.	http://www.bing.com/	5,401	4.9%	7,494	2.1%	2,093	38.8%
6.	http://www.engadget.com/ipad-talk.html	3,991	3.6%	3,828	1.0%	-163	-4.1%

TAKING IT FURTHER

Here are some additional ideas for augmenting your traffic source analysis:

- Create a daily or weekly "movers and shakers" report to capture significant changes in traffic levels to different pages or site sections.
- Research the social influence (Klout or Kred score) of bloggers and Twitter authors (like Technobuzzalo) that are driving significant traffic to your site. Start following them on Twitter and retweeting their posts as appropriate.
- Consider reaching out to key referrers to form more formal relationships or partnerships. For example, in the case of Technobuzzalo you might feature him periodically as a featured guest writer and collaborate on new content ideas.

With all these new visitors to its website, your company is now interested in their online behaviors.

Site Interactions Analysis Examples

Organizations want to understand how visitors interact with their company's websites, apps, and so on. On one side, companies have specific objectives that they want to accomplish, such as generating a return on their online investment. Meanwhile visitors have a specific goal in mind for each visit, such as to find information, get support, be entertained, purchase an item, and so on. Essentially, when you look at the broad range of interactions happening across your website, you can approach your analysis opportunity from two angles:

- **Objective-based.** How can my company get visitors to do more of *what the company wants them to do*?
- **Customer-centric.** How can my company help visitors to achieve *what they want to do*?

Often the two perspectives can align. When they don't, you need a balanced approach. The danger of measuring and analyzing site interactions is the limitless measurement possibilities. The Site Interactions zone is plagued by nice-to-know, actionless reporting and analysis, so stay alert to how your analysis can drive action and value. The following seven scenarios represent valuable forms of site interaction analysis for landing pages, paths, page effectiveness, products, internal promotions, broken links, and internal search.

NOTE Although I won't focus on engagement in this section, it represents a subset of site interactions that are deemed to indicate how engaged visitors are by the online content. I typically find engagement scores to be subjective, overly complex, and difficult to interpret and act on.

How Can I Improve a Particular Landing Page?

Scenario: As the online marketing manager for a private online college, you're tasked with ensuring the online campaigns and content is driving prospective students to the sales team. Under the direction of a new college president, the number of online degrees has expanded fourfold over the last 18 months. Promoting and launching multiple degree offerings over a relatively short period of time meant a hectic pace for your marketing team; you've been juggling multiple web design contractors while trying to meet the demands of diverse education programs. Finally, the rush of new offerings has subsided.

You decide to analyze the performance of the various landing pages to determine how they can be optimized:

1. Run the Pages report with a landing page filter using the entries and bounce rate metrics. (Or, if your web analytics tool offers it, simply run the Landing Pages report.) The bounce rate metric (single-page visits/entries) informs you of how many people entered the landing page but did not progress any deeper into the website, essentially bouncing back to where they came from. The higher the bounce rate, the more visitors you have who are not progressing beyond the first page they see.
2. Sort the report by entries, and then work down the list of landing pages comparing each page's bounce rate against the site average for your landing pages (61.7%). Through this process you identify that the new MBA landing page has a bounce rate that is 35% above the site average for other landing pages (**Figure 7.9**).

TIP Be careful about measuring your landing pages against a supposed "industry standard" for bounce rates. Many different factors can influence bounce rates (product, industry, target audience), so they can vary widely from site to site. Instead use an internal benchmark and work on reducing your bounce rates over time.

landing: Go Advanced Add Metrics

	Page	Entries		Bounce Rate
1.	landing:ugrad:nursing	15,680	9.2%	65.0%
2.	landing:ugrad:accounting	15,051	8.9%	54.3%
3.	landing:ugrad:criminaljustice	13,791	8.1%	62.8%
4.	landing:ugrad:compsci	13,553	8.0%	57.6%
5.	landing:mast:mba	10,977	6.5%	83.0%
6.	landing:ugrad:multimediadesign	8,152	4.8%	64.5%
7.	landing:mast:eduction	7,331	4.3%	59.0%
8.	landing:ugrad:onlinemarketing	6,203	3.6%	47.2%

FIGURE 7.9 The online MBA landing page has a significantly higher bounce rate than the site average.

TIP Most campaign landing pages don't provide any navigation or internal search capabilities so that visitors aren't diverted from converting. Not all "landing pages" are a part of marketing campaigns, however, and their content may "organically" attract visitors from search engines or referral links. If you segment the visitors to these pages, look also at what internal search terms they're using to get a better sense for their intent as well as their path behaviors.

3. Create a segment for visitors to the landing page with the above average bounce rate. You next want to understand where these people are coming from.
4. Run the Marketing Channels report to get a general sense for where they're coming from, and then drill into specific reports (Search Keywords, Referrers) to verify the quality of the incoming traffic as well as the relevancy of the landing page's content to your visitors.
5. Check the actual landing page to determine what might be causing the high bounce rate (bad design/layout, slow load times, broken links or images, unclear messaging). Looking at the landing page, you see that the call-to-action buttons are at the bottom below two student testimonial videos. You may also compare it with landing pages that have better bounce rates (landing:ugrad:onlinemarketing) for additional ideas.
6. Run the Monitor Resolution report to determine the distribution of monitor resolutions for visitors. Use a monitor resolution simulator to test and experience what your customers are encountering on the landing page at various screen resolutions.

DRILLING INTO THE DATA

TIP Landing pages are often lost in the shuffle when a new site design is rolled out. They can easily fall in the cracks between marketing and web development. Consider keeping a list of all your landing pages that are currently live and checking them when doing a site refresh.

1. You discover more than 35% of your visitors to this page have a screen resolution of only 1024 by 768 or smaller. If these visitors don't scroll down the page (**Figure 7.10**), they'll very likely miss the call-to-action buttons, won't know what to do next, and abandon the website prematurely. While the Referrers report didn't turn up anything of note, you notice that the landing page is receiving a fair amount of traffic for the search phrase "online mba no gmat." Your landing page, however, clearly states applicants need to have taken the GMAT exam. The mismatched traffic from the paid search ad might also be contributing to the page's high bounce rate.

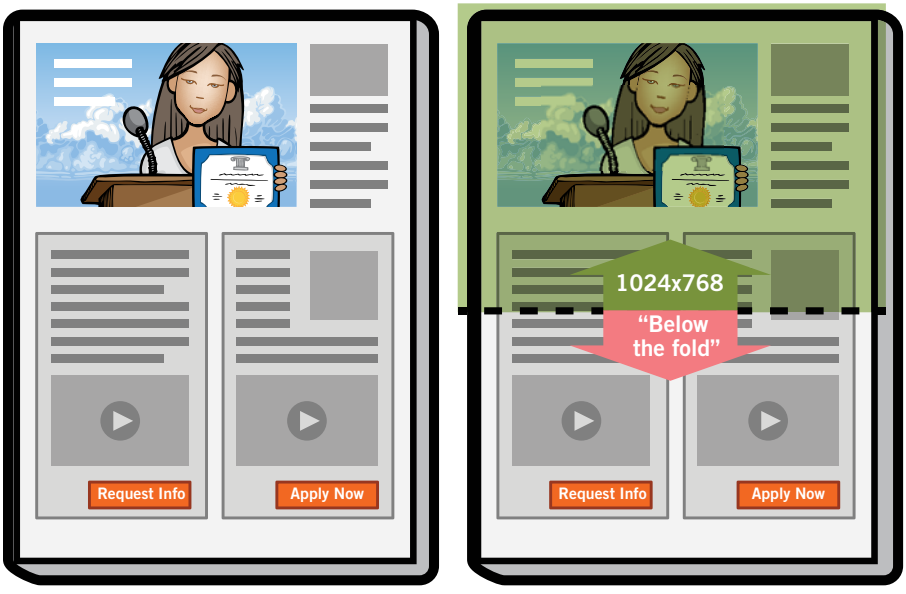


FIGURE 7.10 Many visitors using 1024 by 768 screen resolutions see a portion of the page content only, and the call-to-action buttons are well below the fold.

TAKING IT FURTHER

Here are some additional approaches for enhancing your landing page analysis:

- Test different variations of the landing page to determine whether having the call-to-action buttons above the fold helps to reduce the bounce rate or whether some other aspect of the layout, design, or content is causing the high bounce rate.
- Examine and modify the campaign creative and targeted keywords for weak-performing landing pages. Create negative keyword phrases ("no gmat") to avoid paying needlessly for unwanted clicks and visitors that are obscuring the true bounce rate.
- Consider using a content targeting solution on the landing page to improve the relevancy of the online content to different visitor segments (geographic location, keywords, campaign, and so on).

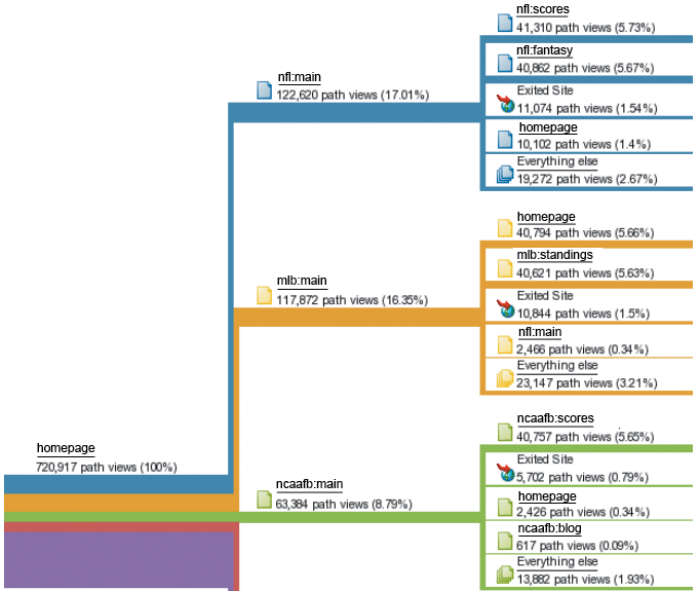
What Are the Main Paths of Our Visitors?

