THE HOLISTIC PICTURE.

Building customer profiles through data-driven marketing.

2016

Part 2
A step-by-step guide to
data-driven marketing

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When making a diagnosis in holistic medicine, doctors take the whole patient into account, weighing mental and social factors right alongside physical symptoms. Smart marketers do something similar, evaluating everything possible about customers' buying patterns, tastes, and demographic backgrounds to understand the motivations behind their behavior.

As a consumer moves from first contact with a company to first purchase and beyond—with stops at their mobile phone, tablet, social media page, and nearest retail store along the way—the marketer needs to see every step, understand how each one fits into the bigger picture, and create a fluid, seamless experience across all channels.

Data is the key to doing this. But simply collecting it won't take you all the way. You must use the data to create holistic customer profiles, then use those customer profiles to create interesting, personalized, and memorable experiences. This three-part, step-by-step eBook series explains how to actually use data to provide each customer the best experience possible:

- **Part One** covers the importance of accountability and attribution, what data-driven marketing can help you accomplish, and how to get started.
- **Part Two (this eBook)** discusses how to merge data from disparate sources to create a complete view of every customer, and then use that understanding to deliver a seamless customer experience.
- **Part Three** explains how to use data and software to predict what customers will do, and how to turn that new knowledge into a business advantage.

The whole PICTURE.

If you want to lock down a powerful data-driven marketing operation, you must first shift your thinking. Think about walking into your favorite coffee shop each morning. You breathe in the aroma and can't wait for the first sip of the day. You smile at the regular customers and put your briefcase at "your" table. The friendly barista greets you by name and starts brewing a cup of espresso with a touch of cream, heavy on the sugar. She knows exactly what you're going to order each day before you open your mouth. She even predicts your orders based on the time of day or the weather. She can do this because she's taken the time to develop a personal relationship with you and she uses this knowledge to predict what you're going to order. And odds are, you frequent the coffee shop at least in part because of this relationship. It feels good to be known, to feel like you matter.

The future of marketing is in capturing this feeling of personal service with each customer. Mass-market ads aimed toward the widest possible audience are proving less and less effective. One-way communication between brands and consumers is going the way of the woolly mammoth. So are one-size-fits-all discounts and dinnertime telephone sales pitches.

A new kind of marketing is evolving that targets shoppers based on what they need and want, when and where they want it—like the barista who makes your coffee just the way you like it. The difference is, a barista can only keep track of a few customers. You can use data to know the preferences of millions of customers, so that each feels a personal connection.

The challenge is knowing where to start. Marketers today grapple with many different data sources: email, advertising, company websites, apps, customer service call centers, and retail stores, to name a few. Add in stats from third-party sources—which might include information from social media platforms or purchased demographic data[1]—and you may feel like you're facing an insurmountable pile of numbers. Also, it doesn't help that different departments in the same company often manage databases using a variety of incompatible technologies.

But as you look at all this data, remember this. If one piece of information on its own offers limited value, combining 10 pieces of information from disparate sources and then understanding how each relates to the others is marketing gold. Taking the holistic view means combining all those pieces to create a whole that's greater than the sum of its parts: a complete view of each and every customer. This approach lets the marketer see a consumer's entire path, from brand awareness and first purchase to loyal customer.

Holistic thinking requires marketers to continually put themselves in the customer's shoes. More than being about just one sale, the relationship between seller and buyer is about creating a complete experience in which the customer encounters consistency from one interaction to the next. If José is shopping on a desktop web browser, then later opens the company app on his tablet, his shopping experience should pick up right where he left off. In the same way, his news sources should know his interests. With any given seller, José should feel like he's taking part in a single conversation that happens to take place across many points of contact, from screens to stores.

The big culture change is that you're now talking to individuals, not markets or groups of individuals.[2]

ANDY FRAWLEY
EPSILON
CEO

ONE COMPANY.
One experience.

If you want your customers to enjoy seamless, personalized experiences, you need to treat them like people. That means not marketing to someone just because they're there, but rather, doing it because you recognize their interests, wants, and needs. For some, this may require a shift in office culture—and even, in some cases, a rethinking of corporate structure.

