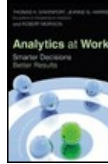


Chapters *To Go*



Analytics at Work: Smarter Decisions, Better Results

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Chapter 8: Build an Analytical Culture

Whenever we go to a company that is really good at analytics, we find that an analytical orientation is deeply embedded into its culture. The principles of an analytical culture go beyond the particular attitudes of individual decision makers, and they're rarely communicated as lists of precepts; they're usually things that people just know. In organizations with an analytical culture, new hires, who are selected in part for their analytical skills, quickly find out that the organization runs on analytical and fact-based decisions. While most firms haven't consciously cultivated analytical cultures in the past, we believe that they will increasingly do so in the future.

Analytical Traits and Behaviors

Culture, of course, is one of the softer elements of an organization's makeup, one that may seem incompatible with the "hard" nature of analytics. But it's incredibly critical if you want your firm to make better decisions. What is an analytical culture? Like any culture, it's the sum total of a series of individual attributes and behaviors that get repeated over time. People in an analytical culture demonstrate a set of common attributes. In our research and experience, they

Search for the Truth. Analytically minded people don't accept traditional actions as "given," but try to find out what's really true about how a business operates. They use analytics and data not to appear rational and objective, but to actually *be* rational and objective about the business environment. In their quest for truth, they are intent on applying rigorous objective logic, without preconditions or bias. This means that analysts must question the status quo, common assumptions, and conventional wisdom. As a result, they may arrive at unexpected conclusions, some of which may be politically incorrect. Thus, an analytical culture is a meritocracy that recognizes and rewards the best data-driven insights. People are open to being surprised and thus inclined toward innovation.

Find or Identify Patterns and Get to Root Causes. Work at identifying patterns in data or real-world situations, regardless of your level of ability. Identifying root causes for problems is not just an individual task, but one that can be built into a corporate culture. Toyota's "Five Whys" approach to finding root causes, for example, is deeply embedded. As one executive points out, in Toyota's analytical culture the answers must come not only through deduction, but also through diligent pursuit of each "why?"^[1]

Are as Granular as Possible in Their Analysis. Better analytics usually result from more detailed data and analysis. If there is an average in your business, try to "de-average" and understand its variations. If you're using zip code data, try to get census tract or even household data. If you're working with households, try to learn more about the individuals who make up the household.

Seek Data, Not Just Stories, to Analyze a Question or Issue. Non-analytical cultures use stories and anecdotes to support their decisions; analytical cultures seek data. They know that anecdotal evidence may be interesting, but it often isn't representative. That said, allow us to support this point with an anecdote: Memorial Hermann, the largest hospital system in Texas, has become increasingly analytical over time. However, an executive at one of its eleven hospitals commented at a leadership meeting that a major influencer of patient satisfaction and perception of quality was the taste of food. The analytics group at Memorial Hermann examined their own patient satisfaction data to discover whether this was true. In fact, the quality of food was one of the poorest predictors of patient satisfaction. Using regression and examining correlation coefficients, it was actually dead last in a list of over thirty correlates of patient satisfaction. It turns out that the executive had spoken with two patients at his hospital who were grumpy about their food. Rooting out plausible but unsubstantiated explanations of poor performance is vital to make and sustain improvement in health care. That's a major reason why Memorial Hermann won the 2009 National Quality Forum award for achieving exceptional patient outcomes.^[2]

Value Negative Results as Well as Positive. Since an analytical orientation is the application of the scientific method to business, one key principle of the scientific method applies: negative results are just as useful as positive ones. That is, if you find out that an intervention doesn't work—it doesn't lift sales or get a customer to buy something from you—that's just as useful as knowing that something does work. A culture that is not receptive to negative results will lead people to skew results in a positive direction—a highly unfortunate cultural attribute!

Use the Results of Analyses to Make Decisions and Take Actions. Making decisions based on power and politics rather than on objective analysis is a cancer on the organizational culture. It suggests that if you are powerful enough in the hierarchy, you'll get your way. This has been one of the problems at General Motors over the years (according to interviews with executives there)—market studies were done, data was gathered, and recommendations were made to management, but they were often ignored in favor of power and politics. Contrast this culture with Procter & Gamble's, where analysts are evaluated not by the quality of their analyses and the answers they develop, but by the breakthrough results that are achieved by putting their ideas into action.

Are Pragmatic About Trade-offs in Decision Making. One of the most common questions we get about analytical decision making is, "Isn't it possible to be too analytical—to gather too much data, or take too long to decide?" Of course it is possible, and it happens frequently. Gathering large amounts of data or doing detailed analysis can sometimes be an excuse for postponing decision and action. The best practitioners in analytical cultures are pragmatic about this trade-off, gathering data and employing analytics when possible, but not delaying unnecessarily to wait for them. If the decision needs to be made quickly, they make it quickly based on experience and the best data available.