Scenario: Your client, a TV sports channel, is planning a major redesign of its aging website. As part of the project, the editorial team has asked your web design agency to perform an analysis of the homepage and category pages to identify ways to increase the engagement and return frequency. The editorial leadership team feels the site's average page views per visit (2.9) has significant room for improvement.

With your client placing a heavy emphasis on the importance of the homepage, you decide to start with a path analysis of this key page:

NOTE Path analysis can be handy in situations where visitors are supposed to follow a series of pages (checkout process). If you would like to know how people arrived at a specific page (such as the store locator page), you can use Previous Page Flow reports to determine its feeder pages.

1. Run the Next Page Flow report for an appropriate time period, select the Homepage as the beginning page, and filter for only entry paths (not all paths). If you're evaluating a landing page such as a homepage, you'll want to restrict the paths to just entry paths so you have a common starting or anchor point for your path analysis, which makes comparing the behaviors of similar visits easier. Without isolating the entry paths, you will have people in different stages in their visits (beginning, middle, and end) when they pass through the homepage, making it more difficult to draw clear insights on the page's impact on path behaviors.
2. Review the graphical Next Page Flow report for quick insights, and then switch to the more useful tabular view to drill into specific paths (**Figure 7.11**).



homepage

nfl:main

	Next Pages	Instances	
1.	nfl:scores	42,367	22.9%
2.	Exited Site	29,873	16.1%
3.	nfl:teams	23,848	12.9%
4.	ncaafb:main	12,838	6.9%
5.	nfl:standings	11,929	6.4%
6.	homepage	10,928	5.9%
7.	nfl:news	7,664	4.1%
8.	nfl:blog	6,748	3.6%

FIGURE 7.11 The graphical pathing report (left) may highlight significant high-level patterns in the paths while the tabular pathing report (right) is more useful for specific path analysis. The tabular pathing report shows what happened after visitors entered on the homepage and went to the NFL category page (nfl:main). The exits from the NFL category page and returns to the homepage represent undesired paths.

3. For key pages such as category pages (golf:main or nfl:main), evaluate and compare their back/exit rates from the homepage. One of three outcomes occurs when someone passes from the homepage to another page: exit the site on that page, return to the previous page (homepage), or go to another page (article pages are a good alternative; the site map or search results are undesirables). You expect and want visitors to go beyond the main category pages into more specific content, such as scores, team pages, and articles; you don't want visitors to exit the site or return immediately to the homepage. The back/exit rate reveals how often a visitor exits (disengaged) or returns to the homepage (less engaged) compared to moving deeper into the site to consume more content (more engaged). You calculate the back/exit with the formula

$$\frac{\text{(instances of returns to the homepage + instances of exits)}}{\text{total instances for the path}}$$

   Optionally, you could also add instances of the search results page as another potentially undesirable next page. It can be tedious to perform these calculations for strategic pages from the homepage, but it can pinpoint potential problem areas.

4. If you set up search origination (which reports the internal search terms that were searched from specific pages), look at what visitors searched for on the homepage; these searches might indicate content that is missing or difficult to find.

NOTE Some people may be tempted to use a heatmap tool in this scenario. Heatmap tools are best suited to static HTML pages that don't change very frequently. Most homepages and category pages are the exact opposite. They're often dynamic pages that change on a weekly and sometimes daily basis. You can set some heatmap tools to evaluate page locations rather than links, but overlaying clicks on a dynamic drop-down navigation menu is difficult. I've also seen some companies take screenshots of key pages on a weekly basis and store the click overlay data in a spreadsheet for later reference.

DRILLING INTO THE DATA

After calculating the back/exit rates for several strategic pages (**Figure 7.12**), you identify some issues with the NHL (41%) and golf (46%) category pages where the back/exit rates are higher than the average (24%) for other more popular sports categories (NFL, MLB, and NCAA football).

	Homepage to	Oct 2011			Oct 2010		
	Category Pages	Back %	Exit %	Back/Exit Rate	Back %	Exit %	Back/Exit Rate
1	nfl:main	11%	8%	19%	12%	10%	22%
2	mlb:main	7%	14%	21%	9%	12%	21%
3	ncaafb:main	12%	4%	16%	16%	6%	22%
4	fantasy:main	6%	3%	9%	7%	4%	11%
5	nascar:main	10%	14%	24%	9%	15%	24%
6	nba:main	24%	6%	30%	15%	9%	24%
7	nhl:main	20%	21%	41%	13%	9%	22%
8	golf:main	27%	19%	46%	14%	11%	25%
9	ncaabb:main	11%	10%	21%	12%	10%	22%
10	tennis:main	15%	10%	25%	16%	10%	26%

FIGURE 7.12 By determining how often people are clicking back to the homepage or exiting on the category page, you can identify a couple of category pages that are having engagement issues.

TIP Get familiar with the seasonality effects that can affect your analysis (sports seasons), especially when you're analyzing data for other geographic locations that you're not as familiar with (country- or region-specific holidays).

Your first instinct is that the difference might be explained by a seasonal effect, but you verify that the year-over-year increases are quite significant compared to last year. Although these two sports might not receive as much traffic, they are still important sections that have been attractive target audiences for advertisers in the past. You remember there were some cuts to the editorial team since last year, and you wonder if these two sections ended up bearing the brunt of those cuts.

You also notice that a lot of visitors were searching for the following terms from the homepage: mixed martial arts, mma, and ufc. The global navigation doesn't have MMA listed as a default category. You need to hover over the Other Sports category and then select MMA from a drop-down menu. You decide to perform a destination analysis to see if people across the site are struggling to find the MMA content. To set up the analysis:

1. Run the Pages report, select the right date range, and add the visits metric to the report.
2. Create and add two calculated metrics: destination visits (visits – entries) and destination visits percent (destination visits/visits). Subtracting the entries from the visits tells you how many times people found their way to a page once they were on the site as opposed to landing on the page directly from a traffic source. The higher the percent of destination visits for a page, the more visitors who are seeking out that page once they're already on the site.
3. Filter the report for just the category pages (:main) and sort in descending order by Destination Visits %.

The destination analysis reveals MMA to be the only category page in the top ten destination results that isn't visible on the main global navigation (**Figure 7.13**).

:main | Go | Advanced | Add Metrics

	Page	Visits		Destination Visits	Destination Visit % ▾
1.	nfl:main	47,989	6.0%	32,837	68.4%
2.	mlb:main	45,736	5.7%	30,828	67.4%
3.	ncaafb:main	43,829	5.5%	27,636	63.1%
4.	fantasy:main	41,991	5.2%	25,626	61.0%
5.	nascar:main	39,828	5.0%	23,882	60.0%
6.	mma:main	25,939	3.2%	15,002	57.8%
7.	mls:main	16,738	2.1%	8,567	51.2%
8.	nba:main	15,111	1.9%	7,636	50.5%
9.	nhl:main	14,929	1.9%	7,128	47.7%
10.	golf:main	13,280	1.7%	5,627	42.4%

FIGURE 7.13 The Destination Visit % column shows how many people are finding a page once they're on the site as opposed to entering on that page. The mma:main isn't visible on the global navigation but people are still seeking out the page.

The good news is that people are still finding the MMA content despite its poor location in the global navigation. You wonder how much extra traffic could be generated if it was featured on the main global navigation instead of buried under the Other Sports category.

NOTE The ideal destination visit percentage for a web page will vary by company, and it will depend on the type of pages being analyzed as well as the company's search engine optimization and traffic sharing strategy. For example, if this company focuses a lot of its efforts on driving traffic directly to its category pages (bypassing the homepage) then the destination visit percentages will be lower. Benchmark your pages against each other, not against an industry average.

TAKING IT FURTHER

Here are some additional techniques for augmenting your path analysis:

- Create two time-based segments for traffic to specific sections or pages to compare the behaviors before and after an event (staff cuts). Even though you can't reverse the event, you can at least try to understand what was working before and what isn't working now.
- Run a test on changing the main global navigation options (adding MMA as a default category). Test different ordering of the various options to determine the optimal layout of the global navigation.
- Create segments for heavy and light users for each major section or category to better understand the differences in behaviors and content consumption. Insights from this analysis can influence the content creation, design, layout, and so on.
- Perform path analysis for entry traffic to key category pages that bypass the homepage to better understand usage behaviors on these other key pages. Consider path analysis for other types of content such as site sections, page types, and videos.

Which Pages Are Influencing Site Success?

Scenario: Your mortgage company recently merged with a major competitor, and most of the content from the other company has been subsequently rebranded and retagged for consistency. Although clearly duplicative content was removed, your management team wonders what remaining content should be removed or kept. They ask you to do an analysis of the various pages and make recommendations for the future of the merged content. With your mortgage company receiving the vast majority of its applications online, you're going to focus on the KPI of application completions as the gauge of page effectiveness.

TIP If your web analytics tool supports event participation, you can determine not only how different pages perform but also how page types, site sections, videos, online tools, or any form of tagged content contributes (or doesn't contribute) to your site success. For media companies, it can be useful for determining which pages are pushing visitors deeper into your site content. You can highlight the influential content, and remove or improve the "deadwood" content.

To find the influential pages, follow these steps:

1. Run the Pages report for the appropriate timeframe, and pull in visits and application completion *participation* metrics. Event participation is a powerful approach for attributing the full value of an outcome (application completion) to all of the pages that *preceded* the event during a visit (and not those that followed it). Essentially, every page that contributed to a successful outcome receives full credit for its involvement. The participation approach is a unique

session-based way of evaluating your content, differing from the more familiar first-click, last-click, or linear attribution approaches.

2. Download the report for all pages into Microsoft Excel. Once you have the data in a spreadsheet, create a new calculated metric for the participation rate (application completion participation/visits). This metric tells you what percent of the time a particular page influences a downstream outcome (application completion) during a visit. Sort by this new metric from highest to lowest. If helpful, add color scale conditional formatting to the columns (**Figure 7.14**).

