

Marketing & Sales

Big Data, Analytics, and the Future of Marketing & Sales

March 2015

Table of contents

Business Opportunities	8 Getting big impact from big data 24 Smart analytics: How marketing drives short-term and long-term growth 38 Using marketing analytics to drive superior growth	16 Big Data & advanced analytics: Success stories from the front lines 30 Putting Big Data and advanced analytics to work	20 Use Big Data to find new micromarkets 34 Know your customers wherever they are
Insight and action	48 How leading retailers turn insights into profits 60 Marketing's age of relevance 80 Name your price: The power of Big Data and analytics	56 Five steps to squeeze more ROI from your marketing 72 Gilt Groupe: Using Big Data, mobile, and social media to reinvent shopping 84 Getting beyond the buzz: Is your social media working?	60 Using Big Data to make better pricing decisions 76 Under the retail microscope: Seeing your customers for the first time 98 Want big data sales programs to work? Get emotional
How to get organized and get started	90 How to get the most from big data 102 Get started with Big Data: Tie strategy to performance 114 Simplify Big Data – or it'll be useless for sales	94 Five Roles You Need on Your Big Data Team 106 What you need to make Big Data work: The pencil	110 Need for speed: Algorithmic marketing and customer data overload

Introduction

Big Data is the biggest game-changing opportunity for marketing and sales since the Internet went mainstream almost 20 years ago. The data big bang has unleashed torrents of terabytes about everything from customer behaviors to weather patterns to demographic consumer shifts in emerging markets.

The companies who are successful in turning data into above-market growth will excel at three things:

- Using analytics to identify valuable business opportunities from the data to drive decisions and improve marketing return on investment (MROI)
- Turning those insights into well-designed products and offers that delight customers
- Delivering those products and offers effectively to the marketplace.

This goldmine of data represents a pivot-point moment for marketing and sales leaders. Companies that inject big data and analytics into their operation show productivity rates and profitability that are 5 percent to 6 percent higher than those of their peers. That's an advantage no company can afford to ignore.

This compendium explores the business opportunities, company examples, and organizational implications of Big Data and advanced analytics. We hope it provokes good and useful conversations.

Please contact us with your reactions and thoughts.



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Part 1: Business opportunities

8 Getting big impact from big data

24 Smart analytics: How marketing drives short-term and long-term growth

38 Using marketing analytics to drive superior growth

16 Big Data & advanced analytics: Success stories from the front lines

30 Putting Big Data and advanced analytics to work

20 Use Big Data to find new micromarkets

34 Know your customers wherever they are



Getting big impact from Big Data

New technology tools are making adoption by the front line much easier, and that's accelerating the organizational adaptation needed to produce results.

January 2015 | David Court

The world has become excited about big data and advanced analytics not just because the data are big but also because the potential for impact is big. Our colleagues at the McKinsey Global Institute (MGI) caught many people's attention several years ago when they estimated that retailers exploiting data analytics at scale across their organizations could increase their operating margins by more than 60 percent and that the US healthcare sector could reduce costs by 8 percent through data-analytics efficiency and quality improvements.¹

Unfortunately, achieving the level of impact MGI foresaw has proved difficult. True, there are successful examples of companies such as Amazon and Google, where data analytics is a foundation of the enterprise.² But for most legacy companies, data-analytics success has been limited to a few tests or to narrow slices of the business. Very few have achieved what we would call "big impact through big data," or impact at scale. For example, we recently assembled a group of analytics leaders from major companies that are quite committed to realizing the potential of big data and advanced analytics. When we asked them what degree of revenue or cost improvement they had achieved through the use of these techniques, three-quarters said it was less than 1 percent.

In previous articles, we've shown how capturing the potential of data analytics requires the building blocks of any good strategic transformation: it starts with a plan, demands the creation of new senior-management capacity to really focus on data, and, perhaps most important, addresses the cultural and skill-building challenges needed for the front line (not just the analytics team) to embrace the change.³

Here, we want to focus on what to do when you're in the midst of that transformation and facing the inevitable challenges to realizing large-scale benefits (exhibit). For example, management teams frequently don't see enough immediate financial impact to justify additional investments. Frontline managers lack understanding and confidence in the analytics and hesitate to employ it. Existing organizational processes are unable to accommodate advancements in analytics and automation, often because protocols for decision making require multiple levels of approval.

If you see your organization struggling with these impediments to scaling data-analytics efforts, the first step is to make sure you are doing enough to adopt some of the new tools that are emerging to help deal with such challenges. These tools deliver fast results, build the confidence of the front line, and automate the delivery of analytic insights to it in usable formats.

But the tools alone are insufficient. Organizational adaptation is also needed to overcome fear and catalyze change. Management teams need to shift priorities from small-scale exercises to focusing on critical business areas and driving the use of analytics across the organization. And at times, jobs need to be redesigned to embrace advancements in digitization and automation. An organization that quickly adopts new tools and adapts

¹ See the full McKinsey Global Institute report, *Big data: The next frontier for innovation, competition, and productivity*, May 2011, on mckinsey.com.

² To learn how marketing functions in Google's data-driven culture, please see our forthcoming interview with Lorraine Twohill, the company's head of marketing, on mckinsey.com.

³ See Stefan Bieddorf, David Court, and Paul Willmott, "Big data: What's your plan?," *McKinsey Quarterly*, March 2013; and Brad Brown, David Court, and Paul Willmott, "Mobilizing your C-suite for big-data analytics," *McKinsey Quarterly*, November 2013, both available on mckinsey.com.

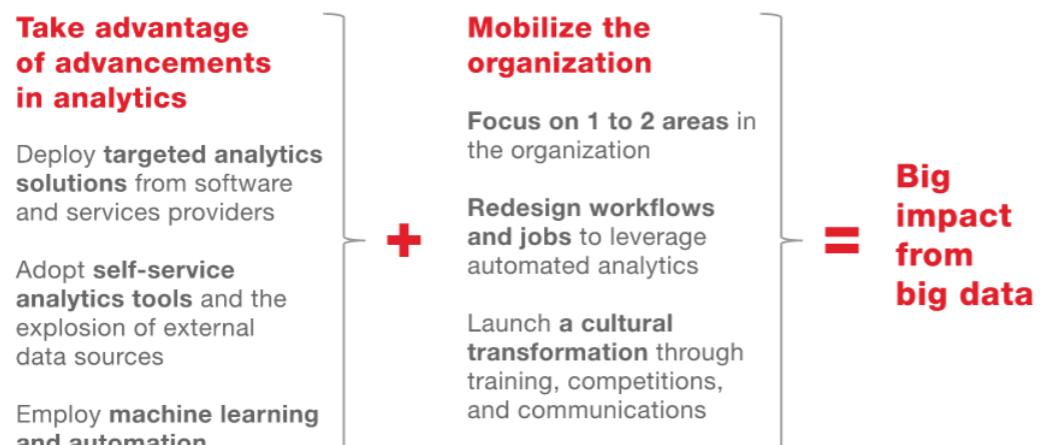
itself to capture their potential is more likely to achieve large-scale benefits from its data-analytics efforts.

Why data-analytics efforts bog down before they get big

As recently as two or three years ago, the key challenges for data-analytics leaders were getting their senior teams to understand its potential, finding enough talent to build models, and creating the right data fabric to tie together the often disparate databases inside and outside the enterprise. But as these professionals have pushed for scale, new challenges have emerged.

Exhibit

How to accelerate your data-analytics transformation



Source: McKinsey analysis

First, many senior managers are reluctant to double down on their investments in analytics—investments required for scale, because early efforts have not yielded a significant return. In many cases, they were focused on more open-ended efforts to gain novel insights from big data. These efforts were fueled by analytics vendors and data scientists who were eager to take data and run all types of analyses in the hope of finding diamonds. Many executives heard the claim “just give us your data, and we will find new patterns and insights to drive your business.”

These open-ended exercises often yielded novel insights, without achieving large-scale results. For example, an executive at one automaker recently invested in an initiative to understand how social media could be used to improve production planning and forecasting. While the analysis surfaced interesting details on customer preferences, it didn’t provide much guidance on how to improve the company’s forecasting approach.

Executives can often point to examples such as this one where early efforts to understand interesting patterns were not actionable or able to influence business results in a meaningful way. The upshot: senior management often is hesitant about financing the investments required for scale, such as analytics centers of excellence, tools, and training.

Second, frontline managers and business users frequently lack confidence that analytics will improve their decision making. One of the common complaints from this audience is that the tools are too much like black boxes; managers simply don’t understand the analytics or the recommendations it suggests. Frontline managers and business users understandably fall back on their historic rules of thumb when they don’t trust the analytics, particularly if their analytics-based tools are not easy to use or are not embedded into established workflows and processes. For example, at a sales call center, staff members failed to use a product-recommendation engine because they didn’t know how the tool formulated the recommendations and because it was not user friendly. Once the tool was updated to explain why the recommendations were being made and the interface was improved, adoption increased dramatically.

Finally, a company’s core processes can also be a barrier to capturing the potential of sophisticated analytics. For the “born through analytics” companies, like Amazon and Facebook, processes such as pricing, ad serving, and supply-chain management have been built around a foundation of automated analytics. These organizations also have built big data processing systems that support automation and developed recruiting approaches that attract analytics talent.

But in more established organizations, management-approval processes have not kept up with the advancements in data analytics. For example, it’s great to have real-time data and automated pricing engines, but if management processes are designed to set prices on a weekly basis, the organization won’t be able to realize the full impact of these new technologies. Moreover, organizations that fail to leverage such enhancements risk falling behind.

Adopting new technologies to scale impact

Few areas are experiencing more innovation and investment than big data and analytics. New tools and improved approaches across the data-analytics ecosystem are offering ways to deal with the challenge of achieving scale. From our vantage point, three hold particular promise.

First is the emergence of targeted solutions from analytics-based software and service providers that are helping their clients achieve a more direct, and at times faster, impact on the bottom line. An emerging class of analytics specialists builds models targeted to specific use cases. These models have a clear business focus and can be implemented

swiftly. We are seeing them successfully applied in a wide range of areas: logistics, risk management, pricing, and personnel management, to name just a few. Because these more specific solutions have been applied across dozens of companies, they can be deployed more readily. Collectively, such targeted applications will help raise management's confidence in investing to gain scale. There's still a need for a shift in culture and for a heavy emphasis on adoption, but the more focused tools represent a big step forward.

Second, new self-service tools are building business users' confidence in analytics. One hot term gaining traction in the analytics world is "democratization." Getting analytics out of the exclusive hands of the statistics gurus, and into the hands of a broad base of frontline users, is seen as a key building block for scale. Without needing to know a single line of coding, frontline users of new technology tools can link data from multiple sources (including external ones) and apply predictive analytics. Visualization tools, meanwhile, are putting business users in control of the analytics tools by making it easy to slice and dice data, define the data exploration needed to address the business issues, and support decision making. Companies such as American Express, Procter & Gamble, and Walmart have made major investments in these types of tools to democratize the use of analytics.

Hands-on experience (guided by experts in early go-rounds) helps people grow accustomed to using data. That builds confidence and, over time, can increase the scale and scope of data-informed problem solving and decision support. A technology-hardware company, for example, deployed a set of self-service analytics and visualization tools to improve the decisions of its sales force. The new platform helped the company to conduct customer analytics and to better identify sales and renewal opportunities. Since implementing the tools, the tech company has generated more than \$100 million in new revenue from support and service contracts.

Finally, it's becoming much easier to automate processes and decision making. Technology improvements are allowing a much broader capture of real-time data (for example, through sensors) while facilitating real-time, large-scale data processing and analysis. These advances are opening new pathways to automation and machine learning that were previously available only to leading technology firms. For example, one insurer has made major strides using analytics to predict the severity of claims. Automated systems instantly compare a filing with millions of claims records, cutting down the need for human intervention. Another analytics program can vastly automate search-engine optimization by predicting the type of content that will optimize engagement for a given company and automatically serving up content to capture customers.

Beyond new tools: Adapting the organization

The challenges we outlined above demand some new actions beyond the tools: more focus, more job redefinition, and more cultural change.

Focus on change management

Democratization and the power of new tools can help overcome frontline doubts and unfamiliarity with analytics. However, in addition to gaining confidence, managers need to change their way of making decisions to take advantage of analytics. This is the heart of the change-management challenge—it is not easy, and it takes time. The implication is that to achieve scale, paradoxically, you need to focus. Trying to orchestrate change in all of a company's daily decision-making and operating approaches is too overwhelming to be practical. In our experience, though, it's possible to drive adoption and behavioral change across the full enterprise in focused areas such as pricing, inventory allocation, or credit management.

Better to pursue scale that's achievable than to overreach and be disappointed or to scatter pilots all over the organization. (One-off pilots often appeal to early adopters but fail to cross the chasm and reach wider adoption or to build momentum for company-wide change.)

Leaders should ask themselves which functions or departments would benefit most from analytics and deploy a combination of new targeted solutions, visualization tools, and change management and training in those few areas. One telecommunications company, for example, focused on applying analytics to improve customer-churn management, which held the potential for a big bottom-line impact. That required the company to partner with a leading data-storage and analytics player to identify (in near real time) customers who would churn. Once the models were developed, a frontline transformation effort was launched to drive adoption of the tools. Moreover, customer-service workflows were redesigned, user-friendly frontline apps were deployed, and customer-service agents received training for all of the new tools.

Redesign jobs

Automating part of the jobs of employees means making a permanent change in their roles and responsibilities. If you automate pricing, for instance, it is hard to hold the affected manager solely responsible for the profit and loss of the business going forward, since a key part of the profit formula is now made by a machine. As managerial responsibilities evolve or are eliminated altogether, organizations will have to adapt by redefining roles to best leverage and support the ongoing development of these technologies. At the insurance company above, claims managers no longer process all claims; instead, they focus on the exceptional ones, with the highest level of complexity

or the most severe property damage. Again, focus is required, since job redesign is time consuming. And it can be taken on only if the automated tools and new roles have been developed and tested to meet whatever surprises our volatile world throws at them.

Build a foundation of analytics in your culture

People have been talking about data-driven cultures for a long time, but what it takes to create one is changing as a result of the new tools available. Companies have a wider set of options to spur analytics engagement among critical employees. A leading financial-services firm, for example, began by developing competitions that rewarded and recognized those teams that could generate powerful insights through analytics. Second, it established training boot camps where end users would learn how to use self-service tools. Third, it created a community of power users to support end-users in their analyses and to validate findings. Finally, the company established a communications program to share the excitement through analytics meet-ups, leadership communications, and newsletters (which were critical to maintaining long-term support for the program). Creative adaptations like these will help companies to move beyond the hope that “we are going to be a big data company” and to root cultural change in realistic action.

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New technologies, with their ease of adoption, point toward the next horizon of data analytics. For a glimpse of what the future might hold, consider what's happening now at a leading organization that has adopted an innovative approach to embedding analytics capabilities within its businesses.

The company started with early-stage centers of excellence and a small corps of analytics specialists tackling business cases in bespoke fashion. Today, it rotates business leaders into a new type of analytics center, where they learn the basics about new tools and how to apply them. Then they bring these insights back to their respective business. They don't become analytics specialists or data scientists by any means, but they emerge capable of taking analytics beyond experiments and applying it to the real business problems and opportunities they encounter daily.

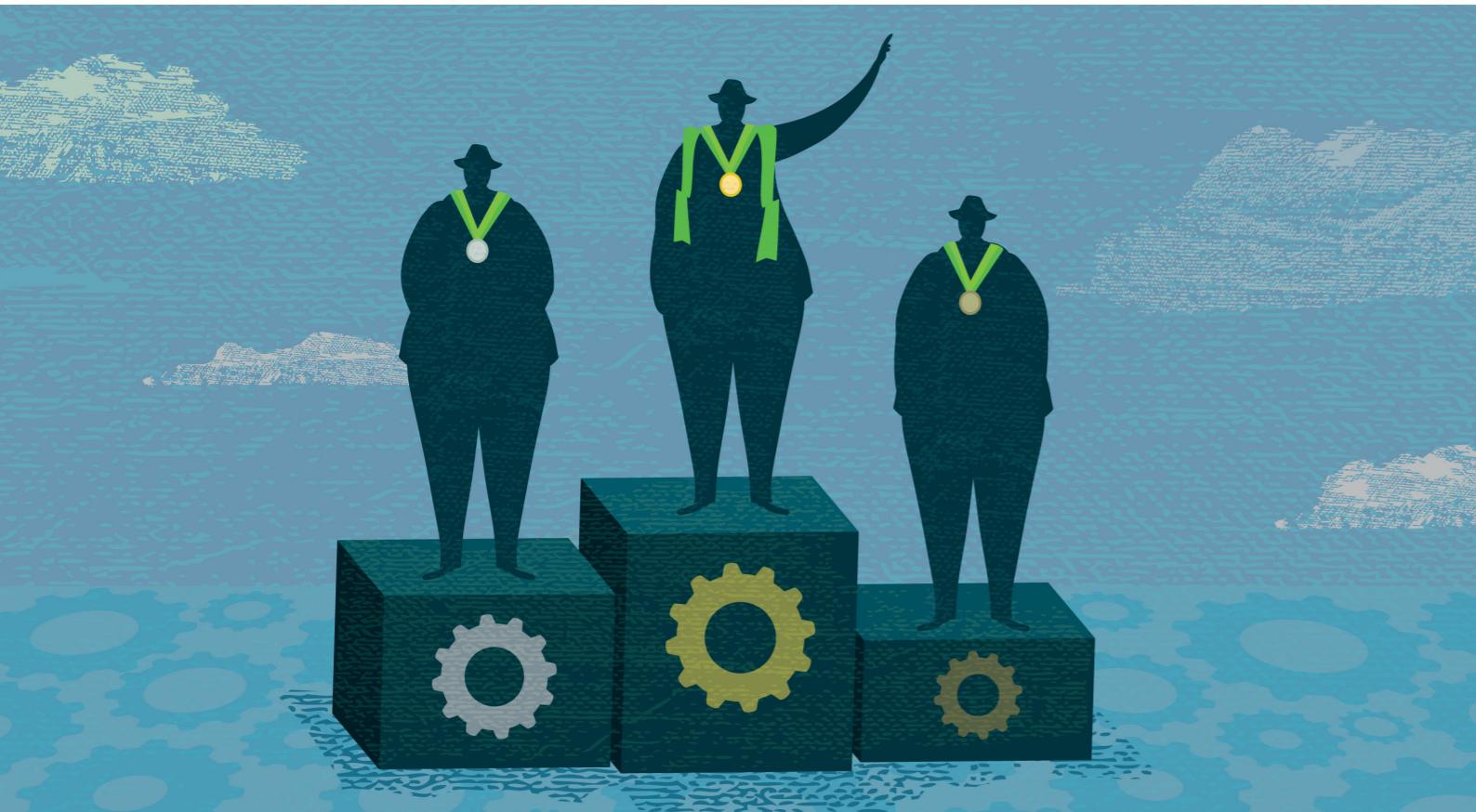
We foresee the day when many companies will be running tens or even hundreds of managers through centers like these. That will accelerate adoption—particularly as analytics tools become ever more frontline friendly—and create the big impact that big data has promised. □



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Big Data & advanced analytics: Success stories from the front lines

Companies that incorporate data into their operations show productivity rates much higher than those of their peers.