An analytical culture comprises many attributes that may be particularly difficult to achieve. Furthermore, the culture may vary by degrees within an organization's departments, functions, business units, and geographies. If you're trying to make your organization more analytical, you need to assess where that culture is prevalent, and where it isn't.

^[1]Discussion by Teruyuki Minoura, then Toyota's managing director of global purchasing, at 2003 Automotive Parts System Solution Fair held in Tokyo, June 18, 2003, <http://www.toyotageorgetown.com/tps.asp>.

^[2]Interview with John D'Amore, May 18, 2009, and e-mail correspondence.

Pushbacks and Pats on the Back

It's still unusual for large numbers of people in large organizations to display the proclivities we've just described. Therefore, organizations that want to establish an analytical culture have to incorporate some firm (but not punitive) "pushbacks" for people who adopt the wrong behaviors. These day-to-day reminders that data and analysis are necessary to make good decisions help people internalize an analytical culture.

At Google, for example, if you bring an idea for a new feature or capability to product management, the first question will be, "Did you do a test or use data?" With its search engine and other applications, Google has what some would consider a terrifying amount of data available from millions of user interactions, so there is no excuse for not using it to make decisions. The same pushbacks will be found at Capital One, eBay, and other highly analytical firms where testing and the use of information are key components of the culture.

Over time, this question needs to be asked less and less, because it becomes baked into the culture. If managers continually come back with the question, colleagues should begin to ask it as well. Eventually only new employees—or existing ones with a memory lapse—would propose an idea without data to support it. Although it's important to occasionally allow an employee to say, "I don't have data to support this, but I think we should consider it anyway," firms with an analytical bent will try to think of a way to test or gather data to support almost any plausible idea.

The "obligation to dissent" is a cousin of the pushback. Some companies (Intel is a prominent example) encourage employees to dissent when they have opinions—or even better, data—supporting an alternative view to the one being proposed. Of course, dissenting has its limits: at Intel the dissent is supposed to end when the decision is made and the participants leave the room.

Senior managers, of course, are most responsible for creating cultures of informed dissent. Michael Roberto, a professor who studies effective decision processes, describes the problem well:

Consider the nature and quality of dialogue within many organizations. Candor, conflict, and debate appear conspicuously absent during their decision-making processes. Managers feel uncomfortable expressing dissent, groups converge quickly on a particular solution, and individuals assume that unanimity exists when, in fact, it does not. As a result, critical assumptions remain untested, and creative alternatives do not surface or receive adequate attention. In all too many cases, the problem begins with the person directing the process, as their words and deeds discourage a vigorous exchange of views. Powerful, popular, and highly successful leaders hear "yes" much too often, or they simply hear nothing when people really mean "no."^[3]

Culture is established not only by pushing back against the wrong behaviors, but also by celebrating the right ones. For an analytical culture, a person who solves a particularly important problem with analytics deserves praise, reminding others that analytics are a path to fame and fortune. Pats on the back are no less valuable than pushbacks.

^[3]Michael Roberto, *Why Great Leaders Don't Take Yes for an Answer* (Upper Saddle River, NJ: Pearson Education/Wharton School Publishing, 2005).

Analytics in Support of Other Cultures

Ideally, analytics should be combined with other cultural priorities. If your organization is fanatical about developing new products (as is Procter & Gamble), a complementary analytical culture can encourage the development of new product metrics to assess customer reactions and measure how new products are faring in the marketplace—analytical approaches that P&G employs. Companies may also use analytics to support a strong engineering culture, as at Air Products and Chemicals; a strong focus on disciplined financial performance, as at Marriott; or a strong focus on customers, as at Hotels.com, a business unit of Expedia, Inc.

Hotels.com allows customers not only to browse and book hotel rooms, but also to read reviews from previous guests; the site has over a million guest reviews. The company's management decided in 2006 to change its strategy and culture. The site was known as a low-cost way to book hotels, but when the market changed, executives wanted to shift its emphasis to customer service and loyal customer relationships. The company eliminated change and cancellation fees, developed a loyalty program with a free night's stay for each ten nights booked, redesigned its Web site, improved its Web search capabilities, and hired Joe Megibow as vice president of customer experience and online marketing.

Hotels.com is fanatical about gathering and analyzing Web usage statistics, and analysis of that data drives almost everything on its site—a pretty common approach for online firms. But Megibow and other executives felt that basic Web activity and financial reports—all of which showed solid growth and increased sales—were not getting at the truth of the customer experience. Further investigation revealed that the strong numbers were masking a range of problems on the site. By instituting a serious "voice of the customer" program combined with Web analytics, Megibow began to reveal the true story of how customers experienced the site.