FIGURE 7.14 In a spreadsheet, you calculate the participation rate and sort the page data by it.

	Page	App. Completion Part.	Visits	Part. Rate
1	home loan|pre-approval confirmation	146	428	29.19%
2	mortgage calculator|home value	30	109	27.52%
3	mortgage calculator|fha loan payment	34	128	26.56%
4	mortgage calculator|fha loan multiple payments	34	129	26.36%
5	mortgage calculator|results	30	116	25.86%
6	mortgage calculator|fha loan info	29	112	25.89%
7	mortgage calculator|credit score	30	121	24.79%
8	mortgage calculator|fha loan amount	34	140	24.29%
9	help|chat	1,024	4,393	23.31%
10	home buying|10 reasons to get your loan from us	207	923	22.43%
11	refinance|contact	55	261	21.07%
12	home buying|home buying guide	76	370	20.54%
13	mortgage options|escrow	22	111	19.82%
14	home buying|first-time buyer	258	1,422	18.14%
15	legal|security privacy	25	142	17.61%

3. Go through the list of pages and remove ones that have very high participation rates because they are a part of the actual application flow or are relatively unreliable results due to having low instances in the numerator or denominator of the participation rate.

TIP Try to use creative and meaningful names for the various segments, clusters, or quadrants in your data analysis. If they're sticky, you'll find your internal customers adopting and using the names in their day-to-day discussions and projects. Creating a shared data dialogue within or across groups can be a great side benefit of your analysis.

4. Create a scatter plot chart for the remaining pages with the visits on the x-axis and participation rate on the y-axis. Divide the scatter plot chart into four quadrants (examining and removing any outliers as needed). The positioning of the vertical and horizontal lines can be based on the averages for the chart's variables or you can position them where it makes the most logical sense to isolate clusters. Often when you create a quadrant analysis with a volume metric (visits) and conversion metric, you get four categories: dogs (low converting, low volume), pigeons (low converting, high volume), hidden gems (high converting, low volume), and rock stars (high converting, high volume).

DRILLING INTO THE DATA

After analyzing the scatter plot of pages by visits and participation rate (**Figure 7.15**), you identify several opportunities worthy of further exploration in the top two quadrants (hidden gems and rock stars). The page effectiveness analysis confirms that the help chat feature is an influential factor in driving application completions. You also discover the page titled 10 Reasons to Get Your Loan From Us, which is an older but still effective page, continues to drive application completions even though it hasn't been featured in campaigns or internal promotions for some time.

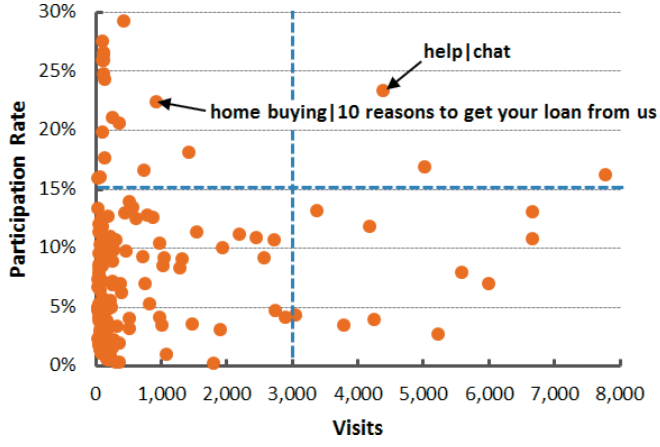


FIGURE 7.15
The scatter plot chart can help you to identify clusters of data points worth exploring in more detail.

TAKING IT FURTHER

Here are some additional suggestions for following through on your page effectiveness analysis:

- For dogs: Consider removing or redesigning these pages if their primary purpose is to drive a key metric. If your site content serves different purposes, make sure to evaluate your content by different types of participation. A page might be weak at driving success in one area (applications) but be effective in other areas (self-service).
- For pigeons: Consider testing variations of these high-volume but low-converting pages to make them more persuasive and effective. Take insights from the rock star pages for how they can be improved.
- For rock stars: Examine these pages more closely to understand what makes these pages so successful. Determine how people are generally finding these pages (previous page flow) and be mindful of how potential website changes could interfere with their effectiveness.

- For hidden gems: Determine whether it makes sense to send more traffic to these pages to take advantage of their ability to drive site success. For example, you might consider decreasing the page depth of the 10 Reasons page, promoting it in more prominent spots across the website, and potentially leveraging the content in future SEM campaigns.

Which Products Should I Feature in Promotional Efforts?

Scenario: As the online marketing manager responsible for promoting your travel website's cruise ship packages, you're a little concerned about their weak performance so far compared to last year. You want to streamline the current list of 15 cruise packages and identify which deals to highlight in your promotional efforts.

As you head into the peak selling season, you ensure your offerings are competitive and well positioned by taking these steps:

1. Access the Products report, select the appropriate date range, and choose the following metrics: trip searches, bookings, and revenue.
2. Download the data into an Excel spreadsheet and create calculated metrics for the look-to-book rate (bookings/trip searches).
3. Create a bubble chart for the various cruise packages with the trip searches and look-to-book rate on the x- and y-axes. The size of the bubbles will be the total revenue generated by each cruise package.
4. Determine the average look-to-book rate and trip searches per package. Draw these averages on the graph for reference and to create four quadrants.

DRILLING INTO THE DATA

With the bubble chart (**Figure 7.16**), you can see which cruise packages are driving the majority of the revenue (larger bubbles) as well as which ones aren't contributing as much revenue (the smaller bubbles in Quadrant III). Once you have the different packages associated with various quadrants, the next task is to determine if there are any shared attributes among the cruise packages in each quadrant. For example, you might find that the cruise packages share similar factors such as destination, duration, timing, or price which places them in a particular quadrant. It would also be important to factor in seasonality, as these bubbles may shift in size and position at different times during the year.

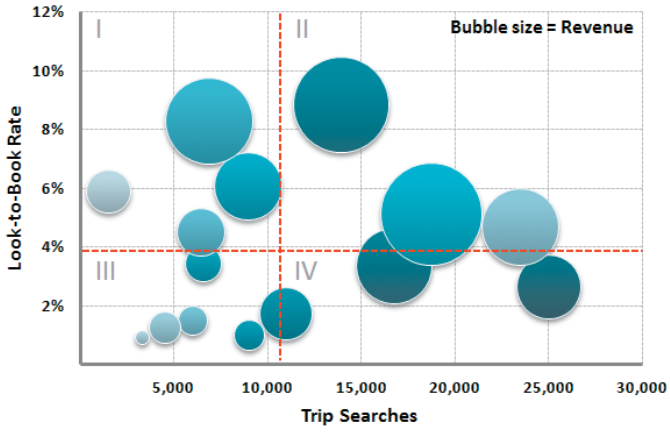


FIGURE 7.16 This chart combines quadrant analysis with a bubble chart by dividing the graph into quadrants based on the average look-to-book rate and average number of trip searches.

NOTE When using bubble charts, the dispersion of data points may impede the visual usefulness of this chart type. If you have too many bubbles concentrated in one area, it can be hard to discern what's happening with overlapping bubbles blocking out each other (even when you remove the fill). In addition, labeling the data points within bubble charts can add to the confusion. Definitely check out Hans Rosling's inspiring TED talks where he shows the power and potential of large datasets in bubble charts. One good example is at www.ted.com/talks/hans_rosling_shows_the_best_stats_you_ve_ever_seen.html.

TAKING IT FURTHER

Here are some additional ideas for augmenting your product analysis:

- If COGS data is available for the various products, you'll want to revisit this analysis in terms of gross margin instead of revenue. You might discover that some of your high-revenue products are not as profitable as other ones that are generating less revenue.
- Consider removing dogs (the low-volume, low-conversion products in Quadrant III) to simplify your offerings or de-emphasize them in promotions. Perform segment analysis to determine what types of customers are purchasing these products. For example, you might find that they're good for niche customers from search engines or they may be popular with your return customers.
- Test promoting hidden gems (the low-volume, high-converting products in Quadrant I) in more prominent positions on the website and in external advertising. Segment visitors to understand to whom these products appeal and use targeting.
- Focus your attention on the rock stars (the high-volume, high-converting products in Quadrant II), looking for ways in which they can either be exposed to more customers or enhanced in terms of their conversion rates. Look at adding more products (cruise inventory) that match the characteristics of this quadrant.
- Place an online survey on pigeon product pages (the high volume, low converters in Quadrant IV) to ask why visitors are not interested in the products. (Price? Cruise length? Ports of call? Cruise line? Ship size or age? Timing?)

How Can I Improve Our Onsite Promotional Content?

Scenario: An online daily deal site would like to optimize its weekly travel offerings. You're responsible for managing and improving the performance of the internal promotions for various travel getaways—a challenging task, considering the company hasn't yet invested in an A/B or multivariate testing tool. The current promotional spots are based on internal department allotments, and different sales and marketing teams are interested in maximizing the success of their specific deals. To better understand the performance of the individual promotions, follow these steps:

1. Run the Internal Promotions report for the appropriate timeframe, and pull in click-throughs and revenue. Depending on how many internal tracking codes you're dealing with, you can either analyze the data within your tool's interface or download the report into Microsoft Excel.
2. Create a calculated metric for revenue per click-through, and determine the average revenue per click-through across the internal promotions ($1.45/click-through). Experiment with sorting the data by different metrics to isolate potential optimization opportunities. Typically, the volume-based metrics (click-throughs or revenue) are the best way to sort your various promotions for higher-impact opportunities.
3. When you find a potential opportunity, investigate the specific banners on the website if they're still running. You might need to break down the Internal Promotions report by the associated metadata to understand the attributes of a specific promotion (placement, type, size, offer, and so on).

NOTE It's never a good idea to track external and internal campaigns in the same variable, as your internal campaigns will overwrite and steal the credit from your external campaigns (last-click). It's best to use separate variables for tracking each type.