For an example of how *not* to market, think about the way many banks still function. One department sells credit cards, another sells checking accounts, and still another sells home equity lines of credit. Each department works to sell as much product as it can. But that means that, at any given moment, all three could bombard the same customer with different marketing messages, which is just annoying.

"You have to make sure you're not fatiguing your customer," says Andy Frawley, CEO of the global marketing company Epsilon. Some companies have created the role of "chief experience officer," charged with keeping an eye on the whole customer journey. Part of that job is to look across product lines to make sure no one customer is being deluged with pitches.[3]

As Frawley counsels, "organize around the customer experience." To do this, a single team must manage and integrate all customer data. Some businesses create marketing technology departments that bring together colleagues who may have previously had little contact. To properly eliminate data silos, traditional customer analysts, digital analysts, marketing teams, and IT staff must work hand-in-hand to create a 360-degree view of the customer.

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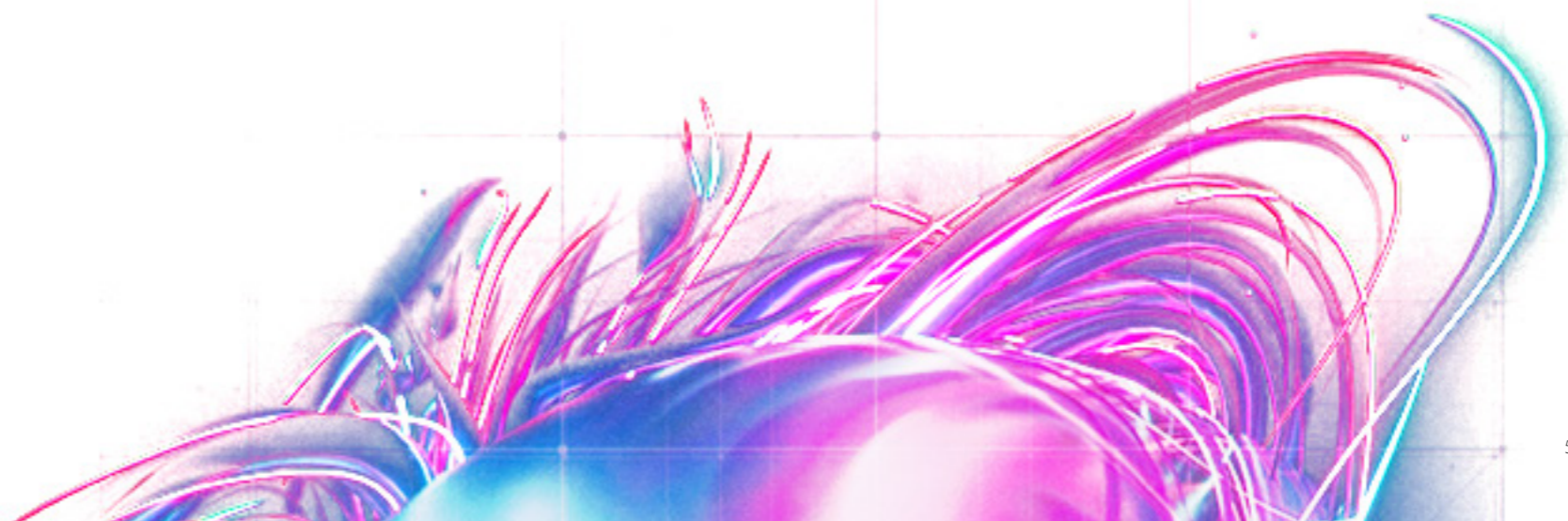
ONE CUSTOMER.
Many opportunities.

In practical terms, the goal is to create a single identity for every customer, an identity that your system can recognize as the same person, no matter the platform. You can only do this by including information from every source available to you and if you ignore this kind of data consolidation, you'll undoubtedly miss significant business opportunities.

For example, one bank department might know that Sue browsed the company website for mortgage rates. Another might know where she lives and her income. Combining these sources provides insight into the kind of mortgage Sue wants and how to approach her—based on just those three data points. The more data, the clearer the picture.

