Harvard Business Review

ANALYTICS AND CUSTOMER INSIGHT: ENGAGING CUSTOMERS AND CREATING EXCEPTIONAL CUSTOMER EXPERIENCES

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How Much Is Customer Experience Worth?

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Know thy customer. Today, it's easier to do than ever before. As evidenced in this paper, increasingly sophisticated data and analytics, innovative approaches, and rapidly advancing technologies are enabling organizations to know customers in a variety of new ways, across multiple channels, anywhere they go.

Such knowledge enables companies to provide highly personalized services, which keep customer expectations on the rise. As a result, organizations spend record amounts of time, money, and resources seeking to provide superior customer experiences that stand out in a crowded marketplace.

But how much is too much?

While it's important to know everything about your customers' expectations and needs, it's also necessary to understand the value those customers bring to your organization. There needs to be a strategic balance between meeting customers' expectations and understanding the value attached to it. Too often, organizations overspend to exceed customer expectations rather than satisfy their needs.

Why? Because conventional wisdom assumes that the greater positive impact on the customer, the higher the loyalty and the greater impact on the bottom line. Unfortunately, that's typically not the case. For many organizations, investments in improving the customer experience don't generate enough value or provide an acceptable return on investment.

Customer Experience (CX) Journey Economics can help. It provides a strategic model designed to create value for both the customer and the organization.

CX Journey Economics

At KPMG, CX Journey Economics is about striking the right balance between what customers expect and what makes financial sense for your company to deliver. Organizations that master the economics of customer experience will be able to optimize spend and investments while delivering winning customer experiences.

To achieve an appropriate balance of value, consider these four practices.

Manage by metrics: Develop financial and customer measures with a clear linkage to value generation and a proven association with customer experience. Deploy the same due diligence as you do in other investments. Define your goals, understand value measurements, and record results.

Recognize true benefit potential: Ensure you have all the customer data necessary to accurately estimate the potential upside from customer experiences. Understand the importance and value of each interaction. Remember, customer satisfaction is a critical component but only part of a complete perspective on customer experience.

Gain clarity on costs: Invest the necessary time and resources needed to create a sustainable method of tracking customer experience costs. Establish standard processes, use tools, and implement policies to support a repeatable ability to calculate customer experience costs on an ongoing basis.

Align organizational support for success: Consistent, effective delivery of customer experience is critical to value generation. Align people, process, and technology with the same vision and objectives. Establish a governance model to monitor, manage, and report on customer experience. Make customer experience a team sport by creating a virtual customer service hub with people representing all business areas to champion customer experience excellence across the organization.

It's clear that customer loyalty is a top CEO concern[1] that will only increase in importance. At KPMG, we believe future success will belong to those companies that master the economics of customer experience while delivering meaningful interactions.

1   KPMG 2016 CEO Survey

ANALYTICS AND CUSTOMER INSIGHT: ENGAGING CUSTOMERS AND CREATING EXCEPTIONAL CUSTOMER EXPERIENCES

EXECUTIVES AT CLOROX CO. knew they were onto something when they discovered that consumers on social media were chatting about mixing hot sauce and other spicy ingredients into their ranch dressing. The company swung into action and in February 2016 debuted a new product: Hidden Valley Sriracha Ranch, a spicy takeoff on the consumer products company's popular salad dressing. Clorox had entered the flavored ranch segment of the dressing market in January 2015, and its Sriracha product helped the Hidden Valley brand gain 14 market-share points in that segment during the 18-month period that ended June 30, 2016.

For companies willing to look, the customer has never been more visible. Even as online commerce has widened the physical gap between business and customer, new technologies—mobile, social media, big data, machine learning, the Internet of Things—are giving companies exciting opportunities to listen to and understand their customers in ways that were not possible just a few years ago; to engage those customers on a breadth, scale, and level of detail never before possible; to become more responsive to customer needs; and to deliver more compelling customer experiences.

"There's always been a hunger to know what consumers want and how they're behaving, but up until the past two or three years, there hasn't been the readily accessible data to do so," says Jeff Bodzewski, chief analytics officer for M Booth, a New York City-based global communications agency. "Now, especially with mobile technology, you have the ability to get an instant, immediate read on what consumers are doing or how they're interacting with your website, your mobile app, even your physical store."