DRILLING INTO THE DATA

As you inspect the various banners on the site (**Figure 7.17**), you notice one banner for a Paris getaway (row 8) received a lot of click-throughs but drove a weaker than expected amount of downstream revenue. When compared to a similar promotion for Paris (row 6), the int_1457 promotion was producing 75% less revenue per click-through. Luckily, the banner is still live. When you visit the page featuring the promotional offer, you notice nothing unusual until you click on the banner ad and you're taken to a destination page for a river-rafting getaway in the Grand Canyon. Misdirections like this can cost your company sales.

Enter term to filter data | Go | Advanced | Add Metrics

	Internal Promotions	Click-Throughs ▼		Revenue		Rev. per Click-Thru
1.	int_1665_las vegas, nv	118,501	11.6%	$195,422	15.8%	$1.65
2.	int_2358_caribbean	106,201	10.4%	$98,754	8.0%	$0.93
3.	int_2332_moab, ut	76,983	7.5%	$118,754	9.6%	$1.54
4.	int_1820_rome, italy	69,396	6.8%	$89,221	7.2%	$1.29
5.	int_2032_wine country, ca	69,217	6.7%	$94,810	7.7%	$1.37
6.	int_2378_paris, france	60,839	5.9%	$82,245	6.6%	$1.35
7.	int_1566_banff, canada	60,193	5.9%	$60,102	4.9%	$1.00
8.	int_1457_paris, france	56,207	5.5%	$18,385	1.5%	$0.33
9.	int_1578_costa rica	55,608	5.4%	$66,773	5.4%	$1.20
10.	int_2286_caribbean	52,328	5.1%	$114,017	9.2%	$2.18

FIGURE 7.17 The highlighted internal promotion has a significantly lower revenue per click-through, indicating there may be a problem.

TAKING IT FURTHER

Here are some additional ways to enhance your internal promotion analysis:

- Strive to use gross margin, not total revenue, to measure and optimize the performance of the weekly travel deals.
- Set up automated alerts to inform you when campaigns drop below a particular revenue per click-through threshold.
- Consider doing the same type of analysis on the internal promotion metadata (placement, offer, type, and so on) to identify patterns across multiple promotions. Insights gained from the metadata can inform the execution of future promotions and increase their effectiveness.
- Segment your traffic by visitor types (return customer versus prospect) to identify how they respond to different offers and identify how deals can be better targeted to them. Take it a step further and add a targeting tool to recommend specific offers to different customer segments.

What Links Are Broken and How Do I Fix Them?

Scenario: The marketing team at your nonprofit organization, LiveLong, was surprised by the relatively weak response to the launch of your annual Chase for a Cure fundraiser. They promoted the event heavily online as well as in offline publications, billboards, and transit advertising across several major cities. The team can't explain why they haven't received as much traffic as last year with more promotion and twice as many cities involved. What happened? You check out the landing page, and it appears to be properly tagged. The online campaigns

also seem to be working fine so you've isolated the problem to your offline vanity URL. Suspecting a broken link, you investigate:

1. Run the Broken Links (Page Not Found) report for the appropriate timeframe (**Figure 7.18**).
2. Classify all of the broken links into three categories: "fat finger" mistakes and other links that are hard to anticipate and don't require any action, legitimate broken hyperlinks that need to be fixed within your website, or URL requests (not hyperlinks) to pages that don't necessarily exist. This third situation may not always have referrers (typed by visitors), but you should still be able to determine on a case-by-case basis what's happening and introduce a redirect to take visitors to their intended destination or similar content.

FIGURE 7.18 The mistake in the offline vanity URL may have contributed to the lower than expected traffic to the campaign page. The correct URL ends with /chase4thecure.

Enter term to filter data | Go | Advanced | Add Metrics

	Broken Links	Page Views	
1.	http://www.livelong.org/chaseforthecure	148,089	85.8%
2.	http://www.livelong.org/mediaroom/livelong-commemorates-hero-terry-fox	9,339	5.4%
3.	http://www.livelong.org/getinvolved/how-to-become-local-advocate	7,171	4.2%
4.	http://www.livelong.org/partners/company-list	828	0.5%
5.	http://www.livelong.org/donate/faq/tax-questions	611	0.4%
6.	http://www.livelong.org/survivorblog-46	424	0.2%
7.	http://www.livelong.org/about/2008/	261	0.2%
8.	http://www.livelong.org/shop	223	0.1%
9.	http://www.livelong.org/survivor/stories/patricia-198	176	0.1%
10.	http://www.livelong.org/surivorblog	58	0.0%

3. Drill into legitimately broken links (second category) by breaking them down with the Broken Link Sources report to see which pages contained the broken links (**Figure 7.19**).

FIGURE 7.19 The breakdown by the Broken Link Sources report shows which pages contain the wrong URL.

Enter term to filter data | Go | Advanced | Add Metrics

	Broken Links by Broken Link Sources	Page Views	
1.	http://www.livelong.org/mediaroom/livelong-commemorates-hero-terry-fox	9,339	
1.	http://www.livelong.org/home	6,070	65.00%
2.	http://www.livelong.org/donate	1,961	21.00%
3.	http://www.livelong.org/health	934	10.00%
4.	http://www.livelong.org/getinvolved	374	4.00%

DRILLING INTO THE DATA

When you look at the top result in the Broken Links report (Figure 7.18), you quickly understand what happened with the offline campaigns. The ad agency used livelong.org/chase*for*thecure instead of /chase*4*thecure for the vanity URL in its offline campaign. Examining the report closely, you're also interested in why the Terry Fox press release (row 2 in Figure 7.19) is showing up as a broken link. You discover that the page was renamed by the PR team so the link on these pages needs to be updated. Finally, you notice that visitors are typing /shop (which doesn't exist) so you're going to recommend setting up a redirect to /store (which does).

TAKING IT FURTHER

Broken links are fairly straightforward to find and fix but can do great damage if left to fester undetected. Schedule the Broken Links report to be sent to you or your web team on a regular basis so that you can address broken and missing links in a timely manner and improve the overall user experience.

How Can I Enhance the Effectiveness of Our Internal Search?

Scenario: Your online store for organic health food is growing rapidly as the demand for healthy foods increases. Keeping up with the latest trends in organic foods is one of the biggest challenges for your company. With the installation of a more robust internal search engine, your management team is eager to see how it can generate even greater online sales and a better shopping experience.

As the lead web analyst, you decide to spend some time analyzing the internal search terms to mine potential optimization opportunities:

1. Run the Null Results report for the appropriate timeframe.
2. Review the search terms and categorize them into three groups (**Figure 7.20**).

	Null Results Search Phrases	Instances		Reason for being in report
1.	goji berries	6,703	6.1%	*Not carried*
2.	organic seeds	5,401	4.9%	*Have - just not being indexed*
3.	quinona	3,991	3.6%	*Misspelled*
4.	chia	3,772	3.4%	*Have - just not being indexed*
5.	baby food	2,849	2.6%	*Not carried*
6.	agave syrup	2,611	2.4%	*Have - just listed under agave nectar*
7.	baby	2,132	1.9%	*Not carried*
8.	chia seeds	2,119	1.9%	*Have - just not being indexed*
9.	black rice	1,788	1.6%	*Not carried*
10.	cocanut oil	1,431	1.3%	*Misspelled*

FIGURE 7.20 The Null Results report shows you which internal searches yielded no results.

First, relevant content or products exist on the site, but they are not displayed for the searches (fix indexing or create new rules). Second, no relevant content or products are currently available, but the search volume indicates a need or opportunity that your company can address (create content or add products). Third, search terms don't make sense or don't align with your company's content or product strategy (ignore).

3. Run the Internal Search Terms report for an appropriate timeframe with the following metrics: searches, orders, and revenue.
4. Download the report to Microsoft Excel and create a calculated metric for revenue per search (revenue/searches) and conversion rate (orders/searches). Remove any garbage values from your search results and then apply conditional formatting (color scale) to the columns. Sort the data by searches (**Figure 7.21**).
5. For high-volume, low-converting search terms, perform the search on your website to experience in person the same results as your visitors. Are the results relevant? Are the items in-stock? Are product images clear and visible? How robust is the selection of items? Diagnose what is happening with the search results to identify potential optimization opportunities.

Internal Search Terms	Searches	Revenue	Rev. per Search	Conv. Rate
sprouts	23,161	$30,850	$1.33	1.97%
barley	19,155	$10,009	$0.52	1.69%
acai	10,255	$14,458	$1.41	3.58%
gluten-free	8,262	$842	$0.10	0.38%
flax	7,555	$16,505	$2.18	3.44%
seed butter	6,590	$9,836	$1.49	4.86%
bean mix	6,239	$1,557	$0.25	2.32%
maple extract	5,898	$1,919	$0.33	0.70%
organic	5,836	$13,431	$2.30	2.11%
fruit wash	5,487	$5,965	$1.09	2.33%
fruit leathers	5,308	$7,023	$1.32	2.94%
almond milk	5,285	$3,544	$0.67	4.64%
steel cut oats	4,962	$1,552	$0.31	1.35%
raw cacao	4,655	$5,628	$1.21	4.34%
essential oils	4,499	$464	$0.10	0.80%
cane sugar	4,467	$384	$0.09	0.92%

FIGURE 7.21 By comparing the search volume with the revenue per search and conversion rate, you can identify different ways of optimizing your search results.

DRILLING INTO THE DATA

From your null search results analysis (**Figure 7.20**), you identify several common misspellings (quinona and cocanut) that you can map easily to existing products. Although your online store doesn't carry any ready-made organic baby food, your merchandising team decides to develop and feature tips and recipes for preparing organic baby food from ingredients available on the site. The web developers also

have a list of algorithm changes to update the current indexing of products and fill potentially costly gaps.

Your analysis into the internal search conversion highlighted a couple of key search terms (sprouts and barley) that are highly searched but low converting (**Figure 7.21**). Examining the search results for these two search terms, you notice that the package sizes are very limited and the image quality is poor. In addition, you identify some high-converting search phrases ("almond milk" and "raw cacao") that don't receive as high volume. Your marketing team decides to promote these products in your search tool's highlighted results feature and also highlight these products in external and internal promotions.