"You have to think of the consumer profile in really broad terms," says Chris Harrison, CTO at Epsilon.[4] That means knowing not just where they shop, how often, and how much they spend. It also means knowing what devices they use at what times of the day, where they are physically located, how they spend their weekends and evenings, whether they have children, what they like to eat, where they go on vacation, and much more.

As you begin to answer these questions, it's important to remember that behind every digital profile is a living, breathing human going through the ups and downs of life. "Think of the consumer's entire day," Harrison says. In the travel and hospitality industry, that might mean simultaneously dealing with customers who are in very different emotional states. For example, if a woman is taking a business trip that she's not looking forward to, the brand should consider what kinds of offers would have the most impact. A free yoga class? Breakfast in bed? On the other hand, if a family with children is traveling to a vacation resort, they will have a different set of needs: streamlined check-in, a crib, toys for the pool.

The trick is to know customers' goals and motivations well enough to offer them just what they want. "Understanding the emotional context will help you better position your marketing to help meet that individual's objectives," Harrison says. Integrating data not only shows the marketing team where the customer is at a given moment, but where they were last and—based on similar-customer behaviors—where they're likely go. (This kind of *predictive marketing* is covered in more depth in **Part Three** of this three-part series.)

Merging data also allows marketers to see what's working and what isn't, sometimes overturning assumptions. Consider a new email campaign with an 80 percent open rate, but very few sales. A marketing manager might react by tweaking the content of the email or sending out more messages to try to increase conversions. But with access to analytics data, the manager sees that of all the customers who open the email and click on a link to the homepage, only three percent make a purchase. In other words, it's not the email that needs tweaking. It's the website. But the marketing team wouldn't know that unless it had access to both email and web analytics.

> When we keep people in silos, we may not be looking at the whole customer journey to understand where we lose someone.[5]
>
> **AXEL SCHAEFER**
> senior manager, strategic marketing
> Adobe

Step-by-step SIGHT.

This process of building a complete view of every customer can be broken down into four steps.
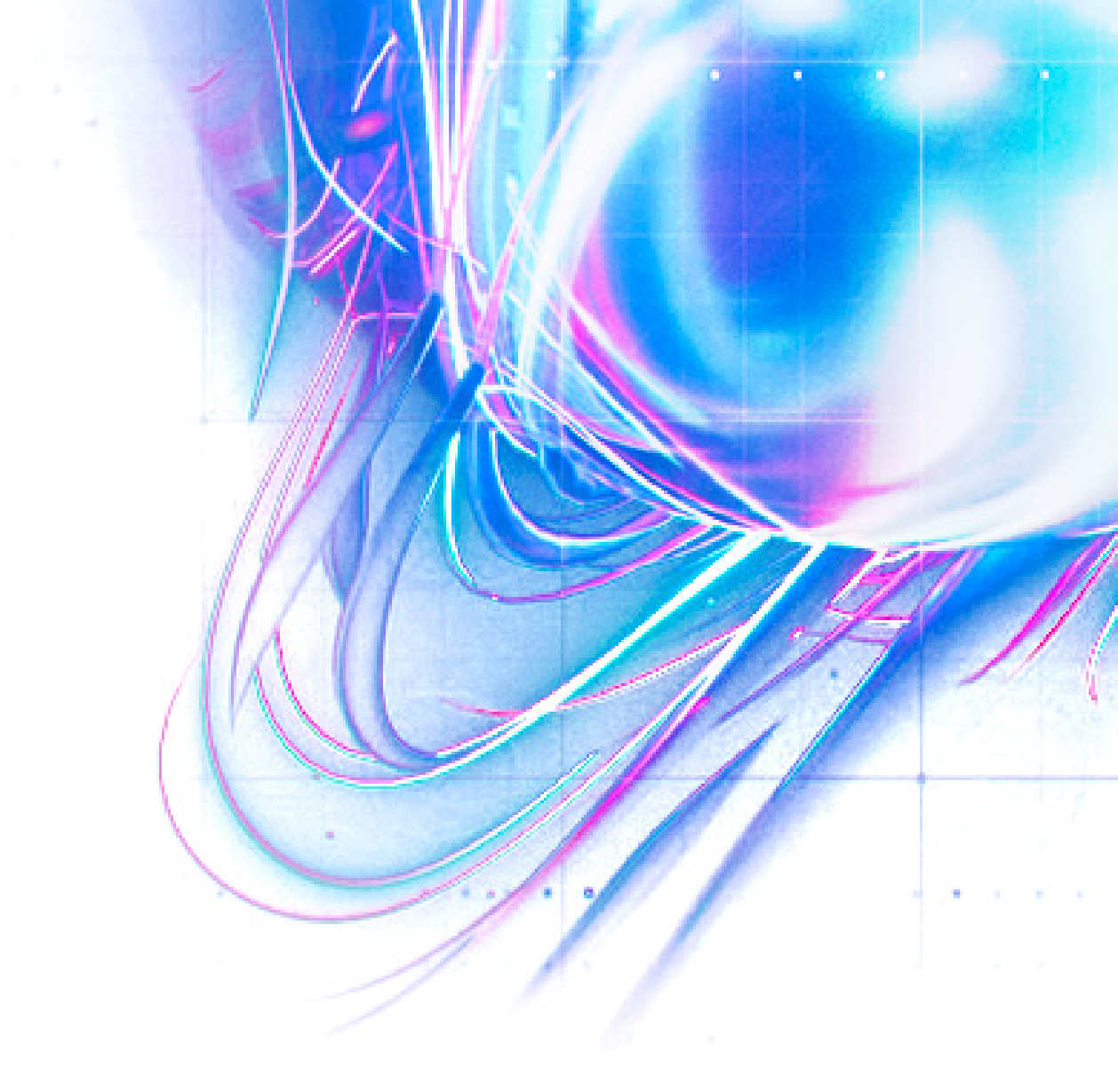
Step 1: Go outside your box.