The challenge, of course, is figuring out what to do with that information. According to a survey by Forrester Research, nearly a third of companies say they lack the right analytical tools to make effective use of the data they have.[1] But the right technology alone is no guarantee of success. Acquiring and capitalizing on a more informed and holistic view of the customer demands an investment not just in systems that can take in data from disparate sources and process it, but also in employees trained to convert data into insights and in tools and procedures for

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[1] Global Business Technographics Data and Analytics Survey 2014, Forrester Research.

making those insights readily available to the C-suite and the business units—all in a format they can use effectively. With so many ways to invest in data analytics and customer insight, it also requires that companies understand how much they're spending on that activity and what they're getting out of it. In short, they must be able to make a business case that links better customer experiences with value for the enterprise. Only then can companies truly align their sales, marketing and service efforts, and their products in ways that resonate with customers and drive better business results.

THE CHANGING CUSTOMER LANDSCAPE

Customers increasingly expect all this. They expect that companies will understand their shopping history and be smart and targeted in catering to their needs. They assume that information shared with one part of a company will be broadly available to employees in other parts so that customers don't feel like they're starting from scratch every time they engage in a new dialogue or transaction with the company. With this mindset, it becomes easy for customers to conclude that a company that doesn't make an effort to know them is a company that doesn't care about them.

"Customers' needs and expectations are growing exponentially," confirms Kurt Kober, director, omnichannel analytics, for Clorox. "In a digital world where things happen in the click of a button, we have to be attuned to that."

Demographic trends suggest this will only become more true over time, as younger consumers are more amendable than their parents to targeted marketing.

"It's very generational," says Bodzewski. "I'm 41, and if you look at my parents and how they interact online, they don't like that personalization. They don't like it when a website browser suddenly fills with retargeting ads from the site they just visited, or when the email they receive shows that the company knows they've been in the store and didn't make a purchase."

By contrast, Bodzewski says, people his own age are more open to an intimate relationship with the companies they frequent, but on their own terms. They'll share their data, but only with brands they trust. Millennials are all in. They expect companies to respond to them on Twitter and to know their interests and likes, especially if they've already established a relationship with the company. They want to be engaged by the brands they buy.

THE CHANGING DATA AND TECHNOLOGY LANDSCAPE

As we've noted, the opportunity for companies to better know and serve customers at scale is attributable largely to advancing technologies, with mobile, by most accounts, the tipping point. As people increasingly began shopping, banking, paying bills, doing product research, socializing, and sharing information about their purchases with each other via smartphones and tablets, companies were able to understand not just what their customers were doing but where. This generated incredible amounts of data, and the volume continues to grow exponentially. In 2014, International Data Corp. concluded that the amount of data created and copied annually is doubling every two years, and by 2020 will

reach 44 trillion gigabytes.[2] Further fueling this data explosion are still newer technologies, including the Internet of Things, in which sensors attached to appliances, automobiles, and other devices—including people—transmit data via the Internet about where those "things" are, what they're doing, or how they're performing. Some companies are already translating this science into dollars. In their *Harvard Business Review* article, Harvard University professors Marco Iansiti and Karim R. Lakhani noted that General Electric Co. is generating more than $1.5 billion in incremental income each year with "digitally enabled, outcomes-based business models" grounded in Internet of Things technology. GE revenue from its jet engine business, for example, is now tied to how many miles those engines fly and their downtime.

"For 150 years, we built the economy on cheap energy," Harvard Business School professor John A. Deighton has observed. "We refer to that era as the Industrial Age. Now we're building an economy on data, and we refer to it as the Information Age. … The result is a new science, data science, that is complementing the physical sciences. Being data literate will be the most critical skill of the Information Age."[3]

Many companies have yet to take full advantage of the wealth of information available to them. In a 2015 study, Forrester reported that companies are analyzing, on average, only 37 percent of their structured data—data that's been highly organized for easy search—and only 22 percent of their data that's semistructured or not structured at all.[4] Another recent study found that the biggest barrier to creating value from analytics is figuring out how to translate data-driven insights into business decisions.[5]

There are technologies available to help, of course. In-database processing speeds data analytics by integrating it into the data warehousing function. In-memory analytics further accelerates the work by shifting data and data queries to random access memory rather than physical disks. Machine learning is becoming increasingly helpful, too, allowing companies to use algorithms to iteratively learn from data even when they didn't know where to look for insights.[6] Meanwhile, the same technologies that allow companies to better listen to and understand their customers—web, mobile, and social technologies—also are making it easier for companies to seamlessly engage with those customers when and where it makes sense, drawing on the results of their data analytics.