TAKING IT FURTHER

Here are some additional ideas for enriching and leveraging your internal search analysis:

- Compare the top 500 to 1,000 search terms from week to week or month to month to identify fast-growing trends on your site. Monitor seasonal changes in the types of products that your customers are seeking.
- Perform path analysis on search terms to see how visitors sequence their search terms, which can be used to build better search algorithms for specific products or product categories.
- Segment your high- and low-value customers to identify differences in the way they use search and the products they search for. Create a segment for visitors who exceed the average number of site searches, and try to determine which types of products or information they are desperately seeking. Analyze the internal search behaviors of visitors who came to the site from your marketing campaigns as it could provide insights into misaligned expectations or unqualified traffic.
- Identify which pages are generating a high number of searches and then evaluate which search terms are originating from those pages. Although this will require some implementation work to set up, the contextual insights can be powerful. For example, searching for an item from the homepage is different than searching for the same item from its product category page.
- Use insights taken from internal search analysis to inform and shape external paid search and search engine optimization efforts. Spotting emerging trends on your own website can lead to a first-mover advantage in your market.

For many websites, all of the site interactions lead into a conversion process that is often the most important part of the website.

Conversion Process Analysis Example

The path to capturing a lead or an order on your website often plays a critical role in your company's online success. Whether the path leads through a process of two steps—initiating and completing the action—or multiple pages, companies want to minimize the attrition throughout the online process to increase end conversions. In the Conversion Process zone, analysts who can patch the unexpected leaks in their online process are positioned to become action heroes. Although the fallout (funnel) analysis scenario that follows illustrates a retail example, you could apply a similar approach to analyzing an online registration or application process.

Where Is Attrition Occurring in Our Conversion Process?

Scenario: Your online custom imprint business has made significant investments throughout the year to streamline the entire conversion process from customizing a single product with an uploaded design to ordering a collection of custom imprinted products. With so many enhancements being introduced simultaneously, however, your management team is struggling to understand the impact of these investments on the business. Worse, the overall conversion rate has dropped rather than increased as expected. The CEO asks you to dig into the issue.

You decide to tackle the problem by combining a Fallout report with path reports:

1. Identify all of the *non-optional* fallout steps in your conversion process. In this case, the key pages are the customization tool page (where you build your custom-imprinted merchandise), checkout page, shipping/billing page, review order page, and order confirmation page.
2. Build a Fallout report with each of the key process pages as a separate checkpoint in the report. While other path reports focus on direct page-to-page interactions, the Fallout report evaluates how many visits follow a sequential flow of pages. In **Figure 7.22**, a visitor could go directly from one page (Customization Tool) to the next page in the process (Checkout), or he could go from the first page in the process through several unrelated pages and then return to the process flow. The Fallout report is an invaluable tool in identifying potential attrition points in your process.
3. Evaluate the major attrition points in the Fallout reports. In some cases, large decreases in visits will occur in logical places where the process requires visitors to provide more information, perform an action, or make a commitment. Any illogical attrition point should be investigated in person to gain more context into what's happening on the page. Also, look at path reports to see where visitors go when they leave a particular page in the process. The path behaviors

TIP You can use the Fallout report for any multiple-step process or simply to compare like pairs. For example, you can use it to determine the content affinity between any two pages, page types, or site sections. It will show you the likelihood of someone viewing one piece of content as well as another in the same visit even if the visitor isn't navigating directly between them. Sometimes this approach is more appropriate than path analysis because you may not be as concerned about direct paths, just that they got there eventually. Bidirectional insights would require two Fallout reports (page A to page B and page B to page A).

(going back to the previous step in the process or checking a privacy policy page) might shed more light on what may be causing the process to be abandoned.

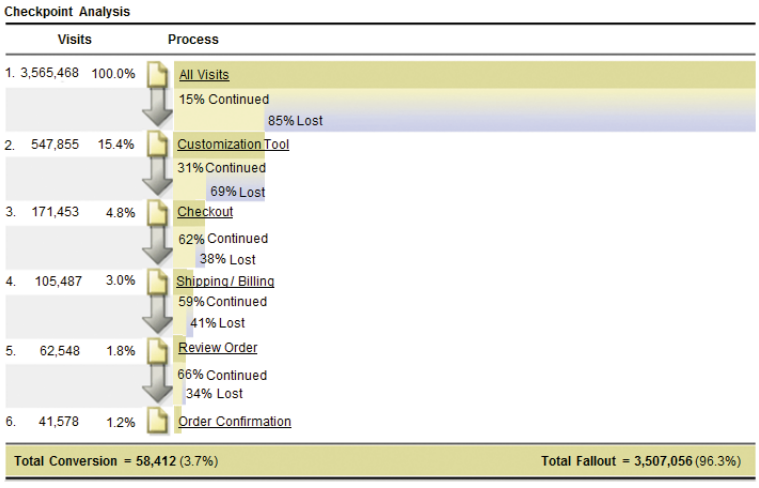


FIGURE 7.22 Selecting the right pages for your fallout analysis is essential.

4. Create a trended view of the attrition data (percent lost at each step) to determine if fallout rates are increasing, decreasing, or remaining constant over time for each individual attrition point (**Figure 7.23**). Without this time-based context it can be hard to notice subtle changes at different stages in your process that can affect your overall conversions.

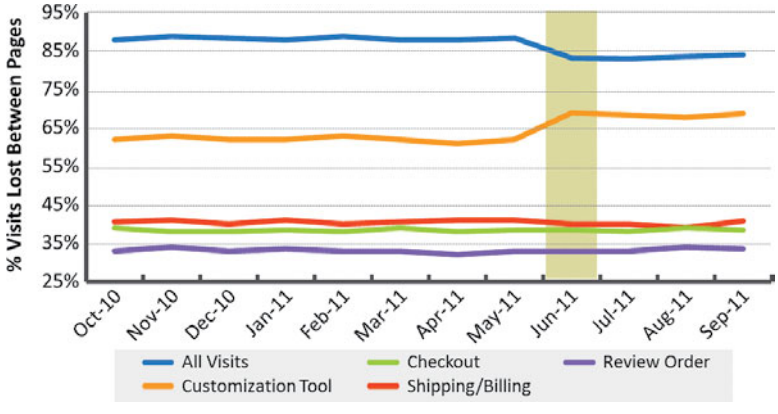


FIGURE 7.23 The trended view of the attrition data reveals shifts, such as what happened in June 2011.

DRILLING INTO THE DATA

In your trended fallout analysis, you notice a couple of interesting things happening in the attrition data. On the good side, one attrition point (all visits to customization tool) has fallen by about 13% since last June, indicating that the behavioral targeting tool that was launched that month may be driving more visitors to products they want to customize. On the bad side, however, another attrition point (customization tool to checkout) has *increased* approximately 10% at the same time. When you ask the team responsible for managing the customization application, they inform you that they launched a major redesign of the tool. Deciding to investigate this issue further, you segment by browser and uncover that the application is incompatible with the latest version of the Safari browser.

TAKING IT FURTHER

Here are some additional techniques for augmenting your fallout analysis:

- Monetize the impact that process issues (Safari browser incompatibility) are having on the business to create a sense of urgency to fix the problem.
- Use content effectiveness (participation) to evaluate the contributions of other new site features to understand how they are influencing site conversion and revenue.
- Focus testing on key attrition points to identify ways that attrition can be reduced. Consider using appropriate re-marketing strategies tied to the key attrition points to reclaim abandoned transactions.
- Compare different segments of visitors who purchased, abandoned, or never began the process to better understand segment behaviors and pinpoint potential opportunities. Segment visitors by product categories to see how the process can be streamlined or improved for various products.

You got the visitor to convert once but will they do it again? When you look at the aggregate or offline value of your customers you're better equipped to maximize ROI.

Visitor Value Analysis Example

Most of the emphasis in web analytics is placed on the visit-level conversion. Companies know certain online customers are more valuable than others, but limitations in the web analytics tools have made it difficult to focus on much more than visit-level conversion. With the increasingly advanced segmentation capabilities and the ability to tie online data to offline actions, however, targeting valuable customer segments is becoming easier. In the coming years, this analysis zone represents a potential growth area for future web analytics innovation. In the meantime, the following customer loyalty analysis scenario illustrates how you can focus on the Visitor Value zone today.

How Do I Market to Our Most Valuable Customers?

Scenario: Over the years your company, an online electronics retailer, has developed a loyal following of repeat customers. Although traditionally most of the marketing budget focuses on acquiring new customers, the new marketing VP sees the loyal customers (two or more orders) as an untapped opportunity for driving additional sales in the next fiscal year. As a starting point, he wants to understand how your company is currently reaching these valuable repeat customers and how effective your current retention marketing efforts are (primarily email). He turns to your team of analysts, and you decide to

1. Run the Customer Loyalty report or create a segment of visitors who have purchased from your site two or more times.
2. Break down your loyal customer segment by the Marketing Channels report (last-click attribution) with the following metrics: visitors, revenue, orders, conversion rate (orders/visits), and AOV (revenue/orders).
3. Compare how various marketing channels are driving repeat purchases among your loyal customer segment. When evaluating the marketing channels, compare the channels that have a third-party variable cost such as paid search (CPC), display ads (CPM), or affiliates (cost-per-sale) with channels that don't (email, social media).

NOTE Some companies that sell high-ticket items with a longer consideration phase may choose to calculate their conversion rate with visitors instead of visits. The key is to use the denominator value that is appropriate for your buying cycle and be consistent.