You're collecting data from a variety of sources. And as your expertise in data-driven marketing grows, the number of sources you have access to will only increase. At the very least, you probably have access to numbers from inside your company, such as figures on website visits, social media interactions, emails opened, app downloads, ad responses, and more. (**Part One** of this three-part series discusses the importance of figuring out what data you already have.) Start by compiling and combining this data into one system.

Soon, however, you'll want to move beyond the basics. That means resorting to outside sources to round out customer profiles:

- There are companies that sell demographic information—such as age, number of people per household, and home value—much of which is sourced from public records.
- Other companies compile and sell information gleaned from past-purchase habits, interests, and Web behavior. For example, media companies sell information such as who subscribes to which magazines and auto industry organizations sell information on car ownership and value.
- Partner sites may share data. For instance, Epsilon offers a service called the Abacus Alliance, in which retailers join a cooperative that allows members to pool customer information.[6]

These sources can be merged with your existing datasets to increase their value immensely. Once all your internal and external data sources are combined, you can start to understand who your customer really is.

The view of the consumer isn't limited to what you can learn within the four walls of your brand.[7]

CHRIS HARRISON
Epsilon
CTO

Step 2: Paint by numbers.

Once you have your data compiled, you can use it to paint a portrait of every customer.

"Data alone is just raw material," says Kevin Lindsay, director of product marketing at Adobe. "It needs to be turned into meaningful insights."[8]

For example, for a kitchen appliance company, data might reveal a 25-year-old woman visited the company website last week and browsed for toasters. Data collected on social media sites reveals that she recently purchased a new home. Additionally, the company's customer analytics data shows that people under 30 tend to buy stainless steel toasters rather than, say, red or white. Based on these combined data points, marketing sends her an offer for toasters, highlighting stainless models as well as featuring other products typically purchased by new homeowners to encourage additional purchases. The more data points, the more opportunities for insight are created.

As marketers increase their sophistication in data-driven marketing, they create a more detailed picture of their audience and act accordingly. When customer information is brought together and analyzed with current software, new customer segments are identified that can be marketed to in a unique way. A person scanning lists of numbers might never notice a high overlap between gym-goers, college graduates, and buyers of movie soundtracks. The software will notice, though, and in doing so, it will define a segment that can be marketed to in a unique way.