December 2012 | Jonathan Gordon, Manish Goyal, Tim McGuire, and Dennis Spillecke

\$50 billion. That's about how much marketers are spending on Big Data and advanced analytics (according to a BMO Capital Markets report) in the hopes of improving marketing's impact on the business.

This commitment reflects a belief that big data and advanced analytics can transform business. While, at times, the promise has fallen short of the reality, some companies are already seeing significant value. Recent academic research found that companies that have incorporated data and analytics into their operations show productivity rates 5 to 6 percent higher than those of their peers. Now is the time to define a pragmatic approach to big data and advanced analytics that is rooted in performance and focused on impact.

Here are four stories "from the front lines" that illustrate how companies have used advanced analytics to deliver impact.

1. Asking the right questions

The more data-rich your business becomes, the more important it is to ask the right questions at the beginning of the analytical process. That's because the very scale of the data makes it easy to lose your way or become trapped in endless rounds of analysis. Good questions should identify the specific decisions that data and analytics will support to drive positive business impact. Asking two simple questions, for example, helped one well-known insurer find a way to grow its sales without increasing its marketing budget: First, how much should be invested in marketing, and second, to which channels, vehicles, and messages should that investment be allocated? These clear markers guided the company as it triangulated between three sources of data, helping it develop a proprietary model to optimize spending across channels at the zip code level. (For more on this, read "What you need to make Big Data work: The pencil.")

2. Being creative with what you have

More data can hone models of consumer behavior, allowing for more accurate views of opportunities and risks. One telecom company in emerging markets recognized that its data could solve a longstanding quandary faced by financial service companies: how to meet the need of millions of low-income individuals for revolving credit, similar to credit cards, without a credit-risk model. Executives at the telecom realized that the payment histories of their mobile network could be used as a way to solve that conundrum. Using this data, the company created an innovative risk model that could assess a potential customer's ability to repay loans. Now the company is exploring an entirely new line in emerging market consumer finance that uses these analytics as a core asset.

Optimizing spend and impact across channels

Business is all about tradeoffs: price versus volume, cost of inventory versus the chance of a stock-out. In the past, many such tradeoffs have been made with a little data and a lot of gut instinct. Even now, in the age of cookies and click throughs, it's not always easy to optimize spending allocations. Big Data and advanced analytics—particularly more real-time data—can eliminate much of the guesswork. One transnational communications company had spent heavily on traditional media to improve brand recognition, and invested in social media as well. However, it's traditional marketing-mix models could not measure the sales impact of the social buzz.

Combining data from traditional media, sales, and customer use of key social-media sites yielded a model that demonstrated that social media had a much higher impact than company strategists had assumed. More critically, company analysts found that the primary driver of social-media sentiment was not its television commercials but customer interaction with the company's call centers—and in fact, that poor call-handling was subtracting almost as much value as the TV spots were adding. By reallocating some media spending to improve call-center satisfaction, the company increased its customer base significantly and gained several million dollars in revenues.

3. Keeping it simple

Too much information is overwhelming. That's why it's important to keep reports simple or they won't be used. One large B2B manufacturer, for example, recognized that a large percentage of the company's sales flowed from a small proportion of its customer base, but sales growth with those big customers was sluggish. Managers wanted local sales representatives to find new customers, so the company created a central analytics team that gathered detailed data and built predictive models that identified the local markets with the highest new-customer sales potential. Rather than give the sales reps reams of data and complex models, the team created a powerful tool with a simple, visual interface that pinpointed new-customer potential by zip code. This tool allowed district sales managers to see zip codes where there was an opportunity for high growth and deploy their sales teams against these areas. In the end, using the tool enabled the company to double its rate of sales growth while actually cutting its sales costs.

Crunching data is not an automatic ticket for success, any more than putting up a website turned every company in the dotcom era into an e-commerce juggernaut. If the rollout of IT in the corporate world over the last 30 years has taught one lesson, it's that the adoption of a transformative technology always requires careful and creative management grounded in facts. The new new thing never succeeds without a lot of help from the old old thing. ☐



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Dennis, the leader of our global Brand & Marketing Spend Effectiveness group, helps clients build successful brands in an increasingly crowded consumer and media environment.



Use Big Data to find new micromarkets

Micromarket strategy is perhaps the most potent new application of big data analytics in B2B sales.

July 2012 | Manish Goyal, Maryanne Q. Hancock, and Homayoun Hatami

Sophisticated sales organizations now have the ability to combine, sift, and sort vast troves of data to develop highly efficient strategies for selling into micromarkets. While B2C companies have become adept at mining the petabytes of transactional and other purchasing data that consumers generate as they interact online, B2B sales organizations have only recently begun to use big data to inform overall strategy and tailor sales pitches for specific customers in real time. Yet the payoff is huge. In fact, we've found that micromarket strategy is perhaps the most potent new application of big data analytics in B2B sales.

For a micromarket strategy to work, however, management must have the courage and imagination to act on the insights revealed by this type of analysis. Most sales leaders deploy resources on the basis of the current or historical performance of a given sales region. Going after future opportunities at the micromarket level can seem risky, but basing strategy on old views of markets and their past performance is riskier still.

Once management is on board, the sales team needs to understand the rationale behind the micromarket strategy and have simple tools that make it easy to implement. That means aligning sales coverage with opportunity and creating straightforward sales "plays" for each type of opportunity.

Align sales coverage with opportunity

During the annual sales-planning process, managers determine how to invest resources to capture anticipated demand. The first step is to overlay the rough allocation of resources across markets on the basis of their overall potential. But instead of then applying salespeople consistently across customers, managers use insights about growth opportunities and recommended coverage models for various market types to fundamentally rethink their reps' distribution.

For example, a high-growth urban pocket with low competitive intensity where a company does not have much coverage should add "hunter" capacity; depending on customer density, that market might be able to sustain a few such reps, each specializing in a particular set of customer segments. A lower-growth market where the company has significant share would require "defensive farming"—that is, fewer reps, but with strong skills in account management. Local sales managers should be trained on how to use the data from the opportunity map to identify more precisely where they want their reps to spend their time and how they want to size their territories.

Consider the case of a chemicals company. Instead of looking at current sales by region, as it had always done, the company examined market share within customer industry sectors in specific U.S. counties. The micromarket analysis revealed that although the company had 20 percent of the overall market, it had up to 60 percent in some markets

but as little as 10 percent in others, including some of the fastest-growing segments. On the basis of this analysis, the company redeployed its sales force to exploit the growth.

For instance, one sales rep had been spending more than half her time 200 miles from her home office, even though only a quarter of her region's opportunity lay there. This was purely because sales territories had been assigned according to historical performance rather than growth prospects. Now she spends 75 percent of her time in an area where 75 percent of the opportunity exists—within 50 miles of her office. Changes like these increased the firm's growth rate of new accounts from 15 percent to 25 percent in just one year.

Create sales plays for each type of opportunity

Micromarket analyses present myriad new opportunities, so the challenge for companies is how to help a generalist sales force effectively tailor messaging and materials to the opportunity.

Companies should identify groups of micromarkets—or “peer groups”—that share certain characteristics. For example, one peer group might be high-growth micromarkets with limited competitive intensity. Another might be made up of markets with similar operating cost structures. Because they are structurally similar, peer groups represent similar sales opportunities. Companies usually find that a set of four to 10 peer groups is a manageable number.

For each peer group, marketing managers develop the strategy and “play”—the best way to sell into that set of customers or market. For example, the chemicals company grouped its 70 micromarkets into four peer groups and outlined a strategy for each, such as “invest,” in which it sought to capture an outsize share of growth, or “maintain,” in which it sought to hold on to its market share while maximizing operating efficiencies. The play usually encompasses guidance on the offer, pricing, and communications and may include tailored collateral materials.

Companies typically devise and perfect plays either by adapting approaches that have been successful in similar settings or by testing new plays in pilot markets. One telecommunications company we spoke with continually tested plays on different customer segments to determine which offers at which price points with which types of services were most successful in various markets.

Support the sales force in executing the plays

For a micromarket strategy to succeed, the sales training has to be experiential. Salespeople should engage with opportunity maps that reveal hot (and cool) micromarkets in a given geography and test their intuition against hard data. (It can be

eye-opening for them to discover that data analysis is often superior to anecdote in this realm.) Training should also allow them to act out and hone the recommended sales plays. Not only does this hands-on engagement help win over sales reps, but it's a much more effective teaching method than lectures or demonstrations.

In addition to interactive training, reps will need direct coaching on specific pitches. To this end, several leading companies have created in-house “win labs” in which sales and marketing experts help reps craft their pitches. (The opportunity map, devised early in a micromarket analysis, provides invaluable information because it reveals drivers of demand: what makes a given customer buy.) Salespeople are required to bring their pitch plans to the win lab—usually virtually—and the lab team provides data, insights, and value-proposition collateral about the market or similar customers that the rep can use to create a sales play for a specific customer. Finding growth with big data is more than an add-on; it affects every aspect of a business, requiring a change in mind-set from leadership down to the front lines. Micromarket strategies are demanding, but they consistently give sales a competitive edge. Sales leaders should ask whether they can afford not to embrace big data.



This article was originally published online in the Harvard Business Review. It was excerpted from the authors' article “Selling into Micromarkets” in the July-August issue of the magazine. □



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Smart analytics: How marketing drives short-term and long-term growth

To become an engine for growth, marketers need to make “smart analytics” their new best friend.

April 2013 | Jesko Perrey, Dennis Spillecke, and Andris Umblījs

If you were looking for a theme song that captures marketing today, you could do worse than pick Queen’s anthem “Under Pressure.” Marketing is under pressure to show results, cut costs, and drive growth. Marketers should welcome it.

That’s because marketing has a big opportunity to drive above-market growth and demonstrate its value to the C-suite and the boardroom. In our experience, marketing can increase marketing ROI (MROI) by 15–20 percent. That kind of value can turn plenty of heads in the C-suite.

How? To become an engine for growth, marketers need to make “smart analytics” their new best friend. By that we mean using a thoughtful range of analytics tools and techniques to maximize short- and long-term returns.

Today's marketing budget process is broken

We know that effective marketing can return €5 of revenues for each euro spent (averaged across a set of sectors we studied). However, you won’t find that kind of ROI if you don’t invest your marketing funds where they’ll deliver the most return. The problem is that in many companies, decisions about setting marketing budgets and spend allocations is done haphazardly and too often without sound facts about what is effective.

Here are the broken budget approaches we see most often see:

1. Beauty contest

Each brand / country manager presents his/her strategy, investment plans, and request for funds. Management allocates funds based on the substance and quality of the presentation (ie. a “beauty contest”). If the pitches from the contenders aren’t constructed consistently- and they often aren’t- it can be hard for managers to compare and evaluate them objectively and assess the relative ROI of each one.

2. Locked-in

Marketing funds are allocated for pre-determined activities, such as marketing support for product launches. The challenge with this approach is not just in deciding what and how much activity each brand / country needs or “deserves” vs. others. The challenge also lies in the lack of flexibility in reallocating funds because they’re already committed.

3. Over-funding

In this case, funds are allocated in proportion to sales. The obvious risk here is that large, mature brands or geographies where growth potential is limited may get

overfunded at the expense of future growth opportunities. Differences in market environment and growth potential among brands or geographies are ignored.

4. Inertia

Many times we see funds allocated based on investments made the previous year, with slight adjustments. Aside from being short on analysis, this method runs the risk of repeating- or worse, compounding- previous errors. The culprit? Oftentimes it's simple inertia in the face of complexity and increased demands on the CMO.

Marketing Mix Modeling (MMM) misses the complete story

Marketers need to focus on investments that maximize the Net Present Value (NPV) of the company's future sales and/or profit, and, ultimately, its share price. In the years before the digital revolution, it was difficult for markets to say with any precision which investments moved the needle on sales and profits. But the surfeit of data about consumers and the analytics techniques now available have made marketing a much more precise science. Marketers no longer need to rely on guesswork or gut feel to make investment decisions that drive both short- and long-term returns.

MMM provides the best way to measure the actual link between a brand's marketing investments and resulting sales / profit impact. By adjusting spend across the mix of channels and examining actual sales over a period of time as well as the intensity of activity changes week to week, marketers can determine consumer buying responses to your marketing. MMM analysis can then statistically separate sales impact of each individual marketing investment.

As effective as MMM can be, there are shortcomings that marketers need to account for:

1. MMM captures only the short-term (3–6 months) incremental sales impact of marketing activity. Consumer memory effects last just three months. The incremental effect of MMM on sales is typically in the range of 20–40 percent of total sales (including both advertising and promotional effects). The remainder of sales is determined by the power of the brand, which marketing activity has developed over the long term (3–5 years). MMM typically captures just 30–60 percent of total NPV delivered by marketing investments and misrepresents the true impact of marketing on brand's performance. But many marketers fall into this short-term trap in response to the relentless pressure to deliver short-term gains. One telecoms company, for example, relentlessly focused on acquiring new customers (short term) while ignoring their more valuable existing customers (long term). The other reason for "short-termitis" is that so much of the available data is by its nature short term. Data on long-term marketing and brand performance is hard to come by and hard to act on given the long lag times.

2. Given the complexity of measuring brand performance over a long duration, marketers have traditionally struggled to assign a real value to brand investments. But sophisticated analytics make that possible today. Calculations that separate short-term effects from long-term benefits can isolate those marketing activities that truly build brand equity. With those calculations in hand, marketers have the data to make nuanced decisions about where to put their euros to juice short-term activity or build long-term equity.

3. Today any analysis of marketing impact on brand performance is incomplete without inclusion of social media, which has a large and growing influence on consumer brand choice. Failure to capture its impact introduce serious biases in MMM estimates. Marketers need to incorporate what we call Social GRP and plug it into MMM analysis to measure its impact compared to other channels influencing customer choices.

So how have companies used these insights in practice?

A marketer rebalances spend for short- and long-term growth

Many executives at Consumer Packaged Goods (CPG) companies are worried about "falling behind" if they stick with traditional consumer communication channels. Even so, they're often not sure how to use the alternative—digital. CPG's challenge is that unlike telecom, insurance or car brands, where consumers invest significant time in researching before buying, consumers are less prone to surfing the web for items like toothpaste, diapers or yoghurt. So how can consumer brands participate in the digital revolution?

A consumer food brand decided to use Facebook to connect with customers. The plan involved using Facebook advertising plus contests, relevant sponsored biogs, photo sharing incentives, and shopping list apps that plugged into the sharing nature of the Web and had good viral potential. The approach paid off, delivering sales results similar to traditional marketing (which included heavy TV advertising and significant print), at a fraction of the cost.

The reason? Better targeting. A brand on Facebook can identify potential buyers by analyzing conversations and activities (while still adhering to privacy laws). In addition, a brand's own Facebook fans have identified themselves as being interested in the brand and are not only likely to become repeat buyers but also form a potential army of brand advocates who can turn the power of social media into word of mouth on steroids.

Given the overwhelmingly positive effects of this Facebook effort, the brand considered making massive marketing budget cuts to TV and print advertising in favor of more spend on social media channels. MMM analysis suggested that digital marketing (online display, Facebook advertising and Facebook viral) would deliver the same impact as traditional marketing (TV and print), but at only 15 percent of the cost.

When long-term effects were included in the calculations, however, the contribution of digital dropped by half. Online displays and Facebook advertising just cannot deliver the same emotional connection that brand equity requires that TV advertising does. Significant cuts to TV spend as suggested by traditional MMM would have reduced the NPV of the brand's profit. In addition, analysis that factored in long-term impact actually revealed that a profitable increase in the marketing budget by 20 percent led to an increase in revenue of 30 percent.

Smart analytics is far from a monolithic approach. It's actually a collection of approaches and techniques that, when systematically applied across a specific set of issues, delivers useful insights for making marketing investments that pay off. □



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Putting Big Data and advanced analytics to work

McKinsey director David Court explains how companies can improve their decisions and performance by getting powerful new tools in the hands of frontline managers. Companies must focus on the big decisions where better data and models will improve outcomes.

October 2012 | David Court

Big data and analytics have climbed to the top of the corporate agenda—with ample reason. Together, they promise to transform the way many companies do business, delivering performance improvements not seen since the redesign of core processes in the 1990s. As such, these tools and techniques will open new avenues of competitive advantage.

Many executives, however, remain unsure about how to proceed. They're not certain their organizations are prepared for the required changes, and a lot of companies have yet to fully exploit the data or analytics capabilities they currently possess.

Getting leaders' attention

Big data and analytics actually have been receiving attention for a few years, but the reason is changing. A few years ago, I thought the question was “We have all this data. Surely there’s something we can do with it.” Now the question is “I see my competitors exploiting this and I feel I’m getting behind.” And in fact, the people who say this are right.

If you look at the advantages people get from using data and analytics—in terms of what they can do in pricing, what they can do in customer care, what they can do in segmentation, what they can do in inventory management—it’s not a little bit of a difference anymore. It’s a significant difference. And for that reason, the question being asked is “I’m behind. I don’t like it. Catch me up.”

I get asked, “Who’s big data for?” And my answer is it’s for just about everybody. There are going to be data-based companies: Amazon, Google, Bloomberg. They’re great companies, and they have a lot of opportunity. But just because you’re not going to be a data company doesn’t mean you can’t exploit data analytics. And the key is to focus on the big decisions for which if you had better data, if you had better predictive ability, if you had a better ability to optimize, you’d make more money.

Finding better answers

So where have I been seeing data analytics recently? Well, the answer is in many places. Let me focus first on efforts to do better things with your customers. An airline optimizing what price it charges on each flight for any day of the week. A bank figuring out how to best do its customer care across the four or five channels that it has. Allowing customers to be able to ask questions and get better answers and to direct them. All of that is on the customer side of things.