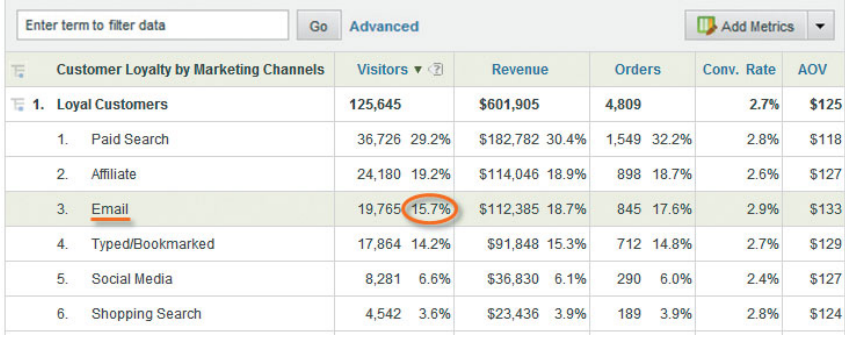
NOTE Sometimes people view the email or social media channels as being free. They may not have third-party variable costs and may be more cost-effective, but they aren't free. You can't overlook the cost of your email marketing tool, building and updating your corporate Facebook fan pages, or the manpower spent managing your corporate Twitter presence.

DRILLING INTO THE DATA

Examining how your loyal customers interact with your various marketing channels shows that almost half of these customers are sourced from your paid search (29.2%) and affiliate (19.2%) programs (**Figure 7.24**). Interestingly, email is driving only 15.7% of your loyal customer visitors; however, it is converting at a higher rate and AOV than your other channels. Your company already knows these

customers and has many of them on its email newsletter list, but it is still paying search engines and affiliates for repeat purchases from these same customers.

FIGURE 7.24 Breaking down the Customer Loyalty report by market channels reveals that most of your loyal customers are not coming from your retention email marketing.



Enter term to filter data | Go | Advanced | Add Metrics

Customer Loyalty by Marketing Channels	Visitors ▾	Revenue	Orders	Conv. Rate	AOV
1. Loyal Customers	**125,645**	**$601,905**	**4,809**	**2.7%**	**$125**
1. Paid Search	36,726 29.2%	$182,782 30.4%	1,549 32.2%	2.8%	$118
2. Affiliate	24,180 19.2%	$114,046 18.9%	898 18.7%	2.6%	$127
3. Email	19,765 15.7%	$112,385 18.7%	845 17.6%	2.9%	$133
4. Typed/Bookmarked	17,864 14.2%	$91,848 15.3%	712 14.8%	2.7%	$129
5. Social Media	8,281 6.6%	$36,830 6.1%	290 6.0%	2.4%	$127
6. Shopping Search	4,542 3.6%	$23,436 3.9%	189 3.9%	2.8%	$124

With very little attention being spent on retention marketing, it looks like your company has an opportunity to reduce marketing costs in its paid search and affiliate channels with a more concentrated effort around email marketing. In addition, you notice that the social media channel is being underutilized in your current retention marketing efforts, representing yet another potentially cost-effective avenue to reach your loyal customers, drive repeat business, and reduce overall marketing costs.

TAKING IT FURTHER

Here are some additional suggestions for augmenting your customer loyalty analysis:

- Explore various attribution models to determine how your loyal customers are interacting with marketing channels at different stages in the consideration process. In the above example, you might find while email and social media aren't getting last-click credit for purchases, they are actually influencing purchases at the beginning of the consideration process.
- Use the marketing cost information for your different channels to monetize the costs associated with paying to re-acquire your customers. Your company might be fine with the re-acquisition costs (if they're nominal) or see the costs as a potential cost-saving opportunity.
- Create a loyal customer segment and build a profile of their shopping behaviors and key preferences in terms of product categories, marketing channels, site content, and so on. Use this profile to inform and better target your retention marketing efforts.
- Test different retention email creative and landing pages. Use a targeting tool to increase the effectiveness of your landing pages for your loyal customers.

Take These Techniques Further

As I mentioned at the beginning of this chapter, my goal in sharing these analysis scenarios is to inspire you in your own analysis. While not of all these specific techniques may be applicable to your company, they do represent some solid starting points and basic tools for your action hero tool belt. In addition, the four analysis zones—Acquisition, Site Interactions, Conversion Process, and Visitor Value—can guide you toward analyses that are better suited to your unique circumstances and environment. Each zone is conveniently tied to specific optimization areas:

- **Acquisition:** online advertising, social media, SEO, traffic sharing
- **Site Interactions:** website content, online tools/features, mobile apps, social media apps
- **Conversion Process:** checkout, registration, application
- **Visitor Value:** loyalty programs, remarketing, targeting

You're now armed and dangerous with live rounds of analysis ammo. In the final chapter, we'll revisit Actionland and make sure you're ready for action.

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CHAPTER 8

READY FOR ACTION?

"Opportunities multiply as they are seized."

– Sun Tzu

Your hard-fought data-driven journey is about to pay off. You delivered your analysis insights, and management appears to be onboard with your recommendations. Having punched your ticket into Actionland, you're ready to see your enhancements add serious value to your online business. It's been far too long since your company last spent time in Actionland, and you can't wait to enjoy all the cool optimization rides that everyone buzzes over at digital marketing conferences.

You've mapped out in your mind exactly which rides you're going to hit, but as you approach the first one you're shocked to find it's actually closed (**Figure 8.1**). As you progress through the park, you discover half the rides either aren't running or have a two-hour wait. What is going on? Where is all the action?

Most of this book has focused on the path to value (remember the dominoes in Chapter 2, "On the Road to Actionland") where analysis transforms your data into business insights, which, when they're acted upon, can lead to significant business value for your organization. And yet, being data-driven as an organization is only half the equation. Very few organizations pay much attention to the other half: *being action-agile*. From an optimization perspective, your company must find a way to routinely jump to the head of the line

and maximize its time in Actionland. In this final chapter, you'll learn what you and your company can do to be more agile and ready for action.

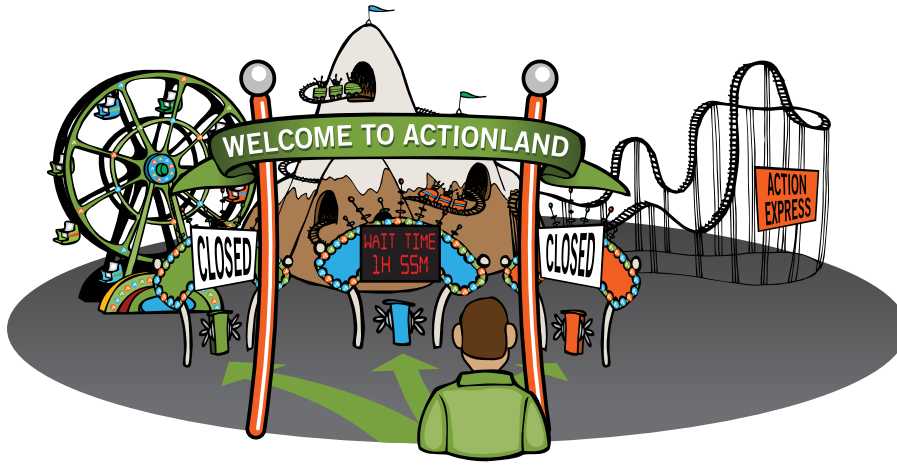

FIGURE 8.1 Analysis gets you into Actionland, but what's with the inaction?

Data-Driven and Action-Agile

"Any powerful idea is absolutely fascinating and absolutely useless until we choose to use it."

– Richard Bach

While consulting with a large multinational corporation, my colleagues and I interviewed stakeholder groups to get insights into their challenges and opportunities related to analytics and optimization. Due to various process, resource, and infrastructure issues, one team shared how it usually took three-to-four months to get an update to the corporate website. Not good. Another business team confirmed the same issue but indicated it took up to six months. Then when I thought it could get no worse, the last manager we interviewed shared how a broken payment option in one of the company's online stores was actually causing all of the items in the visitor's shopping cart to be removed. Even with the severity of this problem, the web development team took nine months to fix it.

The IT team may have been fighting bigger fires elsewhere, but few executives would find this sort of response time acceptable. Just imagine if you were managing a grocery store, and two of your four cash registers broke down—and you did nothing about it for nine months. The lineups get longer, and your customers get increasingly frustrated. Many of them abandon shopping carts full of merchandise, vowing never to return to the store in the future. What is unacceptable in the offline world shouldn't be tolerated in the online one.

Organizations need to couple being data-driven with being action-agile. When data is the input and action is the output, time to value becomes important. The full benefit of being data-driven won't be realized if an organization can't act or respond quickly to the insights found within the data. Most people associate being data-driven with the entire process, but this viewpoint masks the organizational agility required to act on the data in a timely manner. An organization must be swift and efficient when it comes to

- Identifying important insights
- Making decisions based on those insights
- Executing on the insights

Having supercharged, data-driven capabilities creates value only if the wheels of action are also in place (**Figure 8.2**). In essence, if your company doesn't address both sides it produces a hurry-up-and-wait scenario where data-driven resources impatiently watch opportunities fizzle and costs climb higher as either the decision or execution drags or just never happens.

NOTE MIT economics professor Erik Brynjolfsson points out managers may feel they're already data-driven, but that traditionally charts and numbers confirm and support decisions that have already been made. He asserts, "The cultural change is for managers to be willing to say, 'You know, that's an interesting problem, an interesting question. Let's set up an experiment to discover the answer.'"[1] Continuous improvement through testing or experimentation only heightens the need for more agility.

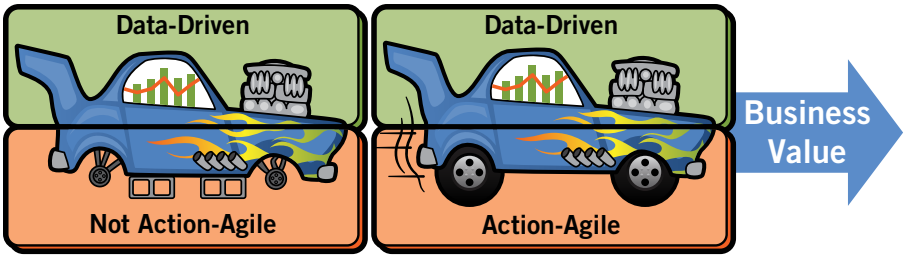

FIGURE 8.2 Being data-driven is important, but it only represents half of what is needed to drive business value.