Still, companies that want to maximize the benefits of all this work need to do more than embark on a technology-spending spree. They need to help analytics professionals better understand how the business operates and what it needs, and

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Marco Iansiti and Karim R. Lakhani in *Harvard Business Review*

KPMG ANALYSIS
In a recent KPMG survey, 72 percent of survey respondents said data analytics will be "very" or "critically" important over the next one to two years.

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2   "The Digital Universe of Opportunities: Rich Data and the Increasing Value of the Internet of Things," EMC Digital Universe with research and analysis by IDC, April 2014.

3   HBS@WORK Resource Library, Faculty Insights: Big Data, http://www.exed.hbs.edu/assets/interviews/Pages/competing-on-business-analytics-and-big-data-john-deighton-karim-lakhani.aspx.

4   "Why Firms Struggle to Analyze More Data," Forrester Research, 2015.

5   "Minding the Analytics Gap," by Sam Ransbotham, David Kiron, and Pamela Kirk Prentice, *MIT Sloan Management Review*, reporting on a survey conducted by *MIT Sloan Management Review* in partnership with SAS Institute Inc.

6   "Machine Learning: What it is & why it matters," SAS, http://www.sas.com/en_id/insights/analytics/machine-learning.html.

help business managers better understand how data analytics works and what it can do for them. A practical approach balances technology, process, and skills.

"I wish I could tell you there is some magic bullet tool out there that is great at analyzing data," Bodzewski says. "There are some that take that first pass, but ultimately the best way is with people." He advises companies to create analytics and marketing teams that combine people with a wide range of backgrounds and skills—research, data science, retailing, advertising, sales and marketing, production—and find someone from that group who can spin the data and findings into an actionable narrative that business decision makers can use. "It is very easy to make peoples' eyes gloss over the second a chart pops up," he says. "If you were to look at the way we report our data, charts and graphs and numbers are actually deemphasized. They're in the appendix; we still show our work. But the upfront tends to be much more infographic-oriented and visually interesting, and focused on the implications rather than the data behind them." In short, the best analysts don't report numbers; they tell a story that's supported by facts.

"Being able to sit at the intersection of business thinking, analytics thinking, and technology thinking is important," says Zoher Karu, vice president and chief data officer at online marketplace eBay. "Having specialists only in each domain means that the gears of the engine may spin but they won't connect with each other to drive growth."

Here's how some companies are leading the way.

King Digital Entertainment plc

As a company whose business is almost exclusively digital—it created the monster hit mobile video game Candy Crush Saga—King Digital Entertainment plc understandably plays in the deep end of the data analytics pool. The company endlessly tracks how, how often, and when its 300 million-plus users play its multi-level games each month, and uses its analysis of that data to inform countless decisions about those games, including when to offer players incentives to stay engaged and how difficult to make the transition from one level of a game to the next. Technology is part of its approach—the company stores its data in a large Hadoop-based data warehouse and then sends the most important bits to a smaller, nimbler MPP (massively parallel processing) in-memory database to be queried.

To extract maximum value from its data, King makes it available across the organization, starting with the data scientists working in its 10 game studios around the world. "We also have central teams of data scientists who do a deeper dive into the data to answer bigger, deeper questions that often don't relate to an individual game but rather to how people play across our whole portfolio of games," says Vince Darley, King's chief scientist. "That wasn't happening five years ago. It's proved very valuable in answering subtle questions about what people enjoy about games, what motivates them, what frustrates them."

To supplement player usage data, King's data scientists work with game producers to craft ongoing experiments in which the company offers different variations of its games to different users to see which resonate most strongly with customers.

One such test showed that, contrary to the company's intuition, it should make successive early levels of a game increase in difficulty more quickly than it had planned. The test showed that this approach better engaged long-term players. The company also conducts "micro surveys" of players—brief pop-up surveys with one or two questions in them.

While reluctant to share the specific degree to which the company has benefited from all this activity, Darley says the net result has been "a pretty constant flow of improvements to our results covering all metric areas—player retention, engagement, conversion, monetization, and virality." (The latter is a catchall term for social interactions between players.) "That's why we continue to grow this area of data analytics," Darley says. "We've discovered how much value it's had to the business."