"You move away from subjective decisions on how you're slicing and dicing your audiences to more sophisticated ways to differentiate," says John Bates, an Adobe senior product manager whose work focuses on data science and predictive marketing.[9]

Data-driven digression.

The evolution of the data-driven customer relationship.

There are five basic stages on the route to data-driven marketing maturity. From simplest to most complex, they are *ad hoc, informative, real-time, predictive,* and *decisive*— also known as what happened, why it happened, what is happening, what will happen, and what to do. As your data-driven marketing operation grows, you'll have answers to more of these questions, and more understanding of your customer.

In the **ad hoc** stage, data is used to look at what happened in the past—for example, 20 customers bought running shoes on Monday. Marketers track key performance indicators such as number of emails opened, number of visits to the company website, and number of products sold. They gain an understanding of customers' past behavior. Individuals and groups use those insights to make decisions.

At the **informative** stage, data sources are merged, and marketers get answers to the question of why things happen by measuring relationships in the numbers that are invisible to the naked eye. A *correlation,* for example, could tell marketing that, say, 85 percent of customers who received a shoe-sale email bought running shoes. Marketers get a deeper understanding of what experiences may have led to what actions. Limited *A/B testing* begins to inform decision-making.

At the **real-time** stage, marketers use their merged customer data, integrated software systems, and statistical algorithms to gain a more refined picture of the customer. This phase may include clustering, which attempts to define target audiences by finding customers with similar traits and placing them into groups. For our shoe retailer, a cluster might consist of everyone who buys running shoes at least twice a year and subscribes to the company newsletter. During this stage, marketers receive data as it is collected, so instead of just knowing how last week's campaign performed, they know how things are working in the moment and can make immediate adjustments. Automatic personalization begins to occur, with individuals making decisions about what campaigns and offers should look like.

In the **predictive** stage, the algorithms can predict outcomes, such as whether a person will make a purchase or leave the website after a mere browse. For example, if in four years of frequenting a retailer, a customer has only ever bought socks, predictive analytics might tell you he's unlikely to respond to ads for shoes. Many reactions are programmed to occur automatically when shoppers perform certain actions.

One type of predictive marketing—*lookalike modeling*—extends the reach of clustering by analyzing the members of a cluster, then finding other customers who share many of the same attributes. For example, the cluster that bought running shoes twice a year may share demographics, subscriptions to a running magazine, or social media activity in running groups. Marketers can then find additional people with those characteristics (but who aren't currently purchasing at the same rate) and predict product interest. If a shoe campaign needs to reach 100,000 people, it can reach out to 100,000 of these lookalikes. Predictive marketing is explored further in **Part Three** of this three-part series.

By the **decisive stage,** the customer is enjoying an experience tailored to his or her personal needs and wants. Marketers make high-level creative decisions, but many communications and promotions are triggered automatically based on artificial intelligence and uncovered opportunities. Algorithmic analysis might reveal, for example, that certain sock buyers would be likely to join a sock-of-the-month club, prompting the software to initiate invitations. At this stage, marketers not only know what a customer is going to do, but what actions they need to take to capitalize on their needs and responses. The software can also automatically optimize, creating the best customer experience with the company's limited resources. Optimization is discussed further in **Part Three** of this three-part series.

At each stage, the magic behind the scenes becomes increasingly complex, but it's worth the effort to get the finely-detailed portrait of the customer that you need, and with it produce a powerful consumer experience.[10]

Step 3: Know, don't guess.

Once marketers have merged their data and analyzed the numbers for insights, they have the foundation needed for creating the most useful possible tests. In the past, marketers took shots in the dark when designing concepts to test in A/B testing. With the holistic customer view gained through data-driven marketing, marketers can use their deep understanding of what matters to each customer to create more targeted offers and campaigns for testing. Data-driven marketing allows companies to test concepts based on data-based customer profiles rather than hunches and anecdotes.

In the past, an insurance company might test two campaigns—one using a couple on a ski-slope and another featuring tennis players. But with data-driven marketing the company knows that more of their customers hit the golf course than the ski slopes. By testing golf and tennis instead of skiing and tennis, the company can now create a more targeted campaign to the customers they want to convert. This decreases the amount of testing required and increases odds of success.