What's the point of having real-time analytics if it takes your organization weeks and months to react to the data? Your company has two options: throttle back on the data-driven side to match its inability to respond quickly or preferably bring your action-agile capabilities up to par and in sync with your data-driven decision making. My preference (and probably yours if you're reading this book) will be to roll up the sleeves on the latter option than settle for mediocrity.

How Action-Agile Is Your Company?

Organizations need to ensure they're willing, capable, and ready to optimize their online initiatives. Actionland is where the business value of being data-driven comes to fruition in terms of streamlining the online business and capitalizing on opportunities. With so much effort going into just getting to Actionland, the equivalent of closed rides and two-hour wait times in the execution phase isn't

"An idea not coupled with action will never get any bigger than the brain cell it occupied."

– Arnold Glasow

NOTE I've talked about analysis, action, and agility in this book, but you can't forget the other important but sometimes controversial a-word: accountability. Many of the problems impeding companies from being more data-driven and action-agile can be traced back to a lack of accountability.

acceptable. Three key factors ensure trips to Actionland are memorable for all the right reasons:

- People are aligned and committed.
- Processes are streamlined and flexible.
- Technology supports, not impedes, agility.

Although web analysts play a key role in the data-driven issues, most of the action-agile aspects fall on the shoulders of others—from the executive team down to the technical teams introducing enhancements or changes. More importantly, your executive sponsor needs to be the champion for helping your organization to become not just more data-driven but also more action-agile.

With so much riding on the efforts of one individual, nothing disappoints me more than to find an executive sponsor who doesn't appear to "get it." Sure, the individual might have the right title and internal clout, but without him displaying vision, passion, and commitment the organization will be stuck in a holding pattern—a massive opportunity missed. By selecting a "placeholder" executive sponsor, the company also shows it doesn't get it either.

TIP One of the most powerful things you can arm your executive sponsor with is the financial opportunity of action versus inaction. In business, nothing motivates action like money does.

By getting it, an executive sponsor doesn't necessarily have to fully grasp all of the data, jargon, and technical considerations, but she does need to fully appreciate the importance and urgency of being data-driven and action-agile. Your executive sponsor will have her work cut out for her as she seeks to address the three key factors of people, processes, and technology.

"Change before you have to."

– Jack Welch

PEOPLE

Empirical evidence shows that being data-driven isn't merely a good idea but actually distinguishes high-performing firms from their competitors. For example, research in 2011 by MIT professor Erik Brynjolfsson and others revealed that data-driven decision making led to a 5–6% increase in productivity and profitability.[2] Whether you're on the business or technology side, you need to understand why being data-driven and action-agile is a powerful one-two combination. If you don't appreciate the potential, you're not likely to change or operate differently.

In most companies, change doesn't begin at the employee level; it typically starts at the management level and trickles down. In fact, becoming more data-driven is a cultural change for many organizations that will take to time to nurture. If your organization's leaders aren't onboard, you've identified a key obstacle that needs to be addressed. While teams can work around the data laggards within an organization (the IT department is seen as a traditional culprit), it's far better to have buy-in and a unified front across your leadership team. When that's not the

case, try to raise awareness of this issue, while in the meantime seeking out more agile alternatives to drive action.

For example, I've seen an increase in the number of web developers and other technical staff working within the actual digital marketing teams. In some ways, it's a win-win proposition. The IT team now has extra bandwidth, and the requests coming from marketing are more clearly defined and scoped. The marketing team has more control over its data-driven destiny and doesn't need to wade through overly bureaucratic processes and slow turnarounds to get basic stuff done.

In talking with one of these marketing-owned technologists, he took pride in being the marketing team's "BS detector" with IT. His intimate understanding of both the business problem and technology enabled him to see through IT's pretense and posturing. The key variable is a more unified, agile working relationship between marketing and technical resources. I think most CIOs would like IT to be a part of the solution, but it's going to require a more flexible and collaborative partnership—soon—as marketing's patience is quickly fading.

PROCESSES

In his management novel *The Goal* (North River Press, 2004) Eliyahu Goldratt recounts the cautionary tale of Herbie and his scout troop. While on a hike, the troop found it could move only as fast as its slowest member, Herbie. After experimenting with different formations, they were able to pick up the pace only by distributing the contents of Herbie's heavy backpack among the other boys. Where is the extra baggage constraining your company's agility in the online channel? Nothing highlights inefficiencies in your system like trying to execute more quickly.

"A bad system will beat a good person every time."

– W. Edwards Deming

Typically, a bottleneck will stand out at a place where several optimization projects get stalled due to the step having insufficient capacity to handle them. When you resolve a particular issue, another part of the process will become the bottleneck (that's expected). You must continually improve until your agility reaches an acceptable time-to-value threshold (hopefully measured in hours and days, not weeks and months). Bottlenecks can occur throughout the entire data-driven process, from the tagging and analysis phases through to the decision-making and execution phases. Most of these optimization-limiting constraints occur in the following areas:

- **Tasks.** At key stages in the process, individuals or teams may need to perform difficult or time-consuming tasks such as requirements gathering, decision making, or project prioritization.

NOTE Based on your evaluation and understanding of the action roadblocks in your organization (Chapter 4, "Prioritize for Impact"), you might already have a good sense for some of the key bottlenecks or barriers to driving more data-driven action. With the support of your manager and executive sponsor, you'll want to dig into the issues to find their root causes.

- **Resources.** Your company may have insufficient resources or bandwidth to handle a particular step such as analysis, A/B testing, creative design, web development, QA, and so on in a timely manner (expertise might also be an issue).
- **Goals.** Different teams may have dissimilar or conflicting goals, which can cause friction when the teams head in separate directions. When teams are measured and rewarded differently, they approach the same task with a different approach, sense of urgency, and outcome in mind.
- **Budgets.** A lack of adequate funds may prevent a team from taking action entirely or interfere with the team's ability to complete tasks efficiently.
- **Policies.** Different procedures or rules may impede the speed with which teams can implement ideas. The policies may be directly or indirectly related to online optimization efforts. For example, your company may have specific policies for handling website updates.
- **Technologies.** Your online infrastructure may be built upon an intricate foundation of different technologies, applications, systems, and platforms. Your infrastructure's age as well as its level of customization and integration can contribute to its complexity and compatibility.

TIP Reward people and teams for taking chances and effecting change, not for just avoiding fires. Great leaders and their companies prize the former above the latter.

TIP There's a difference between big optimization projects (redesign website) and small ones (change a form field). If your company has a one-size-fits-all process for handling both types of requests, your company may be burdening and delaying rapid-fire, quick-hit adjustments with an unnecessary level of rigor, documentation, and scrutiny. Instead tailor the process to the project's scope, risk, and level of effort to reduce the overall work, documents, and number of meetings that are required.[3]

Based on the areas of the business that are related to the online business, try to isolate the primary bottlenecks that impede your company's ability to be more action-agile and efficient. You can use the Fishbone or Five Whys root-cause analysis tools from Chapter 5, "Analyze for Insight," to identify the specific root cause that is hindering action (Herbie's heavy backpack). Once you've knocked out some of the major bottlenecks to action, you'll want to introduce another Japanese concept borrowed from lean manufacturing: *Kaizen,* which focuses on continuous improvement by systematically identifying and eliminating waste (in this case time) in the business processes.[4] It primarily concentrates on small improvements and involves people at all levels in the overall data-driven workflow cycle. Be creative in clearing the bottlenecks (think outside the box), and don't let best stand in the way of better.

TECHNOLOGY

For one multinational corporation, antiquated e-commerce and content management platforms were massive bottlenecks impeding its ability to be action-agile as an organization. The company planned an audacious, multiyear strategy to completely overhaul the entire online architecture across its global operations. Replacing and updating the decade-old technology was the right move, but it wasn't going to have an immediate effect on many of the corporation's individual business units

for a few years. The organization needed not only a new platform, but also some short-term retrofitting to shore up its ability to take action on business insights.

Technology may be currently limiting your company's agility, but it can also be part of the solution to fix your shortcomings in Actionland. Several technology trends in analytics and optimization tools can help make your business more action-agile in both the long and short term:

- **Integration.** Both vendors and their clients are focusing on the benefits of integrating the data, workflow, and capabilities of various digital marketing tools. A greater level of integration can streamline processes but also lead to powerful, unexpected synergies. For example, integrating your social monitoring and web analytics tools can take your insights to new heights by clarifying the real effect social media is having on your online success.
- **Automation.** Faced with growing complexity and limited bandwidth, companies can increase productivity by automating repetitive tasks in analytics and optimization. For example, self-learning behavioral targeting tools, such as Adobe Test&Target 1:1, can handle the process of personalizing and optimizing content and offers for different segments.
- **Experimentation.** Increasingly online content is becoming more iterative in nature where content is tested and optimized based on the real-time responses from visitors and customers (fail early and often to ultimately succeed). While testing isn't necessarily new, it is becoming more pervasive across online applications and tools as more companies follow a *test-and-learn* approach.
- **Self-service.** By simplifying certain tasks or responsibilities, self-service technologies can empower more people to perform tasks that might have been previously limited to a group of skilled individuals such as web developers or web analysts. For instance, tag management tools (Ensighten, Tagman, Adobe TagManager) enable marketers to manage and update various vendor tags without having to engage the IT team.
- **Predictive analytics.** Rather than constantly looking in the rear view mirror at what happened (historical data), predictive modeling based on statistics and data mining forecasts which actions across campaigns, channels, content, and so on will most likely lead to success. In marketing mix modeling, you can use predictive analytics to determine the appropriate marketing spend across multiple channels to drive online success in a cost-effective manner.

To bypass the long lineups in Actionland and shorten the time to value, investigate how technology might be able to resolve some of the persistent bottlenecks in your current optimization process. It can provide valuable shortcuts and accelerators that can simplify tasks, increase productivity, and expedite more optimization projects.

"Any sufficiently advanced technology is indistinguishable from magic."