And then in operations, think of an airline or a railway scheduling its crews. Think of a retailer optimizing its supply chain for how much inventory to hold versus “What do I pay for my transportation costs?” All of that lends itself to big data—the need to model—but frontline managers have to be able to use it.

Changing the organization

So what's the formula or what's the key success factor for exploiting data analytics? From our work—and we've probably talked to 100 people—it always comes down to three things: data, models, transformation. Data is the creative use of internal and external data to give you a broader view on what is happening to your operations or your customer. Modeling is all about using that data to get workable models that can either help you predict better or allow you to optimize better in terms of your business.

And the third success factor is about transforming the company to take advantage of that data in models. This is all about simple tools for managers—doubling down on the training for managers so they understand, have confidence in, and can use the tools. Transforming your company to take advantage of data and analytics is the hard part, OK?

I always describe both a short-term problem and a medium-term problem. The short-term problem is that if you've developed a new model that predicts or optimizes, how do you get your frontline managers to use it? That's always a combination of simple tools and training and things like that. Then there's a medium-term challenge, which is "How do I upscale my company to be able to do this on a broader scale?"

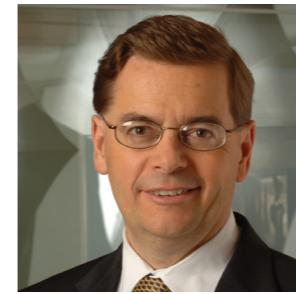
The question then is how to build what I'm going to call the "bimodal athlete." And what I mean by this is, imagine that we go to a retailer and meet its buyers, or to a technology company or consumer company and meet the people that make the pricing decisions, or to somebody doing scheduling. Here you need people that have a sense of the business, and they need to be comfortable with using the data analytics. If you're good at data analytics but you don't have this feel for the business, you'll make naive decisions. If you're comfortable with the feel of the business but you never use analytics, you're just leaving a lot of money on the table that your competitors are going to be able to exploit. So the challenge is how to build that bimodal athlete and how to get the technical talent.

Executing big data

There are several things you just have to do. The first is you need to focus. And what I mean by focus is, let's take a pricing manager in a consumer services company or a buyer in a retailer. They have 22 things they do. Don't try and change 22 things; try and change 2 or 3 things. Focus on part of the decision and focus, therefore, where the greatest economic leverage is in the business.

The second is that you've got to make a decision support tool the frontline user understands and has confidence in. The moment you make it simple, understandable, then people start using it and you get better decisions. For a company, if you have 100,000 employees and you've got only 14 that actually know this stuff and how to use it, you're not going to get sustainable change.

You don't have to have 100,000. But you might have to have 10,000, five years from now, that are comfortable with analytics. So, again, link it to the processes, get the metrics right, and make sure you build the capabilities across the company. ☐



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Know your customers wherever they are

Retailers often don't know that a customer who hit many touchpoints is the same person. They should.

April 2013 | Kelly Ungerman and Maher Masri

Jane wants to buy a TV and starts her shopping journey with a Google search. She finds an electronics review site, clicks on a banner ad, reads about the product details, and decides to go into the store to see the model. She speaks with a sales associate and posts a picture of the TV on Facebook for her friends' feedback. She also uses her smartphone to do a quick price comparison, and scans the QR code to get additional product information.

Welcome to problem #1 for retailers: The company knows that a potential customer has interacted with it across a lot of touch points but it has no idea that all these interactions are with Jane. It can track each of these interactions across touchpoints, but doesn't know how to tie them to an individual customer. Since each touchpoint yields a particular piece of data, this becomes a complex data management challenge.

Retailers are desperate to unlock this intelligence so they can make more personalized offers. Research shows that personalization can deliver five to eight times the ROI on marketing spend and lift sales 10 percent or more.

Here are four keys to tracking today's multichannel customers.

Be systematic

Many companies assign unique customer IDs but lack a systematic way to enrich them to form an integrated view of the channel-surfing customer. A systematic approach requires you to identify and evaluate all of the touch points where you interact with a customer. Too many retailers miss out on valuable insights by stopping at either the data that's at hand or data that is already easily matched with a customer, such as purchases across multiple credit cards. When building your enriched customer views, start with priority customers or segments (big spenders, loyal spenders, future spenders, and so on).

Focus on the important data

Even though your goal is to track all touchpoints, don't try to harness 100 percent of the data. Most companies already have plenty of customer data, but don't tie it together to create a richer picture of their consumers. In our experience, the most fruitful insights come from combining transaction data (such as purchase amounts over time), browsing data (including mobile), and customer service data (such as returns by region). Focus on data that will help you achieve specific marketing goals. For example, if you need to build customer loyalty, concentrate on gathering data from post-purchase touch points like customer service logs or responses to up- or cross-sell emails.

These data rarely exist in one place in the organization so you'll need to pull in people from multiple functions such as marketing, sales, in-store operations, IT, and beyond. We've

seen companies create small “SWAT” teams that assemble people from these functions to break through bureaucratic logjams.

Fill in the data holes

There are three main types of external data sources that can be invaluable. Following are examples of each—but these just scratch the surface.

Data you can buy

1. Broad census data from companies like Experian or Axiom can match hundreds of public and private sources to identify consumers, for example through credit card matches or telephone numbers.
2. Panel data from companies like Nielsen and Compete provide access to a full set of customer actions of about 2 million people. These provide granular views of the customer, such as records of every web page visited and consumer purchase made over a one to two year period.
3. “Traveling cookie” data build a digital footprint of a consumers based on their logins at popular sites (for example, on airline sites or Facebook). Once the customer logs in, the cookie follows that customer wherever he or she goes on the web. Datalogix aggregates data across hundreds of logins and matches it back to a database of more than 100 million households. This connection helps marketers identify consumers on their own sites and others’ and link sales to prior behaviors.

Data you can request from customers

Retailers should encourage customers to self-identify by logging in to the website, using a loyalty card in store, or identifying themselves when calling customer care. Gap, for example, will always ask for your email address when you buy a product. Other companies provide mobile coupons in exchange for cell numbers.

Data you can partner for

Companies with complementary data sets can combine insights by partnering. Vendors such as Visa have partnered with retailers to introduce highly targeted location-based offers to consumers as they make purchases. Scan your Visa at a Gap to make a purchase, and get offers on your smartphone for retailers within walking distance.

Match the data with the customer

This wealth of data is only useful if you can build the complex algorithms needed to connect data collected from these streams to your unique customer IDs. You’ll also need IT systems that automatically update a customer’s profile each time he or she interacts with you at a given touchpoint and scrub the data to ensure accuracy (e.g., validating emails). The organizational and technology challenges are significant, and we have touched on only a few of them here. But we’ve seen big pay-offs for retailers who can follow individual customers across media and channels. Increasingly, such a capability is not just nice to have; it will be essential for any retailer who hopes to stay in the game.



This article was originally published online in the Harvard Business Review. □



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Using marketing analytics to drive superior growth

Companies have so many analytical options at their disposal that they often become paralyzed, defaulting to just one approach.

June 2014 | Rishi Bhandari, Marc Singer, and Hiek van der Scheer

There's no question that the development of better analytical tools and approaches in recent years has given business leaders significant new decision-making firepower. Yet while advanced analytics provide the ability to increase growth and marketing return on investment (MROI), organizations seem almost paralyzed by the choices on offer. As a result, business leaders tend to rely on just one planning and performance-management approach. They quickly find that even the most advanced single methodology has limits.

The diverse activities and audiences that marketing dollars typically support and the variety of investment time horizons call for a more sophisticated approach. In our experience, the best way for business leaders to improve marketing effectiveness is to integrate MROI options in a way that takes advantage of the best assets of each. The benefits can be enormous: our review of more than 400 diverse client engagements from the past eight years, across industries and regions, found that an integrated analytics approach can free up some 15 to 20 percent of marketing spending.

Worldwide, that equates to as much as \$200 billion that can be reinvested by companies or drop straight to the bottom line.

Here's one example. A property-and-casualty insurance company in the United States increased marketing productivity by more than 15 percent each year from 2009 to 2012. The company was able to keep marketing spending flat over this period, even as related spending across the industry grew by 62 percent. As the chief marketing officer put it, "Marketing analytics have allowed us to make every decision we made before, better."

Anchoring analytics to strategy

A company's overarching strategy should ground its choice of analytical options. Without a strategy anchor, we find companies often allocate marketing dollars based largely on the previous year's budget or on what business line or product fared well in recent quarters. Those approaches can devolve into "beauty contests" that reward the coolest proposal or the department that shouts the loudest rather than the area that most needs to grow or defend its current position.

A more useful approach measures proposals based on their strategic return, economic value, and payback window. Evaluating options using such scores provides a consistent lens for comparison, and these measurements can be combined with preconditions such as baseline spending, thresholds for certain media, and prior commitments.

The other prerequisite in shaping an effective MROI portfolio is understanding your target consumers' buying behavior. That behavior has changed so radically in the past five years that old ways of thinking about the consumer—such as the marketing "funnel"—generally don't apply.

Where the funnel approach prioritized generating as much brand awareness as possible, the consumer decision journey recognizes that the buying process is more dynamic and that consumer behavior is subject to many different moments of influence.¹

Five questions for maximizing MROI

- To understand how to maximize marketing return on investment (MROI) using advanced analytics, weigh the following five questions:
1. What are the specific challenges to your brand caused by changes to the way consumers are making decisions?
 2. Do current budgets reflect where the greatest MROI value is?
 3. Where do you need deep analytical insights to guide marketing-mix decisions? That is, what are the real trade-offs you need to make?
 4. What's the most perfect integrated analytical engine you could imagine, combining data from every source you could desire?
 5. What's a good first step you can implement immediately?

One home-appliance company, for example, typically spent a large portion of its marketing budget on print, television, and display advertising to get into the consideration set of its target consumers. Yet analysis of the consumer decision journey showed that most people looking for home appliances browsed retailers' websites—and fewer than 9 percent visited the manufacturer's own site. When the company shifted spending away from general advertising to distributor website content, it gained 21 percent in e-commerce sales.

Making better decisions

While new sources of data have improved the science of marketing analytics, “art” retains an important role; business judgment is needed to challenge or validate approaches, but creativity is necessary to develop new ways of using data or to identify new opportunities for unlocking data.

These “soft” skills are particularly useful because data availability and quality can run the gamut. For instance, while online data allow “audience reached” to be measured in great detail, other consumer data are often highly aggregated and difficult to access. But such challenges shouldn’t impede the use of data for better decision making, provided teams follow three simple steps.

¹ See David Court et al., “The consumer decision journey,” McKinsey Quarterly, June 2009, mckinsey.com. For insight into the impact of digitization, see David Edelman, Kelly Ungerman, and Edwin van Bommel, “Digitizing the consumer decision journey,” June 2014, mckinsey.com.

1. Identify the best analytical approaches

To establish the right marketing mix, organizations need to evaluate the pros and cons of each of the many available tools and methods to determine which best support their strategy. When it comes to nondirect marketing, the prevailing choices include the following:

- **Advanced analytics approaches such as marketing-mix modeling (MMM)**

MMM uses big data to determine the effectiveness of spending by channel. This approach statistically links marketing investments to other drivers of sales and often includes external variables such as seasonality and competitor and promotional activities to uncover both longitudinal effects (changes in individuals and segments over time) and interaction effects (differences among offline, online, and—in the most advanced models—social-media activities). MMM can be used for both long-range strategic purposes and near-term tactical planning, but it does have limitations: it requires high-quality data on sales and marketing spending going back over a period of years; it cannot measure activities that change little over time (for example, out-of-home or outdoor media); and it cannot measure the long-term effects of investing in any one touchpoint, such as a new mobile app or social-media feed. MMM also requires users with sufficiently deep econometric knowledge to understand the models and a scenario-planning tool to model budget implications of spending decisions.

- **Heuristics such as reach, cost, quality (RCQ)**

RCQ disaggregates each touchpoint into its component parts—the number of target consumers reached, cost per unique touch, the quality of the engagement—using both data and structured judgment. It is often used when MMM is not feasible, such as when there is limited data; when the rate of spending is relatively constant throughout the year, as is the case with sponsorships; and with persistent, always-on media where the marginal investment effects are harder to isolate. RCQ brings all touchpoints back to the same unit of measurement so they can be more easily compared. It is relatively straightforward to execute, often with little more than an Excel model. In practice, though, calibrating the value of each touchpoint can be challenging given the differences among channels. RCQ also lacks the ability to account for network or interaction effects and is heavily dependent on the assumptions that feed it.

- **Emerging approaches such as attribution modeling**

As advertising dollars move online, attribution becomes increasingly important for online media buying and marketing execution. Attribution modeling refers

to the set of rules or algorithms that govern how credit for converting traffic to sales is assigned to online touchpoints, such as an e-mail campaign, online ad, social-networking feed, or website. Those credits help marketers evaluate the relative success of different online investment activities in driving sales. The most widely used scoring methods take a basic rules-based approach, such as “last touch/click,” which assigns 100 percent of the credit to the last touchpoint before conversion. But newer methods that use statistical modeling, regression techniques, and sophisticated algorithms that tie into real-time bidding systems are gaining traction for their analytical rigor. While these approaches are a step up from methods tied to rules, they still typically depend on cookie data as an input, which limits the richness of the data set and consequently makes it difficult to accurately attribute the importance of each of the online touchpoints.

2. Integrate capabilities to generate insights

Although some companies rely on just one analytical technique, the greatest returns come when MROI tools are used in concert. An integrated approach, which includes pulling in directresponse data and insights, reduces the biases inherent in any one MROI method and provides business leaders with the flexibility to shift the budget toward activities that produce the most bang for their buck.

So how do these techniques work together? A company may find, for instance, that TV, digital, print, and radio make up about 80 percent of its marketing spending. Since those activities generate audience-measurement data that can be tracked longitudinally, it makes sense to use MMM. But digital spending can be refined further using attribution modeling to pinpoint the activities within broad categories—such as search or display—that are likely to generate the most conversion. The company could then use heuristics analysis such as RCQ to monitor the remaining 20 percent of its spending, which may go toward sponsorships and out-of-home advertising to capture the company’s non-TV-watching target audience.

Developing common response curves across analytical techniques helps marketers put the values of different approaches on common footing. The organization can then use a decisionsupport tool to integrate the results, allowing business leaders to track and share marketing performance on a near-real-time basis and course correct as needed.

An international power company, for example, used RCQ analysis to adjust its out-of-home and sponsorship mix, efforts that increased reach within its target audience and raised the efficiency of marketing communications by 10 to 15 percent. The company then turned to MMM to get a more granular MROI assessment of its spending on digital versus traditional media. It found that while each €1 million invested online generated 1,300 new consumers, the same investment in TV, print, and radio helped

the company retain 4,300 consumers (40 percent of whom were likely to stay loyal to the brand over the long term). Those insights helped the company understand where to best focus its spending and messaging for both attracting new customers and keeping existing ones.

In fine-tuning the mix, it can be tempting to allocate money to short-term initiatives that generate high ROI. That bias is fed by the fact that so much data comes from consumers engaging in short-term behavior, such as signing up for brand-related news and promotions on a smartphone or buying a product on sale. That short-term effect typically comprises 10 to 20 percent of total sales, while the brand, a longer-term asset, accounts for the rest. Businesses need to ensure their mix models are capable of examining marketing effectiveness over both time horizons.

One consumer food brand almost fell into this short-term trap. It launched a campaign using Facebook advertising, contests, photo-sharing incentives, and shared-shopping-list apps.

At a fraction of the cost, the approach delivered sales results similar to those generated by more traditional marketing, which included heavy TV and significant print advertising. Not surprisingly, the brand considered shifting spending from TV and print advertising to socialmedia channels. Yet when long-term effects were included in its calculations, the impact of its digital efforts was cut by half. If the company had proceeded with significantly cutting its TV spending, as traditional MMM suggested, it would have reduced the net present value of the brand’s profit.

3. Put the analytical approach at the heart of the organization

It’s not uncommon for teams to outsource analysis or throw it over the wall to an internal analytics group. When the findings come back, however, those same teams may be reluctant to implement them because they don’t fully understand or trust the numbers.

To solve that problem, marketers must work closely with data scientists, marketing researchers, and digital analysts to question assumptions, formulate hypotheses, and fine-tune the math.

Companies also need to cultivate “translators,” individuals who both understand the analytics and speak the language of business. One financial-services company, for instance, set up councils within its marketing function to bring the creative and analytical halves of the department together. The councils helped analysts understand the business goals and helped creatives understand how analysis could inform marketing programs. We’ve seen such collaboration cut the duration of MROI efforts in half.

Speed and agility are also important. Insights from the consumer decision journey and the marketing-mix allocation should inform the tactical media mix. Actual results should be compared with target figures as they come in, with the mix and budget adjusted accordingly. Attribution modeling can be especially helpful with in-process campaign changes, since digital spending can be modified on very short notice. Our research shows that the best-performing organizations can reallocate as much as 80 percent of their digital-marketing budget during a campaign.

The pressure on business leaders to demonstrate return on investment from a diverse portfolio of marketing programs is only increasing. The data to make smarter decisions are available, as are the analytical tools. We believe that taking an integrated analytics approach is the key to uncovering meaningful insights and driving above-market growth for brands. □



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Part 2: Insight and action

- | | | |
|--|--|---|
| <p>48 How leading retailers turn insights into profits</p> <p>60 Marketing's age of relevance</p> <p>80 Name your price: The power of Big Data and analytics</p> | <p>56 Five steps to squeeze more ROI from your marketing</p> <p>72 Gilt Groupe: Using Big Data, mobile, and social media to reinvent shopping</p> <p>84 Getting beyond the buzz: Is your social media working?</p> | <p>60 Using Big Data to make better pricing decisions</p> <p>76 Under the retail microscope: Seeing your customers for the first time</p> |
|--|--|---|



How leading retailers turn insights into profits

By embedding consumer insights into their merchandising processes, retailers can boost both same-store sales and profitability.

December 2014 | Florian Bressand, Peter Breuer, and Nedim Suruliz

Over the past five years, traditional large retailers—such as supermarket chains, drugstores, and big-box specialty retailers—have found growth elusive. In most major markets they are facing intensified competition, particularly from discounters, as recession-era shopping habits have become entrenched. Opening new stores is no longer a surefire way to grow, in light of market saturation and the boom in e-commerce. Same-store sales growth, or “like for like” growth, has been flat or declining for most large players across all major European markets, and margins are under pressure. By embedding consumer insights into their merchandising processes, retailers can boost both like-for-like sales and profitability while creating smarter merchants.