Alternatively, an insurer could use this knowledge about customer lifestyle and preferences to inform creative at the get go, and use testing to compare different offers against one another. Do more potential customers respond when offered a simple discount on life insurance? Or do more respond when offered a package deal for life insurance and homeowner's insurance together?

Then, instead of waiting months to find out that the discount performed poorly, data-driven marketing gives marketers the information needed in real-time to shift strategy and spending. Within a few hours, the marketers analyze real-time results to find that the banner featuring the package deal receives significantly more clicks and can immediately replace the discount with the package campaign. In addition to allowing marketers to create tests more likely to resonate with customers from the beginning, data-driven marketing allows marketers to react in real time to have the greatest impact with each campaign.

If you can test options based on your insights, you can increase your sales significantly.[11]

AXEL SCHAEFER
senior manager, strategic marketing
Adobe

Correlation's bad rap.

We've all been reminded again and again: Correlation does not equal causation. That's true. But correlation is still pretty useful.

John Bates, an Adobe senior product manager, uses this example: Owners of a hardware company found that only about two percent of customers who visited a particular product detail page went on to buy the product. But they also found that, among customers who viewed the product's ratings and reviews, eight percent made purchases.

What the company had so far was a correlation—people who read the reviews bought the tools at a higher-than-average rate. But the company now also had a great hypothesis to try out: Maybe having the option to read reviews actually led to more purchases. The company tested out its hunch by making reviews more prominent for a subset of customers—and immediately saw hundreds of thousands of dollars in extra revenue pour in.

"Correlations are a goldmine for test ideas," Bates says. "Some won't pan out because they're not causal. But some will."[12]

As useful as testing is when used with holistic customer profiles, there's an important caveat for companies new to data-driven marketing: "It's hard to do predictive analytics around marketing if you don't have a baseline to start with," Frawley says. "It's important to start with six months to a year's worth of data."[13] In other words, the algorithms need enough data—gathered over time—to determine which differences matter. Marketers can create the most useful tests once they've gathered the customer profile data needed to inform and focus them. (The importance of testing for campaign optimization is covered further in **Part Three** of this three-part series.)

Step 4: Be automatically personal.

You've built uniform profiles that recognize individual customers across every platform. You've established correlations and run tests to see which strategies work. But insight alone isn't enough. If your software can't automatically create and promote personalized experiences, such as on-the-fly recommendations or offers, you may have an understanding of what your customer does, but you can't act on that knowledge with any efficiency or speed. Your team doesn't have time to personalize emails one by one—you need a system that does it for you.

Fortunately, today's data-mining software makes it possible to understand the customer and create a personalized experience at a speed unheard of even five years ago. What once took data scientists weeks of spreadsheet analysis and writing code can now be done in a few clicks. This is a very good thing for company budgets, since those data scientists are in short supply and expensive to hire. Of course, even the best software may not preclude you from needing to bring on a data scientist. But at least with the newest tools, analysts can get useful customer insights without getting lost in the statistical weeds. That enables them to make quick decisions about how to deliver the best possible experience.

At the most basic level, personalization might look like one of these scenarios:

- Based on an IP address, a hardware store chain knows that a site visitor lives in a certain ZIP code. And, based on third-party data, it knows that he belongs to a demographic group—males over 30—who buy cordless drills. The marketing system automatically targets him with an offer on power tools at a retail outlet in his neighborhood.

- Based on correlations and testing, a sportswear store knows that people who purchase running shoes at a specific price point often go on to buy high-end running shorts. The system automatically offers deals on premium shorts to running shoe buyers.

- Based on tracking online behavior, a bank knows that customers who browse credit cards for at least five minutes go on to apply for new cards. The bank's system automatically sends customized offers for new teaser-rate cards to customers who hit the four-minute mark. A high-income customer browsing may receive an offer for a platinum card with travel rewards, while a customer in a different income range receives an offer for a card with a cash back program.