– Arthur Clarke

NOTE Automation should be a complement, not a substitute, for skilled web analysts to liberate them from repetitive, mind-numbing work. Human expertise needs to establish the automation rules and triggers as well as spot check and investigate potential issues.

NOTE Self-service technologies encompass any functionality that makes the analytics or optimization tools more user friendly, including rich data visualization, self-guided wizards, rules-based tagging, and other ease-of-use features.

PREDICTING A BETTER FUTURE FOR WEB ANALYTICS

One of the most promising new trends in web analytics is predictive analytics. As the layers of data go deeper and get more complex, the human brain can process only so many factors before it needs statistical tools to untangle and decipher the complicated relationships below the surface. Statistical models and algorithms can augment your domain expertise and knowledge, isolating insights amidst hundreds or thousands of factors. In addition, as data-driven companies increasingly look for ways to become more action-agile, web analytics needs to evolve from its primarily *descriptive* state (figures and reports) to a more *prescriptive* state, identifying the next course of action. Rather than analysts relying on subjective methods to determine what to focus on, predictive models can pinpoint high-value areas that are begging to be analyzed, tested, or targeted (**Figure 8.3**).

The essence of predictive analytics is to identify and score individual visitors on their likelihood to complete desired actions or behaviors. Once you build a predictive model based around actionable segments of prospects and customers, you can use the model's output to fuel better informed decision workflows, online traffic forecasting, testing strategies, targeted marketing campaigns, and marketing mix modeling. For example, predictive analytics can give companies a clearer understanding of interchannel relationships, including the true contribution of each marketing channel and how to best optimize the marketing spend allocation. The goal is to more intelligently define risks and opportunities as well as predict and quantify expected results. Predictive analytics can help your business to identify the appropriate optimization levers as well as when to pull them—shifting from hindsight to foresight. Say hello to the future of web analytics.

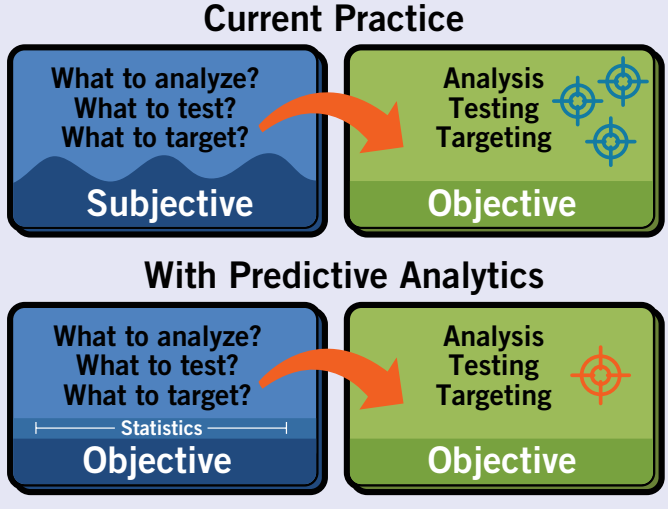

FIGURE 8.3 Predictive analytics can remove the guesswork or subjectivity from what to analyze, test, or target.

What's Your Optimization Throughput?

The old adage is *you can't manage what you don't measure,* and the same applies to your company's adventures in Actionland. Your organization needs to measure and understand how well it's turning data (input) into optimizations (output). As your company focuses on optimizing its online business, it also needs to improve its system for driving online optimization. The more efficient and action-agile your system is, the more value it can drive. Besides the incremental revenue and number of optimization projects completed (bottom of the funnel), you can measure the progress and efficiency of your system in a variety of ways:

- Percent of time (analytics team) on reporting versus analysis
- Analysis presentations delivered to projects started
- Project completion rate (starts to completions)
- Average time from decision to project completion
- Average number of tests per week or month

The goal is not to make the optimization process more cumbersome but to identify areas in which overall throughput can be improved, which might result in adding more resources, offloading noncritical tasks, acquiring new tools, and so on. Before your firm goes down the path of big data, it might want to evaluate how it's leveraging its "small" data in terms of optimization throughput. More data doesn't always translate into more value, just like more visitors won't convert into more sales if your checkout process is broken.

"The most dangerous kind of waste is the waste we do not recognize."

– Shigeo Shingo

Are You Ready for Action?

The stakes are high, the challenges are real, and the opportunities are great. Many organizations, both large and small, are struggling to keep pace with all the demands placed on their business by the online channel. They see incredible opportunities to better understand their customers' needs and improve how their business meets those needs. These companies just need brave individuals to step forward, help connect the dots, and lead them into Actionland. Are you ready and willing to be that person? Your organization desperately needs you to be.

"Whatever you're ready for is ready for you."

– Mark Victor Hansen

Formulate Your Action Plan

"Some people want it to happen, some wish it would happen, others make it happen."

– Michael Jordan

To pursue this critical role at your company, you must first develop an action plan based on your current standing, unique attributes, and environment. If we can learn one thing from film action heroes like Indiana Jones (besides the value of a well-aimed bullwhip), it is they always have a plan for each mission even if they are forced to improvise at times. As you formulate your own action plan for becoming an action hero, consider the following questions:

- Do you have a solid executive sponsor for web analytics? If you don't, how can you find one?
- Looking at your current skills and knowledge, what areas do you need to shore up?
- How much time do you spend on analysis? What steps can you take to free up more time per week?
- Do you have a clear understanding of your company's business goals and online strategy? What are the top online priorities of your company?
- What holes or blind spots do you currently have that could impede or limit your analysis? How can you fill in those gaps?
- How strong are your internal relationships with different key stakeholder groups? How can you strengthen those connections?
- What action roadblocks are currently standing in your way? What can be done organizationally to remove them?
- Which areas of the business are most promising in terms of establishing some initial quick wins and building momentum?

Your specific action plan will be unique to you. Some people may discover they have significant work ahead of them in multiple areas, whereas other marketers or web analysts may realize they're closer than they thought to becoming action heroes. In my experience, it's about striving toward that first taste of data-driven success. Once you have a victory, you can simply adapt and repeat the process. So get your plan in place, determine what your goals will be (keep them SMART and prioritized), write them down, and start working through your list as soon as possible. Enlist your coworkers, manager, and executive sponsor as needed to help you accomplish your goals. Schedule times in your calendar when you'll review your progress and revise your tactics as needed.

NOTE In Chapter 4, I mentioned focusing on goals from a PACT (prioritized, assessable, clear, and time-bound) perspective. When you're *measuring goals,* how attainable or relevant goals are is essentially out of your control as the analyst. In this case, you're *setting goals* so they should be SMART (prioritized couldn't hurt either).

INSIDER INSIGHTS

TIP: Become a data-driven marketer.

Sandy Martin is Senior Manager of Global Marketing and E-Commerce at Dollar Thrifty Automotive Group.

As a marketer, how did you learn to embrace web analytics?

After working in training and marketing roles at DTAG, I was presented with the opportunity to take over database marketing and analytics. As a marketer, I didn't have a web development or statistical background, but I knew how to get value from marketing data. With a "what have I got to lose" attitude, I dove in to learn more about the metrics and reports. One of the most important steps was to clarify how my company defined the metrics (how do we define a conversion?) and make sure I had everyone's buy-in, which sounds easy but involved a lot of back-and-forth debate. (I suggest ordering lots of food and locking people in a room until you can work it out.) After I understood what and how things were being measured, I asked lots of questions. One of the most valuable was "What will I do with this data?" In other words, what decisions can be made off the data and how does this information help my campaigns to be more successful? If data isn't actionable, your management team will see it as a waste of time and money.

What tips can you offer other marketers taking the plunge?

Once a marketer, always a marketer. Don't worry. The data won't extinguish your creative soul, but it will make you smarter. You'll be able to apply your creative skills to what-if scenarios and with the help of predictive analytics determine what would happen if you tried something new. Going in with the end in mind can help to set the benchmark for campaign performance. In addition, rather than waiting for campaigns to run their course, you can tweak your campaigns in midflight to create better end results. The great thing about online marketing, unlike million-dollar TV spots, is you can take a risk and quickly change your campaign if it's not working. Data empowers you to adapt and be a better marketer! ■

"Success will never be a big step in the future, success is a small step taken just now."

– Jonatan Mårtensson

No Mission Impossible

When you contemplate the mission ahead, know that it's not going to be easy but it's also not impossible. Take on the action hero persona today. Summon the ingenuity, charisma, and fortitude of your favorite action hero, and apply it to any obstacle you encounter in your own journey. As you embark on your mission, take along some final words of advice:

- Clarify your company's online strategy and priorities first, and then drill into the data. Stay in tune with the business goals and adjust your focus when priorities shift.
- Be strategic in which areas and KPIs you focus on. Qualitative data and other forms of data (offline, competitive) can complement your web analytics data.
- Plug into the context happening outside of your immediate surroundings. *Who* you know will shape *what* you know. Use your cross-functional knowledge to bridge teams and gaps.
- Start building momentum with small wins that can lead to bigger successes. You start a fire with kindling, not with logs.
- To be a great web analyst, leverage the Action Hero Framework in your analysis approach to be more disciplined, efficient, and effective.
- Lead the data-driven change at your organization, and inspire your organization with your insights, ideas, and actions. Don't sit back and wait for things to unfold; make them happen.

As a new college grad was about to start his new job as a web analyst, a family friend with many years of online marketing experience pulled him aside to offer him some friendly advice before he started his new career. He said, "Rather than deciding *each day* what type of analyst you're going to be, make the decision *today* that you're going to be an action hero." Interestingly, you actually can't just call yourself a hero. The title of hero is earned through your merits and assigned to you by others. I hope that before you close this book, you'll make the conscious decision to become an action hero. Combine the concepts, frameworks, and techniques in this book with your natural talent, skills, determination, and hard work, and people within your company will be calling you an action hero in a matter of months. Good luck!

I'd love to hear more of your Actionland adventures, so email me at brent@analyticshero.com or contact me on Twitter @analyticshero.

For more action hero information and resources, check out www.analyticshero.com.

ENDNOTES

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