M Booth

At M Booth, helping clients deliver a better customer experience begins not just with understanding the client's own customers but also those of its client's competitors. Bodzewski says third-party tools make it easy and inexpensive to see how often people are visiting a competitor's website, which pages they're visiting, where they're spending the most time, and how quickly they leave. Depending upon how users have configured their privacy settings, companies can even get a peek into the lifestyle interests of someone visiting a competitor's website by scanning the bookmarks they've set up on their web browsers. Companies also can see which websites are feeding traffic to their competitors' websites.

Taken together, these data can be extraordinarily useful. In a recent assignment for an online automotive portal, M Booth was hired to analyze the Internet search terms being used by visitors to the client's website and to those of its competitors, and to look at which sites were feeding traffic to them. M Booth found that unique to its client, the top interest of visitors to its client's website, other than automobiles, was fashion. Based on that finding, M Booth built fashion-related content for the client's site, created communications programs designed to reach visitors to fashion websites, and partnered with fashion media outlets on a number of projects. "It proved incredibly successful," Bodzewski says. "We saw a tremendous increase in leads generated to our client's website, with fashion sites among the top sources of traffic."

On other projects, M Booth uses advanced analytics software to search and analyze text conversations on social media for insights into how consumers view client companies and their products. It also subscribes to Watson, the IBM supercomputer that marries artificial intelligence with analytical software. Bodzewski calls it a powerful tool for identifying and conducting an initial analysis of the most relevant data and for quickly translating that analysis into actionable intelligence. "In marketing, speed and man hours count, as we identify trends and deploy programs to take advantage of them," he says. "IBM Watson helps us reduce both while increasing the effectiveness of our campaigns."

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Jeff Bodzewski, Chief Analytics Officer, M Booth

eBay Inc.

As an online business, eBay Inc. has always been awash in customer data. But about three and a half years ago, with the appointment of Zoher Karu to the newly created position of vice president, global customer optimization and data, the company stepped up its focus on teasing out information about its customers by linking all its various data sources—including contact center interactions and customer searches, browsing, and sales on the eBay website and mobile app—to grow more effectively and efficiently.

"Technologies today provide the ability to speak to customers on an almost individual basis rather than through mass marketing," says Karu, now vice president and chief data officer for eBay. "We have done a lot of work building what we call the customer DNA and on predictive modeling of customer behavior—who is most likely to be interested in a handbag, which brand of shoes do they prefer, what price point of luggage might they buy, what are their shipping preferences? Using predictive models, we can intersect the things we know about a customer with the billion items we have for sale and surface the things most relevant to them. It lets us create a more engaging experience for our customers."

eBay also is using customer data to deliver personalized email messages during some of its promotional events. The company can generate "tens of millions of versions" of emails pretty easily, says Karu, adding that this initiative alone has resulted in "dramatic uplifts in engagement and purchase behavior." The company also has embraced machine learning to inform search results on its site, to determine the degree of incentives it might offer individual customers, and to figure out which types of customers should be targeted with which messages.

Because eBay's success ultimately depends on the success of its sellers, it also uses data analytics to help them in selecting, pricing, and selling their inventory and provides that insight through its Seller Hub. Among other things, the Seller Hub shows price ranges for many of the products being sold on eBay, along with suggestions to increase a seller's performance.

Like King Digital and many other organizations, eBay also uses A/B testing to experiment with different versions of its site and see what works best for customers. "We want to make the process of connecting a buyer and seller as smooth and seamless as possible, so we will continue to do as much as we can to help with that process," Karu says.

Standard Life plc

For U.K. investment companies, a series of regulatory initiatives since 2012 has put a new imperative on understanding the customer. The first, the Retail Distribution Review, introduced more transparency to the industry. The second, a requirement that companies begin automatically enrolling eligible employees in their workplace pension plans, has increased the number of potential customers for investment companies. The third, a set of new pension rules, is allowing people to access their retirement savings as early as age 55 and making it easier to stay invested in the financial markets after retirement rather than converting retirement savings

to an annuity. The latter rule suggests customers may remain engaged with their investment providers for longer periods of time but also that they may have more opportunities to switch providers. "It's new territory, with lots more for us to understand about our customer, their behaviors, and their needs," says Howard Barber, head of CRM and customer analytics for the U.K. business of Standard Life plc, which competes in the pension and long-term savings markets. "We need to engage with them and listen to them. We've placed a lot of emphasis in recent years on growing our digital infrastructure so that we're able to support the end-to-end journey the customer wants to go on."