Amid this punishing environment, how have a handful of retailers outperformed the competition and achieved substantial like-for-like sales growth? In our experience, they have succeeded primarily by developing a deeper understanding of consumer and shopper behavior and embedding these insights into the way they manage every product category. In other words, they have implemented an insight-driven sales transformation.

In this article, we describe an approach that has helped leading retailers kick-start such a transformation. We call it the “category accelerator”: it is simultaneously a thorough, data-driven category-planning process and an intensive capability-building program for category managers. Retailers in the grocery, drug, and do-it-yourself sectors that have used the approach have achieved a sales uplift of 3 to 5 percent and a net margin improvement of one to four percentage points in 6 to 18 months.

Three steps to transformation

As they seek to increase like-for-like sales, retailers encounter a number of common challenges. One is wide variability in performance and execution among product categories, in part because each category manager does his or her job independently of and differently from others. They use different tools and techniques, and some rely on data and insights more than others. Another common challenge is a lack of coordination of improvement initiatives; pricing actions, for example, are often disconnected from visual merchandising changes. In such cases, retailers miss out on capturing the full potential of an integrated category-wide (not to mention store-wide) transformation.

The category accelerator addresses all these problems in a systematic, sustainable fashion. In a nutshell, it is a program for creating insight-driven category plans for all of a retailer’s product categories, using a standardized process supported by a dedicated team of experts. The three main steps of the approach involve building the core team, creating best-practice content, and developing insight-driven category plans.

1. Set up a cross-functional team of ‘navigators’ and analysts

The first step is to establish a cross-functional core team focused on delivering quick wins. The team should combine category-management expertise (in the form of high-profile, experienced merchants) and analytics expertise (data analysts, often hired through targeted external-recruitment efforts). Retail leaders may initially balk at the idea of pulling top merchants from their day-to-day tasks, but it is an essential sacrifice for both perception and impact. The team, which initially will have approximately four to eight members, should be situated in a dedicated space—an environment designed to encourage new thinking, foster creativity, and facilitate rapid implementation. Having a separate room for the team may seem trivial, but it is a fundamental success factor. It helps the team get away from a business-as-usual mind-set.

The merchants play the role of navigators who coach and challenge category managers throughout the process, while the analysts are responsible for mining transaction and loyalty-card data and translating those data into useful insights for category managers (see sidebar, “A sampling of opportunities in big data”). This arrangement sidesteps a common pitfall of sales transformations: having an analytics team that works in isolation from the commercial team and thus generates unusable or irrelevant insights. Instead, the analysts work with category managers to make sure that decision-support tools are intuitive and accepted by end users, and that the insights are accessible to everyone who needs them—not just to a select group of “superusers.”

Retailers should resist the temptation to incorporate the team back into the business. Once it has built buy-in and momentum through quick wins, the team should broaden its focus, bring in more navigators and analysts, and become a permanent unit. For a large grocery retailer, this core team would typically consist of 10 to 20 people, split evenly between navigators and analysts.

2. Create a comprehensive series of modules

Among the core team’s initial responsibilities is to develop a series of modules, covering all commercial levers, to serve as the main content for sessions with category managers (Exhibit 1). The integration of levers—in contrast to the typical siloed approach whereby each initiative is managed independently of others—is part of what makes the category accelerator a powerful force.

Each module should contain standardized, best-in-class tools and methods that will help category managers perform consistently high-quality analyses of commercial decisions, manuals that explain how to use the tools, and sample outputs and templates. The materials should make clear the overall objective of each session, actions to be completed for each session, and core concepts and terminology definitions. Crucially,

each module should incorporate consumer and shopper insights, generated primarily through analysis of transaction and loyalty-card data.

Module 1: Customer-Decision Tree Build customer-decision tree, which will guide category analysis	Module 2: Clustering Check relevance of store clusters and provide guidelines for creating cluster-specific assortments	Module 3: Category Overview Understand the category's performance across all channels and identify main areas for improvement
Module 4: Assortment Health Check Refine assortment using customer-decision trees, category performance, and competitive insights to highlight potential SKU additions and deletions	Module 5: Value Set pricing and promotional action plan to optimize customer value perception and profit	Module 6: Own Brands Develop action plan for own brands, including new-product requirements and margin improvement
Module 7: Inventory Management Optimize inventory by setting up-front targets, evaluating performance, and building action plans (eg, exit strategy)	Module 8: COGS¹ Set a COGS goal and create action plan to improve negotiations with key vendors in the short and medium term	Module 9: Merchandising/Operations Create customer-centric planograms for each store cluster
Integrated Category Plan Develop an integrated category plan, including an estimate of sales and margin impact and action plans with critical milestones/owners		

¹Cost of goods sold.

Exhibit 1

The modules of the category accelerator cover all commercial levers.

If a retailer has some category-management teams that are consistently high performing, it can build the modules simply by identifying and codifying internal best practices—an exercise that usually takes a few weeks. Another option is to assemble external best practices and tools, customize them to the company, pilot them for a subset of categories and suppliers, and then refine and codify them. This option obviously takes more time: two weeks to three months, depending on the starting point and the topic.

3. Develop insight-driven category plans

With the core team in place and the content ready, sessions with category managers can begin. A retailer typically starts by having two to four category managers go through the sessions over a two-week cycle. Each category manager runs through the entire set of modules with the core team, spending one or two days on each module. Relevant specialists participate as appropriate—a pricing specialist for the pricing module or a space planner for the visual-merchandising module. In each session, the analysts provide a fact base for the navigators to use as a basis for challenging the category managers’ conventional assumptions and for pushing them to develop ambitious

Sidebar

A sampling of opportunities in big data

Big data and advanced analytics can benefit retailers in almost all areas of the business. Examples include the following.

Optimizing assortments.

Loyalty analysis—for instance, measuring purchase frequency or penetration among high-priority customer segments—allows retailers to understand product categories from a customer perspective. By measuring customer “switching” behavior, retailers can also identify which SKUs play a unique role and which are redundant. Such analyses helped a European retailer reduce its assortment by 10 percent across 100 categories while improving margin by one percentage point.

Improving pricing and promotions.

Using market-basket analysis, retailers can measure price elasticity and identify key value items by customer segment. They can thus set prices based on consumer demand and competitor moves. In addition, by analyzing the impact of past promotions and linking it to current customer behavior, retailers can reliably estimate the success of planned promotions. A European retailer was able to increase returns on promoted sales by 3 to 5 percent

after analyzing its historical promotions across marketing vehicles.

Customizing marketing offers and activating the online customer base.

Retailers can tailor offers and promotions to customers based on their past behaviors, thereby increasing spending and loyalty. Big data also enables retailers to activate their online base with targeted content and offers. An Asian retailer used big data to send customized coupons to millions of customers based on their profile (taking into account metrics such as total spending by category). This effort helped the retailer reduce its reliance on the above-the-line couponing that made it easy for competitors to quickly duplicate the offers. The result: a three-percentage-point lift in same-store sales.

Conducting negotiations.

By measuring vendor-performance fundamentals (such as penetration rate and repurchase rate), retailers can develop compelling arguments to improve their bargaining power during supplier negotiations. A grocery retailer in the Asia-Pacific region trained buyers on how to use data and insights in supplier discussions—an effort that yielded \$300 million in savings within the year.

category plans. The goal is to create uniformly high-quality category plans powered by consumer insights. As a category manager at a large South African retailer said, “For the first time, we built integrated category plans covering all levers, and we made bold

moves that went beyond the typical knee-jerk pricing and promotions actions.” She and her colleagues set—and met—ambitious targets equivalent to 3 percent of sales and two percentage points of margin.

After working out any glitches in the first few cycles, the accelerator should be able to accommodate ten categories per cycle. A rigorous follow-up calendar—with quarterly or biannual check-ins—ensures that decisions are executed, that progress is measured, and that errors are corrected.

A large grocery retailer built a team of 25 navigators and ran all 300 of its product categories through the category accelerator over a two-year period. In one category, for example, it captured a 2 percent incremental sales increase within six months by making a series of pricing changes and expanding the distribution of select regional product lines.

How to make it stick

The approach might not appear complicated, but in practice it can be rife with pitfalls. To capture the full potential, retailers must adhere to the following success factors.

Start with targeted commercial changes that drive rapid impact

Retailers must pick their battles along the sales transformation journey; they should initially focus on a carefully chosen set of two or three improvements in core commercial processes. These should be initiatives that will pay off right away, which will build buy-in and momentum for the broader transformation.

One retailer had seen its value perception among customers fall by more than ten points over a six-year period despite having the lowest prices in the market. Through analysis of transaction data, the retailer found that the decline in value perception was due to a large share of its baskets being more expensive than competitors’. While it took approximately a year to put in place new pricing processes, in just a few weeks, the retailer reduced prices on some of its best-selling items, consequently reducing the share of more expensive baskets while tactically increasing prices on background items. Customer value perception improved, and the retailer was able to achieve an increase in like-for-like sales from 2 to 5 percent, while also recouping one percentage point of margin.

A European grocery retailer chose supplier negotiations as one of its priority areas for quick wins. It held two-day workshops for all buyers, and its core project team wrote a one-page negotiation playbook that quantified and justified the “asks” it would make of each supplier. In only six weeks, this initiative generated a 1 percent reduction in cost of goods sold.

Invest in big data talent and systems

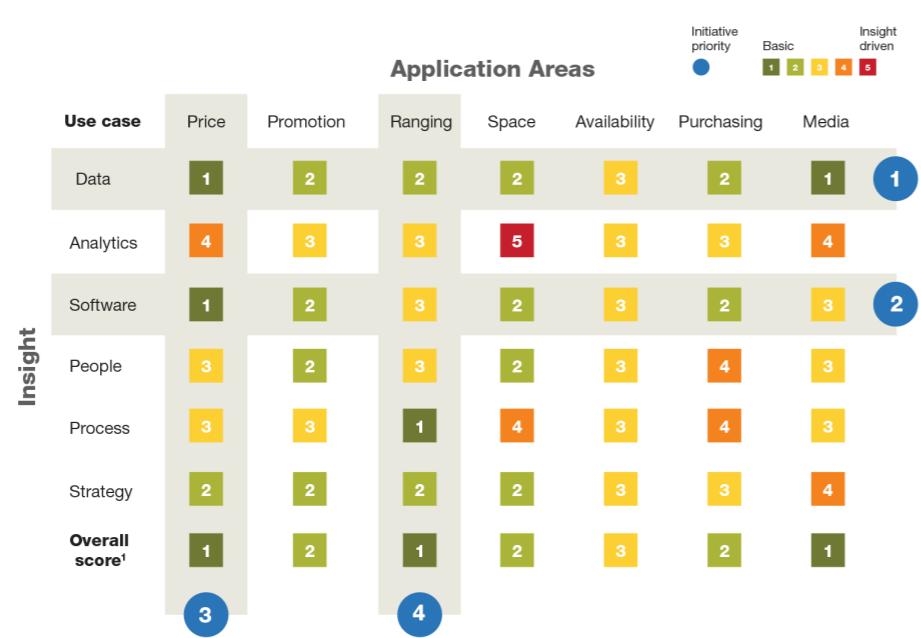
Retailers know that their transaction data and loyalty-card data are a treasure trove that they could mine to find new pockets of growth. The most sophisticated retailers also use big data and advanced analytics beyond commercial applications—for example, instead of relying exclusively on traditional sales and margin indicators, they use more data and analytics (such as household-penetration metrics or insightful and nuanced performance evaluations of category managers).

There are a number of reasons that retailers fail to embed insights from big data into their daily decision making. One is a lack of technical capabilities. Indeed, the category accelerator won't work unless skilled data analysts are a core part of the team, collaborating closely with category managers. Another reason is poor systems and infrastructure. Investment in the right data infrastructure is a key enabler for delivering insights in a timely manner. One retailer, by changing its data middleware, accelerated its insight-generation process from days to minutes.

A North American nonfood specialty retailer used a heat map to assess its strengths and weaknesses in using big data across all functional areas (Exhibit 2). The heat map helped the company identify and prioritize opportunities for investment. The resulting initiatives included targeted efforts to improve data quality and management, technology and software updates, and the introduction of a new pricing model.

Exhibit 2

A heatmap can highlight priorities for investment in big data.



¹. Takes into account the weakest link in each application source and is therefore always equal to the lowest score in the column.

Use multiple levers to shift mind-sets across the organization

Making any change stick beyond the specific project or intervention requires the use of several levers, one of the most important being highly visible role modeling by senior leaders. For instance, top management should serve as faculty and coaches for some of the modules.

Performance management is another important lever. Handing out “category manager of the month” awards or special prizes for the “best negotiation team” can be surprisingly effective in spurring performance.

And to make sure that the new ways of working stay embedded in the organization, companies should choose the two or three capabilities that will make the most difference and invest in those capabilities, either through additional training or new hires. The category accelerator gives retailers a clear path for developing and honing their category-management and merchandising skills; it serves as a training ground for future commercial directors and buyers. But hiring new people, particularly data analysts or customer-insights managers, is often also necessary. Retailers should try to upgrade existing capabilities—for example, by reassigning employees to new roles or by providing training—but such moves are typically not enough to make a difference.

A retailer that chose pricing as its priority battle put in place a new offshore team tasked with analyzing competitive pricing data on a weekly basis, working hand in hand with the onshore category-management team. The new global pricing team delivered one percentage point of margin uplift, with very limited additional overhead.

As retailers strive to boost like-for-like sales, an insight-driven approach can increase their chances of success tremendously. The category accelerator’s distinctive elements—particularly the combination of quick wins with longer-term capability building and the translation of consumer data into actionable commercial insights—have helped large retailers across the globe capture growth in spite of fierce competition. □



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Five steps to squeeze more ROI from your marketing

To keep up with today's channel-surfing customer, marketers need to move beyond traditional Marketing Mix Modeling.

March 2013 | Rishi Bhandari, Jonathan Gordon, and Andris Umblis

Before placing your bets on a horse race, it would be nice to know which horse would win. Many CMOs today have a similar yearning when looking at the confusing and proliferating array of marketing channels. They're not sure where to place their bets.

Marketing Mix Modeling (MMM) tries to take chance out of the game by measuring the relative effectiveness of channels. But traditional MMM isn't keeping up with the changes in the customer decision journey. For MMM to be effective, marketers need to move it beyond its traditional boundaries.

It's worth the effort. We've seen ROI increase by 15 to 20 percent overall in companies that use enhanced MMM techniques to allocate marketing spend to channels that drive business growth. Here's what CMOs need to do:

1. Move from "backcasting" to "forecasting"

MMM is based on historical data so it's great for "backcasting." But given how quickly customer behaviors change, it falls short when it comes to forecasting. You need to supplement these MMM data by collecting insights from your managers who have deep knowledge of the industry or understand issues like media inflation, media inventory, and contracted obligations. You also need to actively reach out to your target customers to fill in the gaps. Regression analysis based on detailed customer surveys, brand tracker surveys and focus groups can help you understand consumers at different stages of the decision journey across multiple channels.

2. Look at the complete picture

Traditional MMM is rooted in a mindset where channels live in splendid isolation from one another. Today's world is much more complex as customers naturally jump from one channel to another. Many TV viewers, for instance, have a tablet or smartphone on hand, and search because of an ad they've seen. You need to capture these channel influence factors when trying to figure out how effective your channels are. An insurance carrier, for example, was able to save 10 percent on costs while maintaining its marketing effectiveness by figuring out which channels performed best. You also need to understand what aspect of the customer decision journey you're looking to track. Traditional MMM is all about sales, but you need to understand how channels are driving engagement in the consideration, evaluation, and post purchase phases of the buying journey as well.

In addition, channel analysis needs to expand to account for likely environmental changes. For example, you may have seen a certain return from display advertising last year but the ongoing rapid decline in clickthrough rates will undoubtedly alter its effectiveness next year. And don't forget the host of external factors as well. Seasonality, special events, and economic cycles all affect the ROI of your channels.

3. Understand where the payoff stops

The effectiveness of MMM doesn't follow a linear pattern. An X% increase in investment in a given channel doesn't mean a steady Y% improvement in effectiveness in every case. What we see is that channel investments behave more like curves where the value of investment in a given channel diminishes once you've hit your plateau.

That means, of course, you need to look closely at your data to determine where that plateau is. Invest in those channels that still show rising effectiveness; cut back where you've hit your plateau. A food retailer, for example, was able to dial back investment in plateauing channels while doubling down on those with more room for growth, increasing revenue by 2–3 percent at the same overall spend.

Factor in the value of your brand

One of the established rules is that you analyze only as far as the data lets you. This can lead to the problem of “precisely wrong” answers. Rather, we advocate the application of sound judgment when the data sets are incomplete or absent. For example, we believe marketers need to overlay mix models with estimates of the impact after 12 months—the longer-term brand equity effect. As it stands, many MMM outputs don't put any value on this and the implication is that the value of longer-term brand equity is zero. We all know that's not right. We've found it possible—using brand equity trackers and looking at base (or unpromoted) volume in MMMs—to get reasonable estimates of the longer-term effect of the brand. And we've been able to apportion that to specific touchpoints using surveys and judgment. It's not a perfect science yet, but in our world view, we'd rather be “roughly right” than “precisely wrong”

4. Get involved in the analysis

One of the main reasons that MMM doesn't deliver the benefits it should is because CMOs and marketers aren't involved in the analysis. In many cases companies outsource the analysis or throw it over the wall to an internal analytics team. The result we often see is that the CMO pushes back on implementing the findings of the analysis, either because it's too complex or challenges the status quo. Often times there's a high level of distrust due to a lack of transparency into the process, so even if there's great analysis there, the CMO won't act on it.

To eliminate that breakdown, marketing needs to work collaboratively with the analytical teams so they jointly own the insights. Marketing involvement can also provide clear direction on where to focus the analysis. Without that kind of direction, analysts tend to over-analyze every potential driver. Be pragmatic. The power of MMM

is in unveiling insights that help you make decisions, not in micro-analyzing every last piece of data. That can lead to faster turnaround times and quicker decisions. With the right focus, we've seen the duration of many MMM efforts cut in half.

We worked with one European telecoms company that had limited visibility into the impact of its marketing (offline and online) in driving the business. By using the kind of advanced marketing mix analysis we describe above, the company was able to tease apart marketing effects at a granular, tactic-by-tactic level for both offline (TV, print, radio etc.) and online marketing (e.g. search, banner ads etc.), and the degree to which they work together. Using this approach, the company reversed its plans to cut TV advertising and boost search after realizing that TV actually helped its search. Increasing both search and TV investment, the company was able to increase the effectiveness of marketing spend by 15 percent.