The program allowed customers to indicate problems at any time in a session, using software that records every screen presented to a user and which mouse clicks a customer makes (don't worry, philanderers: this information isn't for sale). The company even created separate phone numbers (more than seven hundred in total) that dynamically appeared based on the page and how the customer got to the site, so that when customers called a certain number, it would be obvious where they encountered problems. Hotels.com used these capabilities to identify problems that would otherwise have escaped notice.

The real cultural shift happened as the result of an early, big find. Megibow discovered that a large percentage of customers who had made it all the way to the end of the checkout process did not complete a transaction. It turned out that a combination of unclear messaging, user flows, database issues, and outright bugs may have caused the majority of these customers to abandon the process, although they probably intended to complete a transaction. Based on these results, the GM of Hotels.com supported reprioritizing projects, bringing all relevant

groups to the table and operating at an above-normal pace. In a matter of days, all of the problems were solved. Not only did the change bring immediate additional revenue, but it showed the team how analytics, when used collaboratively across the company, could drive tangible improvements for customers and for the internal operations of the company. This “site conversion” cross-functional team continued to meet twice weekly for almost two years. As of this writing, hundreds of additional opportunities have been discovered.

Megibow reports that by removing obstacles and providing insights into better site design, Hotels.com has substantially improved its conversion rate—the percentage of Web site customers who actually book rooms. The company has also created “tons of customer goodwill” by solving their Web site problems. Finally, he says, they are winning in the shift to a more customer-focused culture. It couldn’t have been done, however, without a strong analytical culture for support. Megibow has moved to the Expedia organization now, and is attempting to establish the same culture of using analysis to root out and fix problems.

Other Cultural Attributes of Analytical Firms

Certain cultural attributes help to reinforce an analytical culture. In effect, well-managed organizations with clearly defined cultures will be more likely to adopt an analytical orientation.

Transparency in an organization’s culture encourages an analytical orientation. Not surprisingly, the willingness to freely share facts about the business is akin to appreciating these facts. As Warren Bennis, Dan Goleman, and Pat Biederman have noted in their book *Transparency*:

An organization’s capacity to compete, solve problems, innovate, meet challenges, and achieve goals—its intelligence, if you will—varies to the degree that the flow of information remains healthy. That is particularly true when the information in question consists of crucial but hard-to-take facts, the information that leaders may bristle at hearing—and that subordinates too often, and understandably, play down, disguise, or ignore. For information to flow freely within an institution, followers must feel free to speak openly, and leaders must welcome such openness.^[4]

Sharing this “flow of information” is particularly important for analytical cultures. If you don’t care about data and analysis and their power to transform an organization, you are not likely to spread them broadly. On the other hand, firms that are highly analytical will want employees, and maybe even Wall Street analysts and shareholders, to know about the data and analysis, particularly if they shed a positive light on the business.

Other cultural strengths can also be translated to analytical strengths. For example, the *pay for performance* culture, a close relative of transparency, creates a demand for performance metrics and motivates managers and employees to attend to them. Similarly, a culture that believes in infrastructure and process management will facilitate the generation of information and respond to operational problems that analytics point out. Finally, a culture that clearly communicates strategic direction will make it much easier to determine where analytics should be applied to the business.

Truly analytical firms not only gather data and analyze it; they also use it to *make tough calls and carry out tough actions*. They don’t allow experience, industry tradition, sentimental attachment, or nagging voices in their heads to create inertia; if the numbers suggest that something isn’t working, they stop doing it.

For example, a customer orientation entails separating the best customers from the worst and “firing” the customers who lose money for the organization. Similarly, analytical cultures must make tough decisions like discontinuing products that don’t make money or letting go of unproductive employees. Barry Beracha, the former CEO of Earth-grains (now a part of Sara Lee), is one of our analytical heroes because he used data to fire bad customers and products, thereby initiating a dramatic turnaround at his company.^[5]

^[4]Warren Bennis, Daniel Goleman, and Patricia Ward Biederman, *Transparency: Creating a Culture of Candor* (San Francisco: Jossey-Bass, 2008), 3–4.

^[5]“Profile: Barry Beracha,” *St. Louis Commerce Magazine*, November 1999, <http://www.stlcommercemagazine.com/archives/november1999/profile.html>.

Recognizing the Roadblocks

Firms with an analytical culture don’t keep up time-honored activities just because they’re time-honored. We talked with one consumer products firm, for example, that uses a lot of analytics but hasn’t established an analytical culture. As a market researcher explained, “We buy tons of data on the consumer products market. We analyze the hell out of it. The problem is, we don’t change anything as a result of it.” He went on to describe the results of a marketing mix portfolio analysis that determined which marketing programs were most effective: “We figured out that a lot of our television advertising wasn’t that effective. But I don’t think we’ve decreased it at all.” The leaders of the marketing function, he explained, either didn’t believe the analysis or weren’t comfortable with the implications.