As part of that effort, Standard Life worked with consultants to create an integrated marketing process that incorporates predictive analytics tools and allows the company to view and analyze data coming in from every channel it uses to touch the customer. Now, when a customer calls into its contact center, Standard Life is able to recommend a next best action based on that predictive modeling—a move it says has helped boost its customer retention rates. More recently, it's begun using a handful of analytics tools to better understand how its web-based marketing is performing and what customers are saying when they contact the company by phone or in post-call surveys. "This is helping us get a richer understanding of the sentiment of customers as they're going through a conversation with us," Barber says.

Drawing on its new understanding of its customers, Standard Life also is changing when it reaches out to them. In the past, its marketing campaigns typically were timed to coincide with some seasonal event, such as tax year-end. But after learning that some customers like to begin their tax planning months in advance, the company now delivers tax-planning information to them much earlier. "That's having a knock-on benefit in the context of how they're interacting with us around the tax-year-end period," Barber says. The company also is now able to update customers more frequently about transactions taking place over a period of time and to share with pension plan sponsors a richer understanding of how their employees are engaging with their pension plans.

Ultimately, Barber says, Standard Life hopes to translate its new connections with its customers into a true omni-channel marketing program in which it interacts with customers in real time via whichever channel they prefer and whenever it makes the most sense. "It's an iterative process; we're building as we go," he says. "But we believe that's the right place to be. It shouldn't matter how the customer is wanting to interface with us or how we are wanting to interface with them. The channel becomes neutral in that context."

Clorox Co.

For Clorox Co.'s Kurt Kober, the customer data revolution isn't just about understanding the customer more completely but also understanding the customer more quickly.

"We've always been an analytical company very focused on understanding our customer," Kober explains. "But it always took us a long time. We'd put up

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>
> Howard Barber, Head of CRM and Customer Analytics, U.K., Standard Life plc

studies, do home research, participate in shop-alongs—things that might take six to 12 months to execute. Today we can get at least directional learning within 24 hours, and begin working with our suppliers to respond almost immediately."

Getting to that point has taken a significant investment in both technology—including servers and analytics and report-generating platforms—and people. On the technology side, Kober says, Clorox has spent a lot of time and energy rolling out software that automatically creates reports that in the past would have been cobbled together in a spreadsheet, and on data visualization software that translates key messages in those reports into a visual format that resonates with end users. "Data visualization can take a lot of the noise out of the numbers and get you focused on the real issues important to your business," he says.

On the personnel front, Clorox has created a centralized team of data scientists but also has deployed technology and analytics experts in functional areas of the company, including sales, to help business leaders understand what the company's data means.

The net result? Better customer insight, the company believes, is driving better sales. Clorox can more quickly identify opportunities to introduce or enhance products and can support an omni-channel approach to marketing in which it seeks to reach its customers at the right time, in the right place, and with the right message, whatever their stage on the customer journey.

Increasingly, Clorox is able to target those messages with a precision companies could only dream about in the past. For about five years, Kober explains, the company has been building a central data repository for all the customers across all of its brands who have engaged with the company in any way—including calling on the phone, messaging through Facebook, sending email, or tweeting—where those customers have granted permission to use their information. Initially, Clorox didn't have the technology to do much with that data. But now that it has the right tools, it's working to identify consumers elsewhere who share similar characteristics and is trying to convert them into customers. "It's a central tenet of what we call our sense-and-respond marketing initiative," Kober says. "We'll talk to individual consumers digitally, and hopefully they'll make a purchase and become more loyal to our brands."

While conceding that the very idea of a company Clorox's size engaging customers and potential customers individually would have been unfathomable not long ago, Kober contends that it's now become an imperative. "We have to be relevant to our customers because our competitors are no longer just the large Fortune 500 companies; they're also emerging brands that are digitally native, that were born in the last five years, and that know every one of their customers because they buy their products through subscription or through an ecommerce website that transfers information about them back to the brand. We believe this is something we have to do to stay competitive."