MMM needs to be relevant to today's marketplace if it's going to deliver the results that marketers need. Or you could find yourself betting on the wrong horse. □



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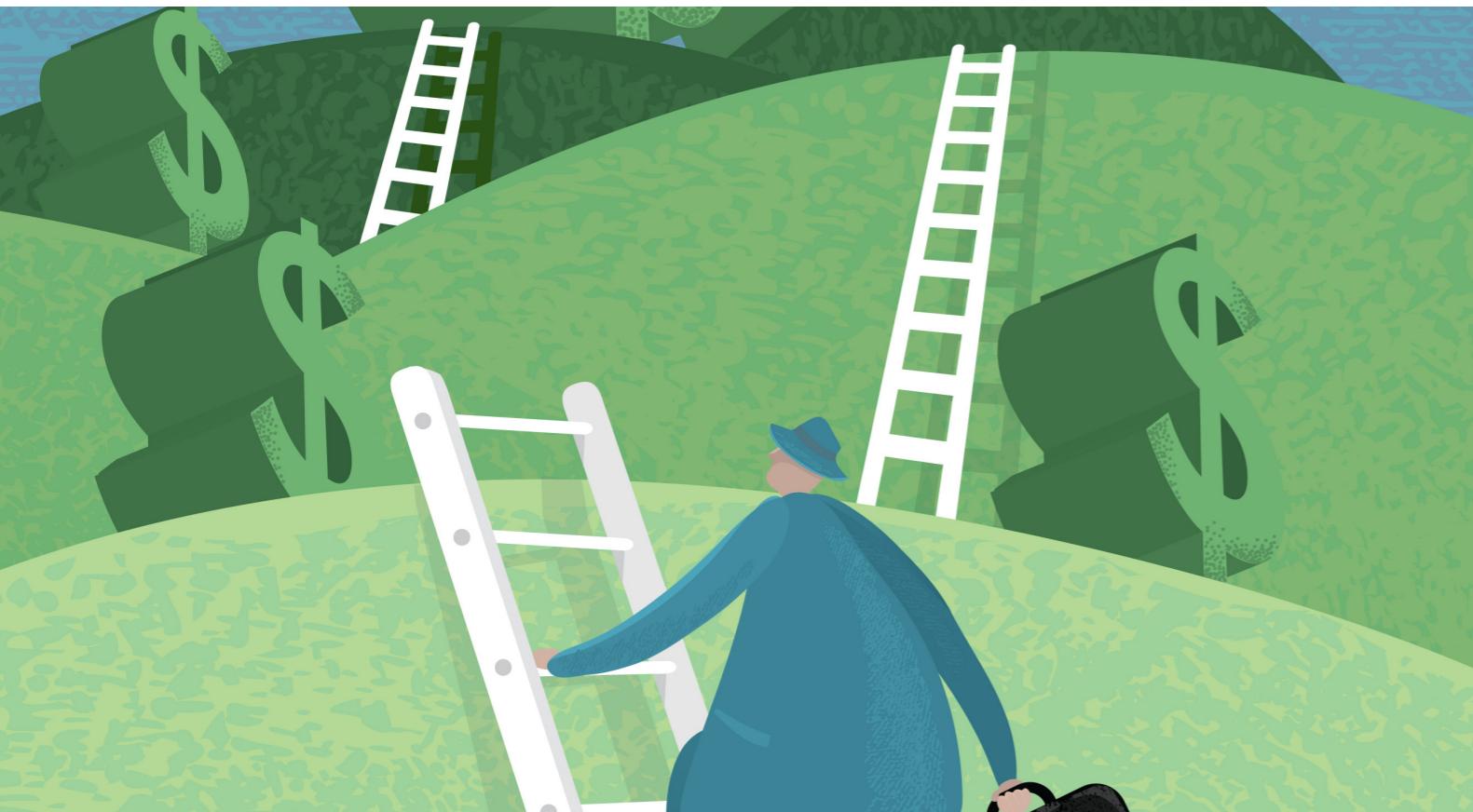
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Using Big Data to make better pricing decisions

Companies can increase profit margins significantly if they can just get granular enough with their pricing

June 2014 | Walter Baker, Dieter Kiewell, and Georg Winkler

It's hard to overstate the importance of getting pricing right. On average, a 1 percent price increase translates into an 8.7 percent increase in operating profits (assuming no loss of volume, of course). Yet we estimate that up to 30 percent of the thousands of pricing decisions companies make every year fail to deliver the best price. That's a lot of lost revenue. And it's particularly troubling considering that the flood of data now available provides companies with an opportunity to make significantly better pricing decisions. For those able to bring order to Big Data's complexity, the value is substantial.

We're not suggesting it's easy; the number of customer touchpoints keeps exploding as digitization fuels growing multichannel complexity. Yet price points need to keep pace. Without uncovering and acting on the opportunities Big Data presents, many companies are leaving millions of dollars of profit on the table. The secret to increasing profit margins is to harness Big Data to find the best price at the product—not category—level, rather than drown in the numbers flood.

Too big to succeed

For every product, companies should be able to find the optimal price that a customer is willing to pay. Ideally, they'd factor in highly specific insights that would influence the price—the cost of the next-best competitive product versus the value of the product to the customer, for example—and then arrive at the best price. Indeed, for a company with a handful of products, this kind of pricing approach is straightforward.

It's more problematic when product numbers balloon. About 75 percent of a typical company's revenue comes from its standard products, which often number in the thousands. Time-consuming, manual practices for setting prices make it virtually impossible to see the pricing patterns that can unlock value. It's simply too overwhelming for large companies to get granular and manage the complexity of these pricing variables, which change constantly, for thousands of products. At its core, this is a Big Data issue (exhibit).

Many marketers end up simply burying their heads in the sand. They develop prices based on simplistic factors such as the cost to produce the product, standard margins, prices for similar products, volume discounts, and so on. They fall back on old practices to manage the products as they always have or cite "market prices" as an excuse for not attacking the issues. Perhaps worst of all, they rely on "tried and tested" historical methods, such as a universal 10 percent price hike on everything.

Four steps to turn data into profits

The key to better pricing is understanding fully the data now at a company's disposal. It requires not zooming out but zooming in. As Tom O'Brien, group vice president and general manager for marketing and sales at Sasol, said of this approach, "The [sales]

Exhibit

Patterns in the analysis highlight opportunities for differentiated pricing at a customer-product level, based on willingness to pay.



teams knew their pricing, they may have known their volumes, but this was something more: extremely granular data, literally from each and every invoice, by product, by customer, by packaging.”

In fact, some of the most exciting examples of using big data in a B2B context actually transcend pricing and touch on other aspects of a company’s commercial engine. For example, “dynamic deal scoring” provides price guidance at the level of individual deals, decision-escalation points, incentives, performance scoring, and more, based on a set of similar win/loss deals. Using smaller, relevant deal samples is essential, as the factors tied to any one deal will vary, rendering an overarching set of deals useless as a benchmark. We’ve seen this applied in the technology sector with great success—yielding increases of four to eight percentage points in return on sales (versus same-company control groups).

To get sufficiently granular, companies need to do four things.

1. Listen to the data

Setting the best prices isn’t a data challenge (companies generally already sit on a treasure trove of data); it’s an analysis challenge. The best business-to-consumer

companies know how to interpret and act on the wealth of data they have, but B2B companies tend to manage data rather than use it to drive decisions. Good analytics can help companies identify how factors that are often overlooked—such as the broader economic situation, product preferences, and sales-representative negotiations—reveal what drives prices for each customer segment and product.

2. Automate

It’s too expensive and time consuming to analyze thousands of products manually. Automated systems can identify narrow segments, determine what drives value for each one, and match that with historical transactional data. This allows companies to set prices for clusters of products and segments based on data. Automation also makes it much easier to replicate and tweak analyses so it’s not necessary to start from scratch every time.

3. Build skills and confidence

Implementing new prices is as much a communications challenge as an operational one. Successful companies overinvest in thoughtful change programs to help their sales forces understand and embrace new pricing approaches. Companies need to work closely with sales reps to explain the reasons for the price recommendations and how the system works so that they trust the prices enough to sell them to their customers. Equally important is developing a clear set of communications to provide a rationale for the prices to highlight value and tailoring those arguments to the customer.

4. Actively manage performance

To improve performance management, companies need to support the sales force with useful targets. The greatest impact comes from ensuring that the front line has a transparent view of profitability by customer and that the sales and marketing organization has the right analytical skills to recognize and take advantage of the opportunity. The salesforce also needs to be empowered to adjust prices itself rather than relying on a centralized team. This requires a degree of creativity in devising a customer-specific price strategy, as well as an entrepreneurial mind-set. Incentives may also need to be changed alongside pricing policies and performance measurements.



We’ve seen companies in industries as diverse as software, chemicals, construction materials, and telecommunications achieve impressive results by using big data to inform better pricing decisions. All had enormous numbers of SKUs and transactions,

as well as a fragmented portfolio of customers; all saw a profit-margin lift of between 3 and 8 percent from setting prices at much more granular product levels. In one case, a European building-materials company set prices that increased margins by up to 20 percent for selected products. To get the price right, companies should take advantage of big data and invest enough resources in supporting their sales reps—or they may find themselves paying the high price of lost profits.

This article originally appeared in McKinsey Insights & Publications. [□](#)



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Marketing's age of relevance

Smart and tech-savvy consumers are taking complex decision journeys. That's creating new opportunities for companies that can read the roadmap and react in time.

August 2014 | Brian Gregg, Wouter Maes, and Andrew Pickersgill

The funnel—the classic linear progression in which customers narrow their buying options as they advance from product awareness to purchase—is becoming a lot less relevant because customers are engaging in a much more iterative and dynamic decision journey. They add and narrow options, turn to a wide range of sources for help in making choices, and they are vocal—to both the benefit and detriment of brands—after their purchase. In addition, once customers are impressed by a highly personalized, responsive, and relevant experience with another brand (think of Amazon's two-day free delivery, one-click purchasing, and "for you" recommendations), they bring those expectations to all their brand relationships.

As the sun sets on the calendar and funnel, the pressure is rising on marketers to become receptive and responsive. What that means in practice is that they must listen for the signals that indicate customers are ready to engage and design programs that respond to those signals quickly. This requires both advanced customer analytics to read the signs of customer intent and a response system that reacts to those signs by reaching out with relevant content across touchpoints and channels.

Becoming receptive

To build an organization that's receptive, companies need to focus on developing a comprehensive program that incorporates and integrates data. McKinsey's DataMatics 2013 survey shows that companies that are receptive, i.e. use customer analytics extensively, are more than twice as likely to generate above-average profits as those that don't. They also outperform their peers across the entire customer lifecycle, are nine times more likely to enjoy superior customer loyalty, and a whopping 23 times more likely to outperform less analytical peers on new-customer acquisition (see exhibit).¹ In previous articles, we've shown how capturing the potential of data analytics requires the building blocks of any good strategic transformation: it starts with a plan, demands the creation of new senior-management capacity to really focus on data, and, perhaps most important, addresses the cultural and skill-building challenges needed for the front line (not just the analytics team) to embrace the change.

To be receptive, companies need to excel at:

■ **Spotting Intent**

Predicting customer behavior boils down to spotting the signals of customer intent sooner than your competitors do and acting on the information. In that arena, customer analytics are an invaluable tool. Companies need to establish necessary "receptors" in the form of well-designed triggers (e.g. signing up for a coupon, asking questions about a product on social media) to detect and respond to customer signals. Marketers who spot the moments when intent first develops have a tremendous opportunity to capture customer attention and steer it to their products

¹ DataMatics 2013: Using Customer Analytics to Boost Corporate Performance (McKinsey, January 2014)

■ Insights can come from new sources of data

Life insurers, for example, use emerging categories of third-party data sources to provide deeper insights into applicant lifestyles, health situations, and risks (e.g. recreational activities, weight, travel behavior). Combining these data sources allows them to tailor policies to each individual's risk profile (e.g. crime rates in his/her neighborhood, affinity for bungee jumping), creating data-driven underwriting capabilities. Spotting intent is also about spotting changes in consumers' lives that may lead to significant purchases—for example, a family moves into a bigger house and can now find space for the home theater system they've been thinking about, or someone receives a bonus or inheritance that creates the need for new banking products. Similarly, life-event triggers often lead to fundamental changes in shopping behavior: The birth of a child can lead consumers to start shopping in discount stores for diapers, trips that can lead to shifts in purchase behavior across a whole range of unrelated categories.

■ Spotting intent can be more subtle

Consumers can gradually develop the intent to purchase an item through their everyday interactions, whether by seeing it used by the person next to them on the subway or by interacting online with friends about it. Advanced analytics that can "sense" burgeoning interests can get a head start on the process of guiding

customers to an eventual purchase. In the old CLM model, these types of data-mining analytics were done ad hoc once a year to prove a hypothesis. In the new CLM, it's a core competency tied to real-time processes and personalized marketing.

■ Anticipating intent

Spotting intent is great, but anticipating it is even better. Advanced analytics systems are good (and relatively cheap) enough to dramatically improve predictions of what a customer will buy next after making an initial purchase, and when s/he is likely to do it. In the simplest example, someone who has bought a high-end TV will likely be interested in surround-sound speakers in the future. One leading Southeast Asian telecom player invested in a "next-product-to-buy" tool and boosted upsell revenue from existing customers by 30 percent.

■ Creating incentives to volunteer data

Consumers are already vocal about their opinions. The Pandora phenomenon (where consumers tell you exactly what they like / don't like) is here to stay as consumers follow up on recommendations and channels formed by their friends' tastes and habits. Companies need to be creative in developing applications and offers that reward customers for sharing data. Customers use the Nike Fuelband, for example, which collects data on their workouts and then recommends relevant products. Car configurators, which help shoppers design the exact car they want, are a great source of information about customer priorities. Companies can be even more direct about collecting data. Our research shows that 35 percent of online buyers are willing to share personal information in exchange for promotional coupons.²

Companies that want to turn data to their competitive advantage need to move aggressively. Nearly three quarters of companies believe their budget for customer insights is too low, according to our recent survey of almost 700 senior executives. Even more disturbing, only 6 percent of companies surveyed say they understand customer needs extremely well, while 45 percent admit their understanding of how their customers interact with them digitally is limited-to-none.³

Becoming responsive

Being responsive is about having the systems, guidelines, and content in place to react with relevant messages or offers when opportunity arises. Timing and relevance are critical. Too many companies mine customer data but fail to get the insight out of the datamart and into the appropriate channels or the hands of frontline agents quickly enough to drive better, more valuable interactions. The objective of responsiveness is

² iConsumer 2012, Insight No. 1

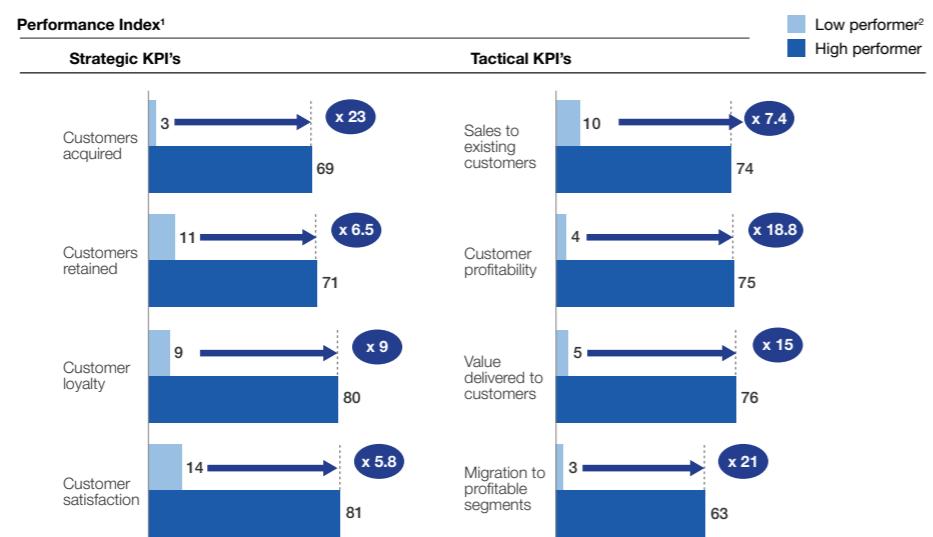
³ Banfi, Francesco and Edelman, David,

Long live the customer decision journey," *The Economist*,

February 14, 2014

Exhibit

Successful companies outperform the competition across full customer lifecycle



Source: CMAC CLM Serviceline – DataMatics team

to turn new customers into loyal repeat buyers, or to ensure that a long-time customer whose loyalty is wavering doesn't leave for a competitor. Our research shows that this kind of personalization can deliver five to eight times the ROI on marketing spend and lift sales 10 percent or more.

- **Arm your channels with analytics to make better decisions**

Often companies invest in sophisticated analytics that stay hidden in the marketing department or customer datamart for use only during outbound targeted campaigns. This is a missed opportunity to arm the rest of the organization, especially sales agents, with detailed, relevant, and useful customer intelligence. Customer-facing personnel should be equipped with relevant information about a customer's history, accompanied by a recommended "treatment path," e.g., offering an upgrade. A major insurance company has improved its profits by integrating customer analytics with its fraud-detection system. During the claims-handling process, agents use simplified customer analytics to fast-track claims for those customer segments that have a low likelihood of fraudulent activities, simultaneously boosting satisfaction and reducing operational costs.

Critical to making this system work is ensuring that channel partners, business units, and frontline reps are involved in the design of "recommendation engines" or related tools. In our experience, companies often invest in sophisticated analytics that stay hidden in the marketing department or customer datamart for use only during outbound targeted campaigns need to pay as much if not more attention to the people and processes that translate insights into well-designed offers as they do to generating the insights in the first place. Salespeople do not react well to black-box solutions with counterintuitive suggestions for their sales pitch. They rightly look for some level of context and customer information to understand why this offer or treatment makes sense for a given customer. Even better is providing salespeople with the ability to dynamically adjust the offer or select from a list of possible offers based on what is learned from the live customer conversation.

- **Measure customer lifetime value**

One of the hardest changes to adapt to in the new world of CLM is moving measurement and reporting from an emphasis on short-term conversion to one that reflects the business impact of engagement. Customer measurement needs to move from blunt units to a more finely tuned and sophisticated set of specific metrics such as "increase in share of wallet," "lifetime loyalty/net present value" and "customer-segment profitability trajectories." As the interaction between the brand and its customers becomes more complex and personalized, the measurement of those interactions needs to be more discreet with the goal of learning and then driving policy and on-the-spot offers and actions. The ultimate goal is to measure the (expected)

impact on the Customer Lifetime Value (CLV) of your efforts to boost customer profitability and reduce churn. Once established, a CLV metric can then be used in day-to-day decision-making processes. For example, offering a \$20 per month promotion to a high-value cable subscriber calling in to end service is a small price to pay to secure longer-term profitability.