Similarly, one retailer that is trying to progress in an analytical direction has hit a cultural roadblock. The company has a successful loyalty program that generates vast amounts of data that the company uses to tailor promotions to customers. However, because the marketing organization is structured by product categories, each category manager acts in the best interest of his or her category but often hurts store performance overall. They have a pool of money to offer customers, but category managers want to use it in their own areas, ignoring overall profitability. Judicious manipulation of organizational structure and incentives might fix the retailer’s fragmented approach, but so far it hasn’t.

Another problem at this retailer is an irrational attachment to circulars—those weekly ads inserted in your Sunday newspaper. Circulars have been around forever, but for this retailer, there is precious little evidence that they are effective as a marketing tool. Nobody knows who reads them, or whose shopping behavior they influence. Yet, despite the distinct possibility that these inserts are more commonly used as bird-cage

liners, the head of advertising at the company continues to spend money on them.

Such inertia is common in business generally, but analytical cultures minimize it. Instead, they are resolute that data and analytics will drive action. If something no longer makes sense—even if it's been done that way for eons—they find the courage to stop doing it. In short, organizations with analytical cultures make analytical decisions a high priority and recognize their value.

A financial services organization we've worked with has encountered different roadblocks. The company has brought us in several times to speak to middle managers about analytical competition. They always seem to get our message, but each time we ask, "Who's going to take these ideas to Bob," the company's imposing CEO, no one ever raises a hand.

The company has a centralized group for customer analytics, but it isn't well integrated with the rest of the organization—or even with the marketing function. A number of analytical studies are undertaken, but always piecemeal and in silos—so there is no way to get a unified perspective on the customer. One senior analyst described the problem:

We think we are an analytical culture, but we think we're better than we are. We have analytical overconfidence. We get stuck in the same practices and methods. Sometimes we do go deeper and deeper in one area, but then it gets harder to link across all the little silos. We never get the true power of linking the information together. Analytics people are treated as a specialty function—not embedded in the business. Managers effectively say, "Thanks for the information and hopefully it will support the case I'm making." Analytics are a black box and the group that does them is a black box. Our CEO doesn't know the true power of analytical decision making. And most managers are not open to hearing things they don't expect or believe. We set up an entire framework to measure marketing effectiveness. We measured it all. Then marketing did what they always did. They think they're doing it all right, but they need more insecurity. Having the capability isn't the same thing as doing something with it.

Despite its shortcomings, the company was doing well, at least until the current financial crisis. Now that it's struggling, it has cut out several people from the analytics group. In this company analytics are viewed as just another business activity—useful, but not essential, to decision makers.

Building Your Analytical Culture

Of course, you can't build analytical culture everywhere in your organization. The specific places where you do establish it (or first establish it) should be:

- Endowed with a great deal of data that isn't being sufficiently analyzed today.
- Important to your business success.
- Led by a manager who already understands the importance of analytics.
- Blessed with a cadre of people who have some analytical skills.

For example, analyzing Web data and metrics is a good place to begin building an analytical culture because the data is rich, the people involved are typically young and technology focused, and the Web is an increasingly important customer channel for most organizations.^[6] It's also a fairly recent development in business, so for many organizations, the state of Web analytics is primitive relative to what's possible.

Having an analytical culture provides notice that "how we do things around here" includes making decisions on the basis of data, facts, and rigorous analysis. Getting to this point isn't quick or easy, but once you're there, it's a competitive advantage. Progressive Insurance, for example, knows that most competitors won't be able to institute a strong analytical orientation overnight. One executive there commented to us in an interview:

We've been doing analytics for quite a while, and it's baked into our culture. A nonanalytical culture is very hard to change—you'd have to overcome senior managers who base big decisions on intuition. Plus we have really deep bench strength—senior managers have had experience in many different areas, and they're comfortable with how data-based decisions are used in all of them. Even if you put in a new department of analytical people, you can't change a culture by creating a department.

Of course, even with their strong analytical cultures, leaders like Progressive can never rest on their laurels. They must come up with new strategies, new data, new models, and new analytical technologies if they want to stay ahead of competitors. The analytical organizations of the future will be those in which analytical cultures as well as capabilities are actively renewed and redeveloped over time. Not coincidentally, how to do that is the subject of the next chapter.

^[6]The online marketing consultant Jim Novo makes a similar point in his blog. See Jim Novo, "Marketing Productivity Blog," <http://blog.jimnovo.com/about-the-blog/>