Although it is difficult to parse out exactly how much Clorox's new approach to customer analytics and marketing is contributing to the company's growth, Kober notes that Clorox's top line grew about 2 percent in fiscal 2016 after currency adjustments, and even more absent those adjustments. "In a consumer packaged-goods space where it's becoming increasingly challenging to grow the top line, we actually have very strong growth," he says. "We don't break it out, but we know that what we're doing with customer analytics is pretty transformational."

Kober says better and faster insight into customer behavior also is making it possible for Clorox to know very quickly, beyond what point-of-sale data are showing, what's working and what's not working with its product. Those insights can then drive changes in how products are packaged, positioned, and priced or even determine whether they continue to be produced. In 2012, for example, Clorox launched a new product called Hidden Valley Ranch for Everything, a variation on its classic ranch dressing inspired by customers on social media who were talking about how they were using ranch dressing on things other than salads—swirling it onto hamburgers, dunking pizza crust into it. "Within about 30 days of launch, we had a report back from a vendor we worked with to understand the customers' conversation, and it provided us with a number of important insights," Kober says. "They were asking whether this product was different from our original product. (It was.) They were saying they weren't sure where to find it, because it was not in the salad dressing section. (We'd put it in the ketchup section.) They also wondered why it was more expensive than our traditional product. And some people were saying that if they were going to buy this product, they would not buy some other product." Clorox quickly made changes to the product's labeling to better explain its value proposition and also worked to make store placement more apparent to consumers.

Those changes failed to drive a sufficient improvement in sales, and ultimately Clorox decided to pull the plug on the product and move on to other opportunities. That may seem like a loss, but Kober counters that it may have saved the company money in the long run. "In the past, we might have chipped away at something for a long time—maybe five or six years—trying to get the proposition right. This was a pretty quick turnaround—about two years. I think that's one of the things you'll see from us now that we're using advanced data analytics to better understand our customers. We'll be a faster innovator, both because we need to do it to be relevant to our customer and because we can now measure faster. We can take more shots at bat."

"We'll be a faster innovator, both because we need to do it to be relevant to our customer and because we can now measure faster. We can take more shots at bat."

Kurt Kober, Director, Omni-Channel Analytics, Clorox Co.

TEN STEPS TO USING DATA ANALYTICS TO DRIVE BETTER CUSTOMER INSIGHTS AND EXPERIENCES

Despite the success stories outlined above, many companies today are still not using data already available to them to better understand and engage with their customers. Some haven't adopted the right mix of tools and techniques to collect and manage data; others lack the skills to convert it to insights. Organizational silos can be part of the problem, as data streaming in from disparate sources and in different forms are neither aggregated nor reconciled in a single location.

Here are 10 steps companies can take to make better use of data in meeting customers' needs and expectations.

1. Define your objectives.

By knowing what they want to achieve—attract new customers, improve customer retention rates, encourage more online sales by in-store customers, boost interactions with customers via social media—companies can better determine what types of data they need to collect. "Don't make this just a data and technology conversation," observes Standard Life's Barber. "Make it a business change conversation. Quite often companies decide to make a change in the way they're doing things, but the focus is on the technology. They end up with the technology implemented but not utilized to deliver the benefits companies wanted in the first place."

2. Focus on the right issues.

With so much data available today, it's easy for analysts to get bogged down responding to management requests that too often are aimed at explaining short-term anomalies—a one-day dip in sales, perhaps—that have little relevance to long-term success. "Just because it is analytically interesting or even technologically interesting doesn't mean it automatically drives the most business value," says Karu. As Harvard Business School's Deighton has observed, it's also tempting to assume that correlational patterns in data are causal patterns, which often isn't the case. Says Karu, "You need people who are able to push the boundaries of technology and data and analytics, but in the direction

that impacts the business the most. Having people who can think through and dissect problems while applying a business lens to them will always serve you well."

3. Identify data sources.

In today's complex, multichannel sales environment, it's seldom the case that all customer data is generated in a single location or even in a single format. Mapping the customer journey is a good way to make sure every customer touchpoint is captured. Because this will be an evolutionary process, prioritize capturing the most important data.