- **Upgrade talent—Raising the "data IQ" of an organization is essential if Big Data principles are ever going to move from the lab to the front lines**

Finding the right talent, however, can be difficult. Just 3.4 percent of CMOs surveyed by McKinsey in 2013 believed they currently have the right talent to fully leverage marketing analytics. Companies need to fill multiple roles with specific skill sets. Specialist competence is essential but not sufficient. Look for specialists who are also "translators," able to bridge different business functions by comfortable and effective communications. This need is driving demand for what have been called "two-sport" managers—those with two complementary skills such as computer programming and finance, statistics and marketing, psychology and economics. Some traditional companies such as Walmart and Allstate have established outposts and innovation hubs in Silicon Valley to gain access to the types of talent and skills needed to excel at the new discipline customer lifecycle management.

The new CLM is about understanding customer intent, then reacting quickly, relevantly and profitably. Marketers who can adjust their tactics to not only identify those customers with the highest potential lifetime value, but also to act effectively on the next best action to take will have the edge in the marketplace. □



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Gilt Groupe: Using Big Data, mobile, and social media to reinvent shopping

Gilt Groupe provides instant insider access to today's top designer labels and has grown to a half billion in sales since its founding. In this interview, co-founder Alexis Maybank talks about how they did it.

November 2012 | Alexis Maybank

Using big data to get to 1-on-1

"Now we have almost five years of data on most of our members and customers, so we're able to do more nuanced marketing and communication. Within a single minute at noon everyday, there are over 3000 versions of our message that go out to customers, based on what they shop for, what they like, even what sizes they wear. It's tailored, one-to-one communication with the customer."

The data is central. We're on the cutting edge of using data to inform our marketing and to create the most personalized e-communication possible to the customer, so that each member essentially has a different email they receive. The same is true of the onsite experience when they're shopping. We might prioritize certain sales for them to see first, based on their preferences. You might not have expressed an interest in kids apparel or in a specific brand, so we'll show you something else first.

On the engineering front, it means that you're hiring statisticians and data engineers who are really good at building algorithms to take advantage of this information. And then you couple that with our photography and our copy teams, and you find a segment of customers who have specific lifestyle or life stage interests, and you figure out the language and imagery that would most appeal to them. And when you do that, to the customer it feels like, "Wow, every time I come to Gilt they know me." That personalized experience is our goal.

We also tie in outside demographic data. It also gives us ideas for whole new categories we should consider. We recently launched into gourmet food and wine, so we were able to tell who was most likely to be interested in these categories. Who had subscriptions to Gourmet magazine or a high affinity to wine? We can pull demographic, psychographic and other transactional information in segments of categories through internal data and external sources."

Using the cloud for flexible scale

"We do more than 65 percent of our sales from noon eastern to about 1:30 p.m. every single day. And just from the standpoint of scaling the business, that's really challenging, because it means that even from our early stages, we were building a business that for about an hour and a half, two hours a day, was the size of Amazon. And the rest of the day we were a small startup. So that puts tremendous pressure on our website. On the engineering side we had to have the equivalent hardware capacity or server capacity of an Amazon for that 90 minute period."

To escape from having to make huge investments in hardware and still be able to scale for these peak loads, we turned to cloud computing early. We also had to rethink customer support for the same reason. We got most of our inbound email and calls in 90 minutes.

So how do you staff for that? We expanded the staff around that time block and opened offices overseas as well."

Our new shopper is the mobile shopper

"Today, 30 percent of our traffic is coming over a mobile device -mostly iPhones, iPads, Apple devices. On weekends, we watch nearly a quarter of our revenue move through mobile devices too. So that was a big change we didn't anticipate. Those were people who were basically responding to the time-based nature of our selling. They're jumping on the site from the sidelines of the soccer game on the weekend or from a meeting during the week. One of our top shoppers is a leading defibrillator implant surgeon. And she pops out for five minutes from the operating room, makes a purchase on her iphone, and pops back in. We've seen mobile devices become incredibly important to us as a revenue stream. It's changed the way people are viewing and experiencing our site. We've had to make the photography even higher quality, because you can zoom in dramatically on an iPad, more so than on a desktop. But also, you showcase items differently on mobile devices."

Shopping for influencers

"We added a million customers in a year. To do that we had to look very quickly at what I call the different tribes online, people who have expressed interest in very specific categories. We looked at networks differently online and offline. Online was incredibly important to our rapid, rapid growth. We were able to quickly identify people online who had micro interests in, say, Marc Jacobs handbags or in hotels in the north of Ibiza, or whatever it might be. There're whole groups and communities that come together over these topics. Apparel, fashion items, designer brands, these are elements that people naturally talk about and have a huge affinity for.

And so we were able to tie into all these communities online, whether it was through bios, through people who had followings on Twitter, Facebook, other social networks, and just identify them really quickly. We used the social web very early on to spur our growth and to find these mavens who were hand raisers in very specific design or fashion areas who could reach out to an audience quickly.

Once we found them we were able to offer a very compelling proposition: access to an invitation only site that offered designer goods at prices up to 70 percent off retail. In addition, we rewarded them for inviting friends who shopped." □



Under the retail microscope: Seeing your customers for the first time

Customer Lifecycle Management (CLM), allows retailers to target their marketing efforts to get much greater returns. In fact, we've seen companies add 20% or more to a company's profits when they use CLM techniques.

January 2013 | Lars Fiedler, Roland Harste, Jesko Perrey, and Andrew Pickersgill

How much are your customers worth to you? That hasn't been an easy question to answer. The massive amounts of information about customers available today, however - from point-of-sale transactions to loyalty programs to social media - provide a view of customers that is orders of magnitude more detailed, nuanced, and personal than it's ever been. This unprecedented degree of clarity means companies, especially retailers, can get understand the lifetime value of a customer and manage for it.

This approach, called Customer Lifecycle Management (CLM), allows retailers to target their marketing efforts to get much greater returns. In fact, we've seen companies add 20 percent or more to a company's profits when they use CLM techniques.

Retail is living the data dream

Retailers are uniquely positioned to benefit from CLM, thanks to the scope and richness of customer data they have. One major US retailer, for instance, processes one million customer interactions every hour, feeding databases that hold more than 2,500 terabytes of data. Think about it. Embedded in each transaction are the specs, price, and category of a product, as well as the date, time, and place of the purchase. Add to this all the personalized data gathered from social media and loyalty card programs over long periods of time, not to mention location data from coupon redemption and store check ins. "Of course we can communicate with customers in a number of ways," says Daniela Mundler, senior executive in charge of marketing at Douglas, the leading European fragrance and beauty retailer. "But the best way to get closer to customers is to understand what their behavior tells us."

What CLM is particularly effective for is doing the basics ... but doing them much, much better:

- **Acquire new customers:** CLM helps develop marketing programs that cost less and return more. Advanced analytics, for example, can quantify the impact of specific promotions, enabling retailers to allocate their marketing spend where it brings the highest returns. CLM techniques also identify not only the most valuable prospective customers but also the places where they spend their time, from stores to social networks. Gilt Groupe, for example, added a million customers in just one year by identifying and targeting people on blogs and social networks who had a specific interest in apparel and designer brands. Gilt extended a tailored invitation to these select individuals and rewarded them for inviting their friends.
- **Develop existing customers:** CLM tools encourage customers to buy more, more often. Analysis of the unique interests of each customer open "up sell" and "cross sell" opportunities, while sophisticated predictive analytics can identify the "next product to buy" that retailers can use to tailor specific offers. Predictive algorithms allow Harrah's, for example, to tailor their offers based on expected customer value.

- **Retain existing customers and win back former ones:** CLM analysis exposes vulnerable areas where customer attrition is likely and helps with developing interventions, such as offering incentives if purchase behavior falls off. Marketers can also identify those customers who matter most and reward them with special loyalty tiers, exclusive offers, or VIP events. Ebay, for example, tailors its offers and discounts based on predictions of how likely a valued customer is to defect—the greater the likelihood, the more compelling the offer.

What CLM leaders do

In our experience, the companies who are most successful turning CLM into growth do four things well:

- 1. Target the best customers:** CLM leaders relentlessly comb through their data to quantify how much their customers are worth to them, not just today but in the future as well. Based on the results, these companies develop customer lifetime value models and prioritize segments. Understanding which customers have traded down or churned out or increased their average purchase is critical for safeguarding the future economic health of the company.
- 2. Build predictive models:** Customer value is not a constant, but a moving target. Leading companies follow that target closely, and develop programs that maximize customer profitability. Well-developed analytics models can take in POS transaction data, product specs, payment details, aftersales service logs, customer data, social media data, etc. and develop accurate “next product to buy” (NPTB) and optimum timing recommendations for specific customer segments. Gathering as much historic data as possible increases the accuracy of NPTB models. Best Buy, for example, sends an email to a customer within three days of a product purchase to recommend must have accessories or “cross-aisle” purchases.
- 3. Continually test and learn:** CLM pioneers constantly test new approaches in multiple channels and at various stages of the consumer decision journey. Such testing and learning creates a constant feedback loop so that companies can adapt and evolve both their marketing vehicles but also their customer segments. Predictive models outlined above are most successful when supported by real-time feedback loops.
- 4. Build for the long term:** Successful players make customer value an integral part of their organization. They assign a dedicated manager with overall responsibility for CLM programs with budget support and authority to implement campaigns. The team needs to include an analyst with strong quantitative skills and experience with relevant software (SQL, SAS). A steering committee from various functions often helps to keep the team from overinvesting in expensive analytics solutions. Most

importantly, executives on the CLM team need to build relationships with line and business unit managers so that their insights are delivered to the people who can actually use them. One example of how to do this is by displaying relevant purchase histories of registered customers on sales reps’ terminals. Information flow, decision patterns, and incentives are at least as important as having the right data.

CLM is not about data and tools. It’s a mindset that puts the customer at the center of business decisions, and guides marketing and sales decisions to maximize the value of each customer. □



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Name your price: The power of Big Data and analytics

A new generation of pricing and revenue management practices can lead to meaningful results quickly.

February 2013 | Jay Jubas, Dieter Kiewell, Stefano Redaelli, and Aziz Shaikh

In the travel industry, pricing has always been a tough job. Overprice an airline seat, hotel room, cruise cabin, or rental car today, and you won't get a second chance to move that unsold unit tomorrow. Set the price too low, and you destroy value by selling out limited inventory too soon. No wonder, then, that the industry boasts some of the most sophisticated pricing capabilities anywhere. But in the era of Big Data, those capabilities are looking increasingly outdated and inadequate. To meet the demands of large data sets and respond rapidly to fluctuations, targeted automation is a must have.

Blame the Internet. An explosion of new sales channels, with price-comparison sites such as Expedia and Kayak, has ratcheted up competition and ever more frequent price changes. Digital technology and social media have also greatly raised the scope for one-to-one marketing -and made it possible to track the behaviors of millions of individual customers.

As a result, pricing managers are faced with an overwhelming amount of information stored in a variety of places. For example, one travel company we know has three terabytes of pricing data in eight systems -including inventory data, current booking levels, historic demand patterns, and competitor information across thousands of categories.

How can companies make sense of all this data -and use it to drive value? The answer lies in a new generation of pricing and revenue management practices that can yield meaningful results quickly. These have helped travel companies improve revenue per unit by 3-8 percent, and market share by 1-2 percentage points. But it is not just a matter of a software tool or a single new analysis. It requires a sharp prioritization, iterative building of tools, and hands-on engagement of many functions across the organization.

What, then, are the practical steps that pricing managers can take to master Big Data? Companies must recruit a new generation of pricing talent with more of a "trader" profile than an "analyst" one.

1. Pinpoint the most promising opportunities

In the travel industry, those opportunities include determining exactly what each customer is willing to pay (through customer segmentation, targeted promotions and micro-marketing, sell-up, and cross-selling), and maximizing the use of available inventory (through, competitive pricing, overbooking, substitutions and upgrades, and so on). Effective pricing and revenue management organizations must have the talent and know-how to identify such opportunities consistently and systematically.

2. Move quickly to automate key analyses

To meet the demands of large data sets and respond rapidly to fluctuations, targeted automation is a must have. To maximize use of inventory, for example, companies

can develop automated utilization forecasts based on past booking patterns, current advance reservations, competitor information, and so on. Just as importantly, the output needs to be in easy-to-use, flexible formats, such as Excel-based tables or web interfaces. One tool we worked with automated the combination of revenue forecasts and inventory utilization data that was previously stored in separate systems; this allowed managers to track progress in real time and make pricing decisions that were much faster and better-informed.

To analyze and simplify large volumes of sales data across locations, you'll generally need customized IT solutions and applications. The best performers can get advanced systems in place in weeks then test and adjust, rather than waiting for months or even years to implement new applications.

3. Align the organization around pricing performance

Companies often spend most of their energies and resources on building advanced analytics tools. But in our experience, they need to spend as much or more time making necessary changes to organizations and processes. At one travel company, pricing team interactions with supporting business units were originally ad-hoc and unstructured. So they developed a systematic process that allocated responsibilities for pricing and revenue management amongst the relevant departments, including pricing, marketing, inventory management, and distribution -and described when and how they should work together to create alignment on pricing decisions. As one output of this process, inventory managers developed a new appreciation for revenue metrics, and understood that these should take precedence over the utilization metrics that had previously been their focus. It's also important to develop clear incentives that reward managers for pricing performance; and to recruit a new generation of pricing talent with more of a "trader" profile than an "analyst" one, ie. results-driven, comfortable with risk and experimentation, and able to make quick decisions.

4. Train to sustain

Gains from improved pricing performance are hard to sustain unless companies commit to extensive and intensive training. Training should focus on the most critical elements of pricing that drive revenues, best practices for pricing and inventory management, and how to use new tools. Rather than using traditional classroom instruction, training needs to emphasize simulations involving real data and decisions that affect the company's pricing in the market. This approach allows participants to review actual results and the impact of the decisions they've made. In addition, this type of training prepares participants to take calculated risks, rather than relying on standard pricing principles, and inculcates an innovative mindset that characterizes the best pricing managers. To be successful, such training must involve the relevant

functions beyond pricing. For example, inventory and sales managers must also learn to calibrate demand and supply through pricing to maximize revenue generation.

Pricing data is just going to get bigger and move faster in the travel industry -and in many others, for that matter. Companies that can keep up will find the growth and margin to stay ahead of the competition. ☐



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Getting beyond the buzz: Is your social media working?

Companies need a Social GRP to measure and manage the business value of social media.

October 2012 | Rishi Bhandari, Jonathan Gordon, and Andris Umblījs

When General Motors pulled its ad dollars from Facebook, it set off a firestorm of debate about the value of social media. Executives in many C-suites today are asking: How do you compare the effectiveness of a Facebook comment with an ad that runs on TV? Or a tweet with a glossy magazine spread? Am I getting my money's worth? Good questions, which until now have been impossible to answer.

In a recent survey, we found that 91 percent of companies believe social media doesn't significantly impact sales. The reality is that it's hard to say for sure because, in our experience, nobody has demonstrated that they can measure the return on investment (ROI) on social. This metrics blind spot means CMOs can't make informed spending choices between social and traditional channels.

We believe that social media can have great value as part of a company's marketing mix - not because of some gut feel but because we can measure it. At one large packaged goods client, for example, we proved that digital had an ROI that was, on average, six times greater than TV. After isolating the effects of digital display from other social content (such as user comments and viral activity), the analysis also found that social media had much higher impact than other digital media. As a result, the company is shifting more than 30 percent of its TV budget to social media.

Social media doesn't live in a vacuum

Measuring social media's impact is complex, requiring a more sophisticated appreciation of how social media fits into the broader marketing landscape. A tweet may lead a customer to a website; a television ad may resonate after the customer reads a comment on a site; and a billboard may encourage a customer to "like" a Facebook page later in the day.

Given the potential cross-over effect, any social media measurement needs to account for the impact of both digital and off-line interactions. Metrics should also factor in the impact of broader external influences, such as fluctuations in market activity and seasonality. And this all needs to be done simultaneously to capture the true impact of each channel.

Figuring out what your earned media is worth—a Social GRP

Digital media comes in three flavors: owned (e.g. your website); paid (banner ads you buy on other sites); and earned (what people blog or tweet about you). Earned media is of particular importance because of the amplification power of social media so we set out to isolate its value.

As a model, we took TV advertising's GRPs (gross ratings points)—a function of the percentage of target audience reached by an ad and the number of times viewed on

average. Marketers can plug this GRP into marketing mix models (MMM) that analyze the effectiveness of each marketing channel. Social needs its own GRP so that marketers can calculate the relative value of earned media.

The Social GRP metric must account for three elements:

Effective reach. Currently the most used social media activity measurement is “buzz.” Buzz, however, measures the number of people talking or writing about a brand or product (“mouths”), but not the number of people exposed to these messages (“eyeballs”). It’s great to have 1 million Twitter followers but if they don’t read your tweets, that’s empty buzz and it doesn’t have much sales impact. Reach matters only if your audience listens to or reads what you’re saying.

- Audience relevance. Not all buzz is created equal. Your message is only as effective as the people it reaches. Imagine, for example, an ad for a high-end car that sets off a storm of social media buzz, but that buzz turns out to be young males who generally can’t afford to buy the car talking about the music track in the ad. That kind of buzz is virtually useless to the car company.
- Sentiment. Measurement efforts need to take the complexity of the social media conversation into account. Unlike TV advertising, where ads deliver positive brand messages, social media ranges across positive, negative, and neutral sentiments. For this reason, you need to calculate three separate social GRPs for each sentiment because they have different impacts on sales.

Show me the social money

This Social GRP has already helped companies better manage their social media investments within their overall marketing mix to drive sales. In one example an internet broadband provider watched new customer acquisitions slow to an unacceptably low pace despite significant investments in traditional media. An assessment of the Social GRP showed a tremendous amount of negative sentiment as complaints about long waiting times on the phone help line went viral through social media.

After calculating the effects of the negative social media, the company was stunned to learn that the loss in potential customers was close to \$45 million—which more than offset all incremental customer acquisitions generated by a multi million dollar TV advertising campaign. With this understanding of the impact of social, the company quickly invested about \$1 million to improve customer service and turn the sentiment to a much more positive mix. More importantly, customer acquisition improved.