The key word in all these examples is *automatically*. Old-school marketers may at first find it tricky to wrap their heads around automation, since there used to be a human being behind every campaign decision. But really, it's okay to let go. There are still plenty of marketing decisions that require human attention. People have to decide what data to collect and what to test, and it's people who know the look and feel of their brand and which choices will sustain it. Machines may be great at spotting patterns, but they don't *understand* anything. Marketing software can present options, but it can't come up with them. Only a human can create experiences that capture the cultural moment.

But as with doing the laundry, there are tasks that are just fine to leave to machines—ultimately saving you time and money. Only machines can act with lightning speed, and it's this speed that gives a company a competitive edge—whether that's in creating segments based on your customer data, automating campaign implementation and personalization to get your ideas out to your customers quickly, or providing real-time dashboards with insights on how your audience is responding to your communications. And automation decreases the odds of human errors or biases. By using machine learning and algorithms, you make better decisions in a shorter amount of time. When you can respond to customer behavior with an instant, appropriate action, you've not only increased your odds of making an individual sale, you're likely retaining that customer over the long term.

Slow and STEADY.

If you're just starting down the path toward data-driven marketing, remember that slow and steady wins the race. **Part One** of this three-part series discussed the importance of taking things step by step, by organizing and analyzing the data you're *already* collecting about customers before adding third-party data. "Starting simple and working your way to complexity is much better than assuming massive complexity from the beginning," Frawley says.[14]

Building a database of complete customer profiles, getting into the habit of thinking about customers holistically, and creating personalized experiences are likewise important skills to master before moving ahead. Once you've got a more developed data-driven marketing practice, you'll need to explore software options that, among other things, conduct sophisticated analytics and tests, deliver automated messages, predict the impact of ads, and help optimize campaigns. These capabilities can be added all at once or one-by-one. (How to make the most of them is covered further in **Part Three** of this three-part series.) Throughout the whole process, human ingenuity is required to come up with the most captivating messages and images to put in front of consumers.

Ultimately, your company should be able to offer experiences as personalized as those found at beloved coffee shops every morning, while using technology to make the process as efficient and accurate as possible. As a marketer, you'll soon be thinking about data all the time, if you aren't already. How do customers behave in each channel? How does data from each source link up?

Keep in mind, however, that customers aren't thinking about channels or devices at all. Adobe's Bates may be a specialist in data science and predictive marketing, but like all of us he's also a consumer, which helps him grasp the experience he's trying to create. He uses three streaming apps to watch television but when he shuts down his show on one device and goes to start it up later on another, only two of the apps recognize where he left off.

"It's a drastically different experience. It's these little things that count," he says. "I just expect the brand to recognize me and provide the most relevant experience possible, depending on my preferences and needs. If it doesn't do that, it's very disruptive. If it does, it's so natural that I find myself not having to think."[15]

To learn more about how you transform your marketing through data, visit http://www.adobe.com/go/data-driven-marketing.

Part Three of this three-part series to data-driven marketing explains how to use data to predict and prescribe customer behavior. To continue learning more about the concepts covered here in Part Two—like combining data sources, testing, and automation—check out this page.

Adobe Marketing Cloud empowers companies to use big data to effectively reach and engage customers and prospects with highly personalized marketing content across devices and digital touch points. Eight tightly integrated solutions offer marketers a complete set of marketing technologies that focus on analytics, Web and app experience management, testing and targeting, advertising, audience management, video, social engagement, and campaign orchestration. The tie-in with Adobe Creative Cloud makes it easy to quickly activate creative assets across all marketing channels. Thousands of brands worldwide including two thirds of Fortune 50 companies rely on Adobe Marketing Cloud with over 30.4 trillion transactions a year.

1   Chris Harrison, personal interview, July 28, 2015.

2   Andy Frawley, personal interview, July 27, 2015.

3   Frawley interview.

4   Chris Harrison, personal interview, July 28, 2015.

5   Axel Schaefer, personal interview, June 23, 2015.

6   Frawley interview.

7   Harrison interview.

8   Kevin Lindsay, personal interview, June 26, 2015.

9   John Bates, personal interview, June 26, 2015.

10 Bates interview.

11 Schaefer interview.

12 Bates interview.

13 Frawley interview.

14 Frawley interview.

15 Bates interview.