4. Build analytic systems and processes.

Once data sources have been identified, data must be collected from disparate sources within and outside the enterprise—including any relevant data made available via social media and new technologies like the Internet of Things—and funneled into a single repository where it can be queried and analyzed, with results readily available to the businesses and corporate functions best-positioned to act on the results. Where this isn't easily done today, processes must be modified to enable collection. A key objective is to make the same, single view of the customer available to everyone in the enterprise.

5. Invest in people.

The best technologies and most advanced analytics tools won't be of much service to employees who don't know how to use them. Many companies are not consistently adept at turning insight into

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7   HBS@WORK Resource Library, Faculty Insights: Big Data, http://www.exed.hbs.edu/assets/interviews/Pages/competing-on-business-analytics-and-big-data-john-deighton-karim-lakhani.aspx

business value, and their employees often don't have the right skills for effective data access and analysis. Companies must train employees in these areas and hire new employees with the requisite skills when time pressures, or the training gap, demand a more immediate solution. Darley says King Digital Entertainment spends several days training new employees on the data systems, player data models, and key metrics the company tracks. "We also try to make sure we are providing our product managers and game designers with the right reporting, dashboards, and tools so that they can get answers to many of the routine questions they have without requiring any time from one of our analytics experts," he says.

6. Embed analytics in business processes.

"Analytics and data should not be restricted to just a few high priests in the organization," says eBay's Zaru. "Pushing this out everywhere throughout the organization is key to success." eBay positions analysts and data scientists throughout its organization, including within its business units. "We also have created a variety of self-service tools to enable quicker access to commonly asked questions about the data," Zaru notes.

7. Align the corporate culture.

Companies intent on building a customer-centric culture need to make sure that message is championed at the top and delivered throughout the enterprise. Many could benefit by appointing a senior executive to own the customer experience. As part of the culture equation, companies can encourage sharing of information and insights between the different and sometimes siloed segments of the enterprise. "You definitely need the senior members of your organization to have faith in what you're doing, because they will need to authorize investments in it," says Standard Life's Barber.

8. Utilize insights to better serve customers.

Beyond improving their products and services, companies informed by better data can now employ web, mobile, and social technologies to take an omni-channel approach to the customer experience, connecting with them, ideally, at any point along the customer journey. In addition, companies can use their insights about customers to customize and even personalize the products and services they offer them. They also can improve their sales processes to better align with customer expectations and enhance the after-sales customer service experience. The key objectives in all these instances are to develop a customer-for-life proposition and fulfill it by in some ways knowing the customer better than the customer knows himself or herself.

9. Balance tools and processes with business objectives.

Depending on their industry and their size and complexity, different companies will have different opportunities to use data analytics to better understand and serve customers. At one end of the spectrum, companies can use very basic analytics reporting to drive better customer engagement. At the other end of the spectrum are complex cognitive technologies that hold the promise of knowing customers better than they know themselves. There's no one-size-fits-all solution, but companies need to identify the optimal combination of customer analytics that will allow them to move to the next stage in the customer experience journey.

10. Quantify results.

Although many leading companies see value in their work to better understand and serve their customers, few are yet able to quantify with high precision the impact on their bottom line. Going forward, companies employing data analytics will want to measure whether efforts to better understand and serve the customer are working. Is the number of customers growing? Is per-customer revenue going up? Is customer loyalty improving? Are customers interacting more, and more favorably, with the company on social media? And finally, how are these factors impacting revenues and profits?

To satisfy these new, highly engaged, highly informed customers, companies must avail themselves of the same technologies their customers are using, as well as tools and technologies that allow companies to capture, analyze, and quickly act upon the insights derived from customer data now available to them.

CONCLUSION

Customers are smarter consumers than they were in the past, empowered by a wealth of information that makes it easier for them to compare prices, buy through channels previously unavailable to them, and share their experiences and insights with other customers via the web and social media. They become frustrated with companies that don't seem to appreciate this—that don't understand their customers or what they want, particularly when the tools to do so are readily available. To satisfy these new, highly engaged, highly informed customers, companies must avail themselves of the same technologies their customers are using, as well as tools and technologies that allow companies to capture, analyze, and quickly act upon the insights derived from customer data now available to them. They also must do it smartly, measuring costs and results to continually refine their work in this area and ensure that it is adding value. Companies that take advantage of these opportunities—and then engage with customers and prospects early and often to deliver compelling customer experiences—will have the best chance to grow their businesses and bolster their bottom lines.

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