For companies to make informed decisions in the social age, they need hard facts and sophisticated analytics. Social media can no longer thrive on buzz alone. □



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Part 3: How to get organized and get started

90 How to get the most from big data

94 Five Roles You Need on Your Big Data Team

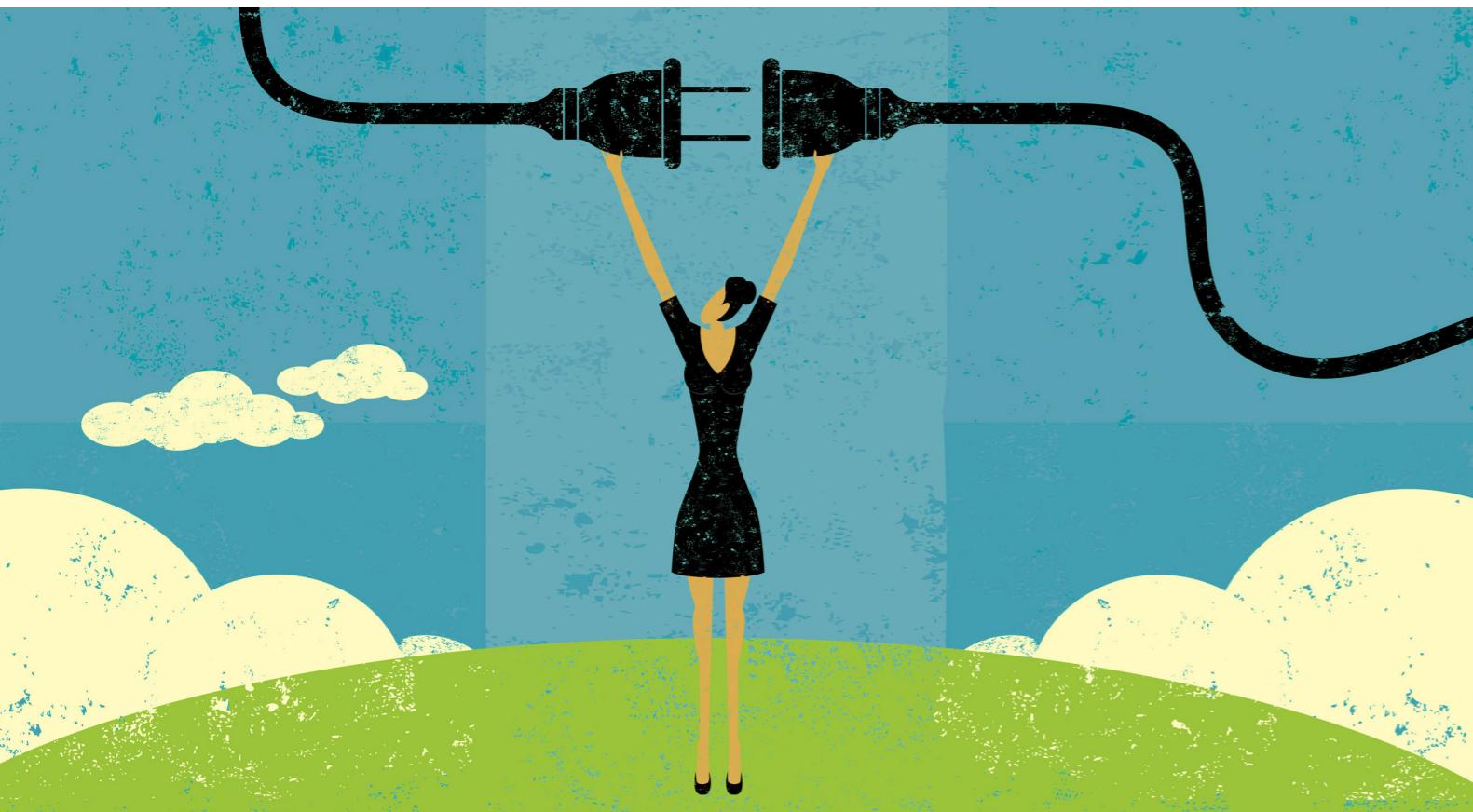
98 Want big data sales programs to work? Get emotional

102 Get started with Big Data: Tie strategy to performance

106 What you need to make Big Data work: The pencil

110 Need for speed: Algorithmic marketing and customer data overload

114 Simplify Big Data – or it'll be useless for sales



How to get the most from big data

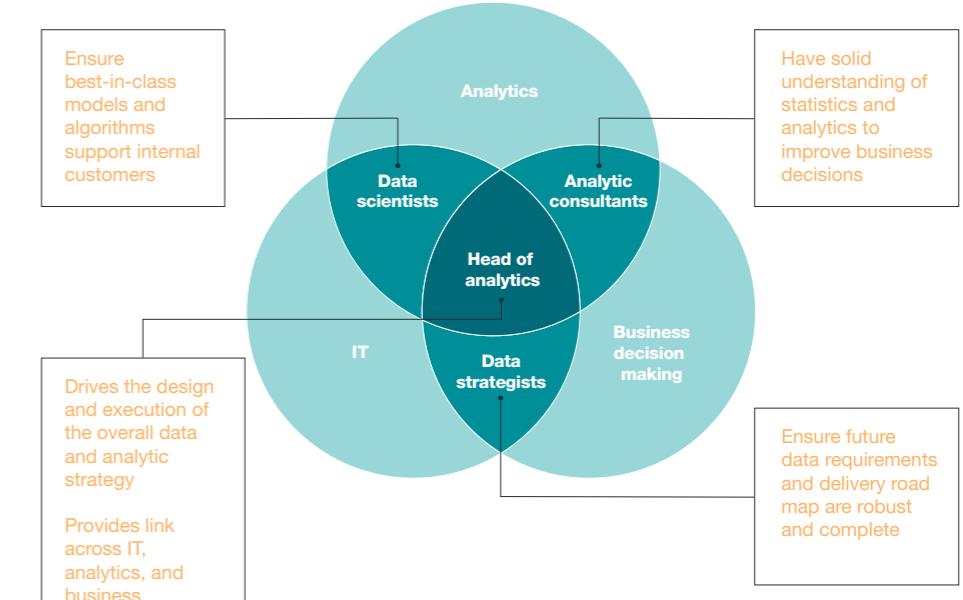
Organizations need specialists, or “translators,” who can analyze, distill, and clearly communicate information of the greatest potential value.

December 2014 | Matt Ariker, Peter Breuer, and Tim McGuire

Simply collecting big data does not unleash its potential value. People must do that, especially people who understand how analytics can resolve business issues or capture opportunities. Yet, as most executives know, good data people are hard to come by. According to a McKinsey survey, only 18 percent of companies believe they have the skills necessary to gather and use insights effectively.¹ At the same time, only 19 percent of companies are confident that their insights-gathering processes contribute directly to sales effectiveness. And what if number crunchers aren’t enough? After all, if a great insight derived from advanced analytics is too complicated to understand, business managers just won’t use it.

Exhibit

Organizations should focus on finding ‘translators,’ people who can bridge different functional areas



That’s why companies need to recruit and cultivate “translators”—specialists capable of bridging different functions within the organization and effectively communicating between them (exhibit). But looking for a single translator at the right intersection of all the various skills you need is like looking for a unicorn. It’s more realistic to find translators who possess two complementary sets of skills, such as computer programming and finance, statistics and marketing, or psychology and economics. In all but the rarest of cases, you’ll need at least two translators to bridge each pair of functions—one of whom is grounded in his or her own function but has a good enough understanding of the other

function to be able to communicate with a counterpart grounded there. That's because when this process works best, it's a collaboration rather than a straight "translation."

Consider, for example, business and analytics. Business managers generally have an incomplete understanding of the data available, no matter how well versed they are in data or how well developed their analytics requirements are. In this case, analytics managers with a fuller appreciation of the data, who also understand the business and have a clear vision of the objectives, can proactively offer solutions and options.

When considering what translators you need, it's important to understand that business impact based on analytical insights requires bringing together the right group of people with complementary skills, and then creating the necessary connections between them. In effect, translators form the links that bind the chain of an effective advanced-analytics capability. On the business end, that requires people who can define a strategy and run the economic and financial analysis to determine the value of the opportunities to pursue. Translators turn those analyses into requirements that guide IT's development of an analytics environment to perform, validate, and ultimately scale analytics. When the data are rendered into insights, business managers need to then translate them into messages and offers to be delivered to the marketplace.

The ability to work together quickly and flexibly is critical. The best processes are highly iterative, requiring business, IT, and analytics teams to rapidly review real-world results, recalibrate analyses, adjust assumptions, and then test outcomes.

While companies don't often think about talent in terms of value chains, the skill and capability links between people are crucial for unlocking the full value of advanced analytics. ☐



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Five roles you need on your Big Data team

While many companies obsess about how to turn their data into value, we find they spend too much time on the “data” and not enough time on the “people” side of the equation.

July 2013 | Matt Ariker, Tim McGuire, and Jesko Perry

Getting the people side of the equation right, however, is not just about hiring the best talent (though that's important, of course). In our experience, companies overlook two critical items: 1) Identifying the roles they really need and 2) building a “customer-service” mentality in their advanced analytics bureau.

The right team

Big Data talent is a critical issue. By 2018, the United States alone could face a shortage of 140,000 to 190,000 people with deep analytical skills, according to the McKinsey Global Institute. But companies need to spend time upfront to identify the kinds of roles they need to make the Big Data machine run rather than just rushing to recruit math and science jocks. While different companies will have different talent needs, here are five important roles to staff your advanced analytics bureau:

1. **Data Hygienists** make sure that data coming into the system is clean and accurate, and stays that way over the entire data lifecycle. For example, are the time values being captured the same? One data set might be measuring calendar days in a year (365), another working days in a year (260), and yet another hours in a year (8765). All the values have to be the same so that comparisons are possible. Or have old data fields been populated with new types of data but under the old field names? If this is not addressed in the database, new product data may override old product data, rendering a meaningless result. This data cleaning starts at the very beginning when data is first captured and involves all team members who touch the data at any point.
2. **Data Explorers** sift through mountains of data to discover the data you actually need. That can be a significant task because so much data out there was never intended for analytic use and, therefore, is not stored or organized in a way that's easy to access. Cash register data is a perfect example. Its original function was to allow companies to track revenue not to predict what product a given customer would buy next.
3. **Business Solution Architects** put the discovered data together and organize it so that it's ready to analyze. They structure the data to ensure it can be usefully queried in appropriate timeframes by all users. Some data needs to be accessed by the minute or hour, for example, so that data needs to be updated every minute or hour.
4. **Data Scientists** take this organized data and create sophisticated analytics models that, for example, help predict customer behavior and allow advanced customer segmentation and pricing optimization. They ensure each model is updated frequently so it remains relevant for longer.
5. **Campaign Experts** turn the models into results. They have a thorough knowledge of the technical systems that deliver specific marketing campaigns, such as which customer should get what message when. They use what they learn from the models

to prioritize channels and sequence the campaigns—for example, based on analysis of an identified segment's historical behavior it will be most effective to first send an email then follow it up 48 hours later with a direct mail.

It is important to map the movement of data across the Big Data team and ensure that all data hand-offs between humans and machines have clear owners. This mapping ensures that each person in a given role is held accountable for complete delivery, not just for completing his or her individual tasks.

Developing a client service culture

It's demoralizing to build a product or service that no one uses so the burden is on your team to demonstrate how its models can benefit internal business owners. That requires thinking of the business owners as customers. As any good retailer will tell you, you need to understand your customers to be successful. Have regular meetings with them to understand their needs and get feedback on the performance of the team's models. Always ask yourself, "Who in the business will be helped by my analytics?" and "Do they agree you helped them succeed?"

We also see Big Data initiatives fail because the internal customers don't have confidence in the team and don't trust the models. Trust starts with being transparent. Be completely open about who is working on what. Provide estimates of realistic finish times. Be clear about trade-offs when determining which models to build so your internal customers make an informed decision that will get to the best end product.

To ensure adoption of a service bureau culture, measure personal performance by business success not just volume or speed as too often happens. Track how many new models were used by internal customers to drive new results.

Some companies have developed bonus criteria for members of their Big Data teams based on how quickly and broadly a model was adopted by the internal customers rather than how innovative the model was. This approach prevents the classic war of words: "I built a brilliant model. It is not my fault no one is using it!" It also nips in the bud the problem of building analytics for its own sake rather than for business impact.

Creating a successful analytics team requires both the right people and the right culture. When it comes to Big Data, your teams should spend less time worrying about crunching it and more time focused on serving it. ☐



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Want Big Data sales programs to work? Get emotional

Companies are inundated with data and know how they would like to use it, yet most can't get it to work. It's time to step away from the dashboard and get personal.

September 2014 | Matt Ariker and Nimal Manuel

The type of question we hear most is: How can I get the Big Data train moving? After all, there's no shortage of rational reasons to get Big Data programs rolling: companies that use customer analytics extensively are more than twice as likely to generate above-average profits as those that don't; an integrated analytic approach can free up to 20 percent of marketing spending; and injecting Big Data and analytics into operations can help companies outperform their peers by 5 percent in terms of productivity and 6 percent in profitability. So what's the problem?

The challenge is that many of the obstacles derailing big data efforts aren't rational. They're emotional. For all the technical and procedural complexity around big data, the biggest hurdle is often human behavior. Recommendations based on advanced analytics can make a huge difference—if sales reps and customer service agents use them. But many simply don't want to. Leaders charged with making Big Data programs work need to understand and acknowledge this reality and develop specific approaches to build trust that overcomes the emotional resistance. That means more than just training employees to use technology to better engage with customers. The best leaders develop examples of what most effectively addresses specific concerns, creating a clear path of action and adopting new approaches to reward new behavior. Here are three of the most common behavioral obstacles and some thoughts about minimizing their impact.

Obstacle 1: "It's too hard and not worth the effort."

Many sales reps believe these "new fangled" analytics are too complicated and won't provide enough benefit for the effort required to understand how to use them. And they have good reason to be skeptical: many have hit "tool fatigue," having seen one allegedly revolutionary approach after another come and go. That means even with a tool with excellent usability, leadership needs to work hard to convince reps that the analytics aren't complicated and that it's worth adopting.

This issue needs to be addressed in three ways. First, note that studies show that the additional time associated with working with recommendations from analytics is insignificant or nonexistent. Second, in many cases these systems can in fact save agents' time by providing accurate recommendations for specific cases that, in the past, agents themselves had to do with outmoded software and little or no analytics support. One of the best ways to convince your reps is to get them to commit to investing a small amount of time (less than 30 minutes) to test run a recommendation or run a simple query. Finally, frontline agents need to know you value their input and are listening to them. The keys to a program's success are having robust user acceptance and operational-performance testing to ensure analytic recommendations are being delivered in a timely and accurate manner in support of employees.

Obstacle 2: “I know better.”

Many sales reps are convinced their instincts and experience can provide better answers than analytics. The reality is, a well-implemented analytics solution can provide better, more relevant answers than all but the very best reps. Convincing reps of this fact requires showing how analytics can help them do their job better and, critically, make them more money. So, show them the earnings difference between a team that uses analytic recommendations and one that doesn’t (if the example happens to show a marked improvement in the performance of previously ho-hum sales reps, all the better). Of course, this isn’t to say that judgment isn’t necessary. In fact, good judgment and experience remain critical to making data-generated recommendations more useful and effective. That’s why good analytics programs ensure that all analytic recommendations are provided with supporting context and rationale so reps understand the “thinking” behind the recommendation.

Obstacle 3: “I don’t trust you.”

This one is probably the toughest issue to overcome: the psychological concern that machines are replacing humans. And while automation has eliminated some low-value and repetitive tasks, and technology may be more efficient at making recommendations directly to consumers (especially in digital channels), the overwhelming reality is that people still want to talk to people. Sales reps and customer-service agents are more valuable than ever for understanding customer needs and more complex purchases, such as bundled product sales.

It’s not easy to build trust and overcome inherent resistance. One thing we recommend is turning top performers into allies and, more importantly, advocates. Top sales performers often have major influence within organizations. Getting them to work with the “meaty middle”—the 80 percent of reps who are neither at the top nor the bottom of the pack—is critical because changing the behavior of this large group will have the biggest impact. It can’t be a mandate from headquarters. If the meaty middle sees top performers adopting new ways of working that are both maintaining and extending their success, it will soon follow suit. At the same time, companies must tweak their incentive structures to get top performers on board with new approaches.

When it comes to ensuring your organization gets the most out of advanced analytics, don’t expect the data to do all the work for you. Getting the Big Data train rolling hinges on how well you can read and react to emotions. ☐



Matt Arikér

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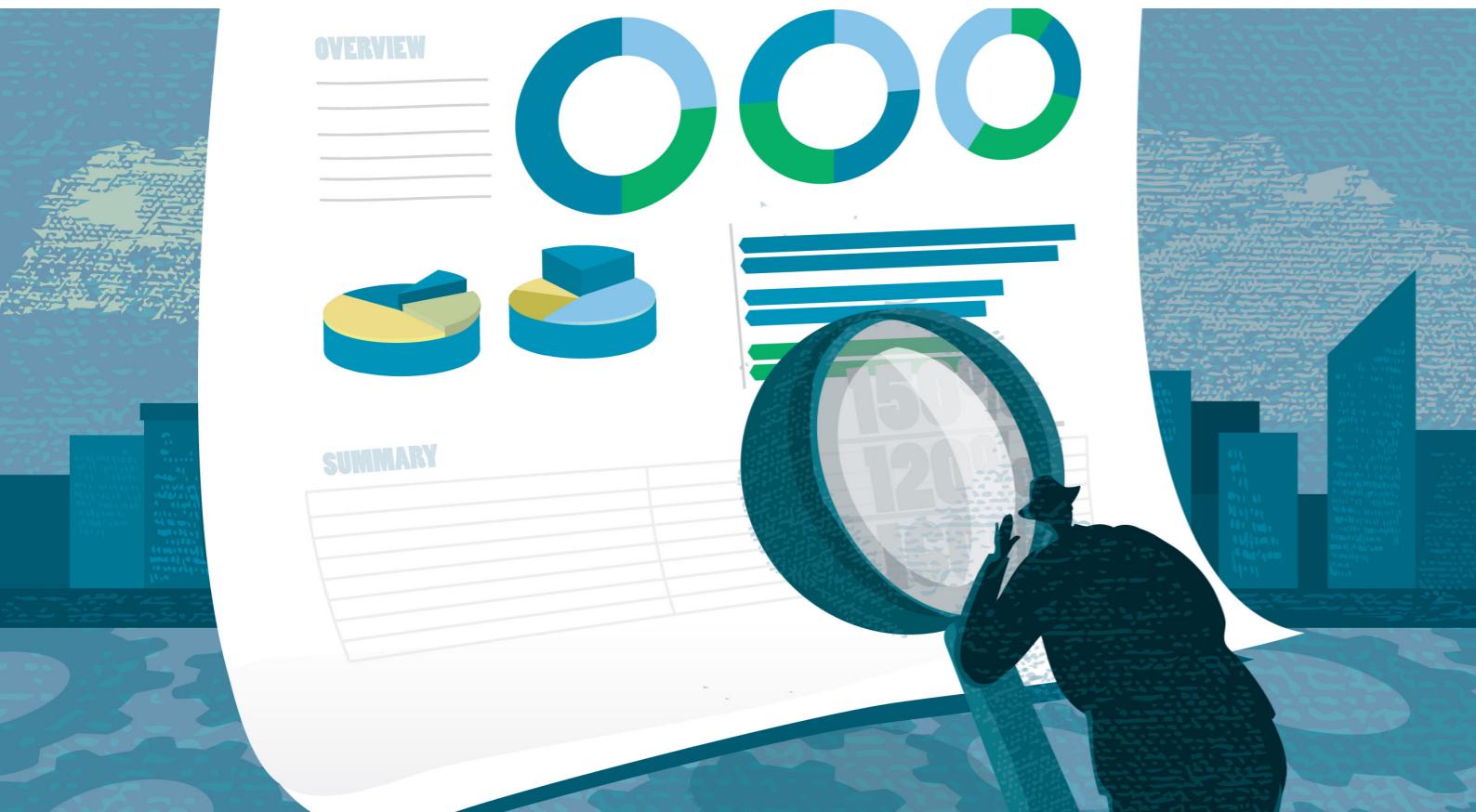
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Get started with Big Data: Tie strategy to performance

Gathering enormous amounts of data is not difficult for anyone who wants to do it, but being able to use it effectively is something different altogether.

October 2012 | Dominic Barton and David Court

Large-scale data gathering and analytics are quickly becoming a new frontier of competitive differentiation. In a recent Harvard Business Review article we explore how companies require three mutually supportive capabilities to fully exploit data and analytics: an ability to identify and manage multiple sources of data, the capacity to build advanced analytic models, and the critical management muscle to transform the organization.

Getting started on a successful data and analytics journey, however, is a continuing challenge for many leaders and they often struggle for a clear strategy that ties data and analytics to improved performance. We took a close look at companies that have recently launched big data strategies to shed further light on the tough road C-level executives face. From these experiences, we have distilled four principles to defining a strategy and getting started:

Size the opportunities and threats

Opportunities may range from improving core operations to creating new lines of business—even in the same industry. For example, insurance companies can use big data to improve underwriting performance now, while over the longer term they can use it to serve formerly unprofitable customers and ultimately even develop entirely new risk-based businesses. The key is to establish a clear-eyed view of the business impact expected at each stage of implementation in order to better focus efforts, and determine priorities.

In the case of a retailer we studied, data and analytics were part of a difficult battle for market share. The company's strategy had long been predicated on matching the moves of an efficient big-box rival, yet now a different online player was draining the company's revenues and denting its margins. At the heart of the threat was the new competitor's ability to gather and analyze consumer data to generate recommendations across millions of customers while becoming a platform where vendors could sell excess inventory at a discount by using publicly-available price data. Responding to this threat required both debate on 'what business are we in' and investment to use data and analytics to drive important performance improvements

1. Identify big data resources . . . and gaps

Framing the basics of a big data strategy naturally leads to discussions about the kinds of information and capabilities required. For example, a review will have to consider access to analytical talent as well as potential partnerships that might help fill gaps. We often find that consideration of required internal and external data will often spark "aha" moments—as executives identify "data gems" cloistered inside their business units or recognize the value of creating the right kind of partnership.

The retailer mentioned above found that the company gathered volumes of data but wasn't using it to potential. This information on product returns, warranties, and customer complaints contained a wealth of information on consumer habits and preferences. The review also revealed that none of the information was integrated with customer identification data or sufficiently standardized to share within or outside the company. Happily, the company had a team that could help solve these problems: in-house data analysts whose siloed efforts were underused.

Align on strategic choices

Once companies identify an opportunity and the resources needed to capitalize on it, many rush immediately into action planning mode. This is a mistake. Data strategies are likely to be deeply intertwined with overall strategy and therefore require thoughtful planning when a company decides how its resources should be concentrated to achieve the desired results.

It's also important to view data and analytics in the context of competing strategic priorities. In the case of a telecom provider, a cross-functional executive committee was created to oversee the analytics team and ensure that its efforts were aligned with the company's strategy. The committee focused the team's efforts on two questions: "How competitive are our brands in the minds of users when they make purchase decisions?" and "What key buying factors matter for users, and how well positioned are we to communicate with customers about these factors?"

The team then combined customer data from several sources to surface actionable insights—for instance, sports and other premium TV programming was a key differentiator in purchasing decisions, and customers would be more inclined to purchase a "triple play" service offering (television, high-speed Internet, and voice telephony) if the company de-emphasized voice telephony in its marketing messages. This was the opposite of what consumers had indicated in traditional market research interviews. The analysis also underscored—and helped quantify for executives—the importance of a bigger strategic imperative: the need to add mobile telephony as a fourth service to complete a "quadruple play."

2. Understand the organizational implications

It's important to note that the threats and opportunities associated with big data often have organizational implications that only concerted senior-executive attention can address. For example, at another telecom player, the consumer data-insights team learned that two things led to the most rapid spread of negative word of mouth about the company on social-media and microblogging sites: network outages and any perception by customers that the company had made false advertising claims about its products or network. Initially, the marketing and network organizations, rather

than cooperate, blamed one another for the findings. Only when senior executives forced the two sides to work more closely together and build trust could the company capitalize on the information, by tailoring marketing messages to better explain new-product rollouts and network upgrades.

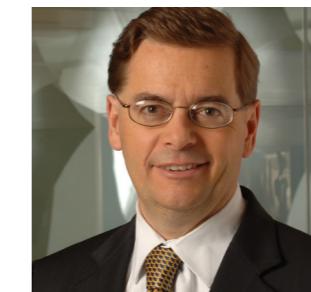
Finally, we often see stresses on technical and analytic resources as a company seeks to capitalize on data and analytics. Thus, whether a company is planning a single, large initiative or multiple smaller ones, its senior team must stay mindful of the resources required (technological and otherwise) to shift quickly from pilot to "at scale" implementation. □



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What you need to make Big Data work: The pencil

Building out Big Data capabilities too often becomes the end goal itself.

October 2012 | Matt Ariker

The secret to getting the most from Big Data isn't found in huge server farms or massive parallel computing or in memory algorithms. Instead, it's in the almighty pencil.

That's the advice I give people these days. The reason is that the promise of Big Data is so seductive that it often sends people scrambling after ever more petabytes or exabytes in the hopes of unearthing that golden insight that will allow them to grow and beat competition. This process untethers many a marketer as one question leads to another and to another. Many retail and telecommunication companies I've worked with, for example, have sought to create a 360 view of the customer by spending years building out an enterprise data warehouse to support it before generating new revenue streams. The build-out itself becomes the end product, not the analytics and revenue impact.

Don't blame the data. Tremendous insights do exist in Big Data. Companies that use it well are leaping ahead of their competitors. One of the big reasons for that, however, is that they have a very clear sense of what they want to do with all that data before they start.

Which brings me back to that pencil. It's a simple but powerful tool to evade the Big Data trap of analysis paralysis. Here's how:

1. Start with "Destination thinking"

Write down in short, clear sentences exactly what business impact you want to achieve with your new Big Data analytics. This "Destination thinking" is a simple but often overlooked process that goes beyond expressing broad goals such as "increase wallet share." You want to lay out what business questions or problems you expect to be able to solve when you have finished the analysis.

My colleagues highlighted a good question in their recent piece in HBR ("Making advanced analytics work for you"): What decisions could we make if we had all the information we need? Using that logic, one shipping company improved the on-time performance of its fleet by tapping specialized weather forecast data and live information about port availability that it hadn't realized were available. The very act of writing at this level of specificity will help you clarify what you're looking to do, and how you will define and declare success before you start. I can't tell you how often people have done this and told me how it's been instrumental in helping them come to a much better understanding of what they needed to do. It will also help to drive alignment with your team and bosses, a great way to defang ambiguity, the serial killer of Big Data initiatives.

2. Define what success looks like by digging into the nitty gritty

Set hard and measurable goals. Lots of folks talk about improving customer experience, a worthy goal. But how do you measure it? Goals like revenue growth,

increased profitability, or increased customer use are good because they're measurable. But don't stop there. Write out how the improvement you're shooting for will impact the P&L. For example, if you want customers to stay longer, are you expecting them to increase their product usage too? If you're looking to reduce customer churn, how much of a reduction, for how long, and how much stronger will profit be because of it? Test the metrics you've laid out: for these measurements, how will you ascribe causality and measure it?

3. Define milestones of success and early opportunities to generate business returns

Big Data analytics initiatives tend to have long gestation periods so it's important to identify milestones that need to be completed. Focus on what I call "Insight Delivery Deadlines." Installing necessary hardware and software infrastructure, for example, is important but in and of itself doesn't deliver value. A better Insight milestone is "convert first high-end target into customer" or "deliver insights report to CEO." Just as importantly, take that pencil and put people's names against the various milestones so that everyone is clear who needs to deliver what and when throughout the entire Big Data gestation lifecycle. Make sure your team is clear and accountable about these milestones (again, kill that ambiguity).

In completing these steps, you'll create the requirements for the insights from Big Data analytics you actually need versus what you think you want. Of course there's a lot more to do -for example, you'll need to establish a baseline so you can measure improvement. But putting this kind of time into your Big Data project upfront will help not only save lots of time and money during implementation, but you're also much more likely to get the value you're looking for.

So, step away from the Big Data hype for a moment and grab yourself a trusty pencil.

This article originally appeared in the Forbes CMO Network. □



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Need for speed: Algorithmic marketing and customer data overload

A new, scientific form of marketing is disrupting industries, forcing companies to consider new strategies, technologies, and talent.

May 2012 | Joshua Goff, Paul McInerney, and Gunjan Soni

Big data has grabbed headlines primarily because of its quantity and complexity. But what often gets lost in the discussion is the nature of speed. Not only do instant-gratification consumers today want responses in real time; the sheer mass of data also requires speedy processing so companies can do something useful with it. It's no use getting a great piece of insight after the customer has walked out the door.

Algorithmic marketing is already starting to solve that speed-to-market conundrum. Employing advanced analytical methods, algorithmic marketing provides real-time offers targeted to individual customers through a "self-learning" process to optimize those interactions over time. That can include predictive statistics, machine learning, and natural language text mining. It harnesses big data such as customer location and behavioral information along with powerful computing systems to match customers with context-sensitive products and services.

To go algorithmic, companies need to move from batch systems (where work is done at regular intervals) to algorithmic systems (real-time updates). The way a batch system works, for example, is a retailer tracks keywords on a spreadsheet and uploads them once a week or once a day. Algorithmic marketing, however, tracks keywords automatically and makes updates every 15 seconds based on changing search terms, ad costs, customer behavior, etc. It can make price changes on the fly across thousands of products based on customer behavior, price comparisons, inventory, and predictive analysis.

Algorithmic profits

Algorithmic marketing is allowing companies to do things they couldn't do before, and some early signs show it can deliver big value, especially in financial or information services.

In North America, Amazon.com grew 30 to 40 percent, quarter after quarter, throughout the United States' 2008-2012 recession, while other major retailers shrank or went out of business. From 2006 to 2010, Amazon spent 5.6 percent of its sales revenue on IT, while rivals Target and Best Buy spent 1.3 percent and 0.5 percent, respectively. That investment and focus has yielded increasingly sophisticated recommendation engines that deliver over 35 percent of all sales, an automated e-mail/customer service systems (90 percent are automated, versus 44 percent for the average retailer) that are a key component of its best-in-class customer satisfaction, and dynamic pricing systems that crawl the Web and react to competitor pricing and stock levels by altering prices on Amazon.com, in some cases every 15 seconds.

Another example is a large Latin American bank which transformed itself from a little known player to an institution that, by 2010, ranked 11th worldwide in market capitalization. All offers are delivered to customers in a personalized way, based on an

understanding of their preferences. In addition, information received via one channel is used to inform and update intelligence across the system in real time. For instance, if a customer rejects an offer on an ATM, the “next product to buy” (NPTB) engine is updated to ensure that the customer’s next interaction with the call-center results in a different, more suitable offer. It also used its capabilities to stay far ahead on straight-through processing (STP) across channels. ATMs are capable of 190 different transactions, which cover key sales types, such as fixed deposit creation, personal loans, credit cards transactions, loans against pensions, and simple life and accident insurance offers.

Getting into that algorithm rhythm

- **Invest in tech:** Making the shift from batch to algorithmic is like going from the age of propeller flight to jet engines. And the implications are just as momentous. To be real time, companies need very different system architectures, investment programs, programming, and security protocols. In-memory processing, an emerging technology that gives users immediate access to the right information for more informed decisions, can’t be found in off-the-shelf packages. Throw in all the security issues in protecting all those data and money transfers and you’re talking about a sophisticated and complex system. Getting these IT systems working is the greatest challenge CMOs face, according to a poll we recently ran on the topic.

Algorithmic marketing requires custom programs or heavily modified packages because the nature of a company’s business, organization, and processes tend to be unique. Firms must, therefore, invest in creating integrated information systems that not only transcend organizational silos but also tie into systems operated by suppliers and partners.

- **New organizational capabilities:** Algorithmic marketing is a wasted opportunity unless companies resolve how it fits in with current organizations and processes. For example, companies need to understand how a merchandizing manager negotiates deals with a dynamic pricing system running in parallel. Or when a mobile customer walks into a store after receiving an offer via SMS, the sales person needs that offer and customer information to understand not only how to fulfill the order but also how to cross- and upsell.

Other opportunities require new teams. For example, big data and intelligent, self-learning algorithms offer the potential for companies to conduct controlled real-world testing. But how to enable, manage, and make sense of potentially thousands of these experiments, while also using time, resources, and money efficiently. Organizations need to set up and manage “test factories” with streamlined IT systems, robust underlying processes, and automated results interpretation tools, which would allow managers to test several thousand ideas every month.

- **Winning the war for digital talent:** Google, Facebook, Amazon have made recruiting talent a top priority. Amazon employs 25 PhDs to manage and conduct tests to optimize its site. Google, which pays its engineers more than its MBAs, provides engineers with leadership roles and well-defined career paths. One retailer we know spent three years trying to attract the right talent but ended up only hiring two people. That’s because they weren’t willing to build its HR strategy—compensation packages, career paths, and leadership opportunities—geared around the data engineers that they need for algorithmic marketing.

Algorithmic marketing isn’t really a choice. Leading companies are already doing it and seeing tremendous growth. Companies need to develop their own algorithmic capabilities or risk being locked out of the next wave of growth. □



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Simplify Big Data—or it'll be useless for sales

3 lessons to make Big Data help sales reps rather than making their lives harder.

October 2012 | Lareina Yee and Jigar Patel

It's been a hectic Thursday so far for Maria. She closed a sale first thing this morning, but since then she's hasn't made much progress following up leads. That's because she's been inundated with a raft of disconnected but detailed analyses of new micromarket sales opportunities, obscure tailored pricing guidelines across dozens of customer and product variables, and social media reports laying out "hot leads" delivered in spreadsheets. Why can't this Big Data, which senior management are evangelical about, actually help her rather than making her job harder?

Good question. Many companies have grasped that today's explosion of data and analytics can help them grow. But they haven't realized that if the sales force can't use the findings, then it's a waste of time and effort. The key to making complex data analysis work is to make it simple for sales.

Fortunately, as we learned in writing the book *Sales Growth*, some companies have got it right. From their experiences, we've found three lessons for how to keep it simple.

Simple leads

In a world of Big Data, sales targets and leads can proliferate but they are of no use if they just create a morass of information for the sales person to wade through. Then you just have data without insight, and that makes Maria's job more complicated. The beauty of Big Data is that it allows for precise micro-segmenting so that each individual lead generated can be directed to the right salesperson. So, rather than Big Data being something that Maria has to decipher, the findings instead are embedded into the sales process and fed straight to her. One tech company, for example, set up a real-time sales lead operation by first identifying a number of relevant keywords and question phrases that signaled potential sales opportunities online. Then it analyzed in real time the social media data on Twitter, Quora, etc. Data analysts tracked purchase decision makers and influencers, asking questions that incorporated one of the select keywords, matching the buyer's question and location with the company's internal data to pinpoint specific hunting opportunities. That lead was then sent to the rep covering that particular company, with a simplified set of insights around the company's questions. Sales reps converted these solid leads almost 80 percent of the time.

Simple tests

A top sales organization isn't staffed by robots. People have intuition and gut feelings based on experience and talent. Data should support those sparks in your sales force rather than quashing them. Use the data to develop and track simple tests for your hunches to see if you're on the right track. It may even be preferable to use third-party analysts, who can generate ideas in days and weeks rather than waiting to build your own in-house capabilities. By all means try and uncover useful patterns by analyzing data, but do it fast and take an experimental approach. Test any findings on a sample

group to see whether the impact is worth building on. Speed is of the essence here—especially in fast-moving competitive environments. If teams are mired in data analysis searching for the absolute best solution they will never deliver any benefits at all. Worse still, without any quick wins from pilots, senior management will be unconvinced of the merits of the whole approach.

1. Simple tools

Sophisticated algorithms, databases, data warehouses, and computations help determine insights. But Maria needs to be able to see the wood for the trees. Sales organizations have to be able to mask all the complexity so sales leaders can take action. A cargo airline recognized it needed to improve its daily sales decisions for its key accounts, such as how much capacity to allocate to each customer. The variances in time of day, day of week, flight space availability, etc. were just too many for sales staff to handle. The company therefore developed a complex model that took all the frequently changing dynamics of the cargo industry into account, as well as opportunities for different negotiation strategies based on supply and demand. But that wasn't the win. The company then took all that complexity and hid it behind a simple “dashboard”, which it gave to the sales force. This dashboard provided simple guidelines on flight capacity, corresponding pricing, as well as competitor options. The result? A 20 percent boost in share of wallet.

It's not enough to analyze Big Data or even extract insights from them. The best sales leaders mask all that complexity and keep it simple for the front lines so sales staff like Maria can get on with what they do best—sales, not statistics.

This article originally appeared in the Forbes CMO Network. □



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McKinsey on Marketing & Sales
March 2015

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