Mighty Guides

REAL-TIME ANALYTICS

for Customer Service

11 TOP EXPERTS SHARE THEIR SECRETS

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FOREWORD

Today, most businesses are software businesses. In industry after industry, a company's software is now the primary way it interacts with customers. To succeed, customer service leaders must know their customers, but how do they do that when the interactions come through a screen instead of face-to-face meetings?

The answer is software analytics—transforming metrics and events from software into actionable data in near-real or real time. The coming together of technology and business metrics with business intelligence and software analytics tools allows customer service leaders and analysts to better understand not only how their software performs but also how their business performs—while there's still time to do something about it. Real-time analytics—a key component of software analytics—helps customer service organizations be more agile, responsive, and customer focused than ever before. Best of all, it lets creative problem solving happen immediately.

This e-book was created to demonstrate the value of real-time analytics to a wide variety of companies and customer service use cases. We hope the first-hand experiences chronicled here offer you game-changing insights, best practices, and inspiration for how to leverage the power of software analytics to make better, faster, data-driven customer service decisions.

Lew Cirne,
Founder and CEO,
New Relic
View Bio

New Relic is a software analytics company that makes sense of billions of data points about millions of applications in real time. New Relic's comprehensive Software as a Service–based solution provides one powerful interface for Web and native mobile applications and consolidates performance monitoring data for any technology in your environment. More than 200,000 users employ our cloud solution to analyze more than 200 billion data points across more than 3 million applications. When your brand and customer experience depend on the performance of modern software, New Relic provides insight into your overall environment. Learn more at newrelic.com.

One contributor to this e-book wisely points out that everything happens in real time, but not everything benefits from real-time analysis. That realization underscores the challenge facing decision makers in customer service organizations today. The ability to capture massive amounts of real-time data often exceeds an understanding of how to use that information effectively.

To better understand how to get the most customer service value out of real-time analytics—and with the generous support of New Relic—we collected answers to the following question from 11 top real-time analytics professionals:

A colleague has been tasked with implementing real-time analytics to transform her company (e.g., saving money, improving a product, or smarter marketing). Please share a story from your own experience or a critical piece of advice that will help her succeed.

Using first-hand experiences from the experts, this e-book looks at when real-time analytics can better inform decisions and actions that impact customer services. It also shows how to get the most practical value out of real-time analytics. One recurring theme from the experts is that to derive value from real-time analytics, it helps to be able to take real-time action.

We hope the insights and experiences these real-time analytics experts share help you strengthen your own customer service operations.

All the best,
David Rogelberg
Editor

Mighty Guides

Mighty Guides make you stronger.

These authoritative and diverse guides provide a full view of a topic. They help you explore, compare, and contrast a variety of viewpoints so that you can determine what will work best for you. Reading a Mighty Guide is kind of like having your own team of experts. Each heartfelt and sincere piece of advice in this guide sits right next to the contributor's name, biography, and links so that you can learn more about their work. This background information gives you the proper context for each expert's independent perspective.

Credible advice from top experts helps you make strong decisions. Strong decisions make you mighty.

New Relic.

Data helps us track our athletes' achievements.

Mark Shaw
CTO & Co-Founder
STRAVA™

We are *all* data nerds.

RAISING THE BAR WITH REAL-TIME ANALYTICS

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Ted Rubin is a leading Social Marketing Strategist, Keynote Speaker, Brand Evangelist, and Acting CMO of Brand Innovators. Ted is the most followed CMO on Twitter, according to *Social Media Marketing Magazine*, one of the most interesting CMOs on Twitter according to Say Media, number 13 on *Forbes* Top 50 Social Media Power Influencers (2013), and number 2 on the Leadtail August 2013 list of Top 25 People Most Mentioned by digital marketers. Follow him @TedRubin, @R_onR, or @Parentng.

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The past few years have transformed the way organizations use data. Today, the volume, variety, and velocity of data are taking the business world by storm. Organizations that are able to understand and act on the data—based on analytics but with the relationship at the forefront—will emerge as winners.

Social media, cloud, and mobile have added a layer of urgency to the big data wave. As the velocity of information increases, there's a need to process the data and analyze it for relevant use cases, but gathering and analyzing real-time data from various structured and unstructured sources are not easy, especially while keeping it human at the same time.

Smarter organizations understand this and invest in people, process, and technology that enable them to use real-time analytics for strategic and operational benefits while keeping relationship enhancement at the forefront. Real-time analytics is not just for smarter marketing but also for cutting inefficiency from operations, improving customer service, and watching trends that can affect the bottom line.

66 **Real-time analytics is not just for smarter marketing.** 99

KEY LESSONS

1 INVEST IN PEOPLE, PROCESS, AND TECHNOLOGY TO USE REAL-TIME ANALYTICS FOR STRATEGIC AND OPERATIONAL BENEFITS WHILE KEEPING RELATIONSHIP ENHANCEMENT AT THE FOREFRONT.

2 USE REAL-TIME ANALYTICS, AND ORGANIZE TEAMS AND PROCESSES FOR REAL-TIME RESPONSE.

3 MONITOR YOUR COMPETITORS, AND OBSERVE THEIR WEAKNESSES AND STREGTHS IN REAL TIME.

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Here is an example of how a company used real-time analytics to implement those changes in its operations and customer service.

A technology service provider wanted to transform its reputation from a slow, sleepy company to one that is nimble, customer responsive, and attentive. It started by setting up teams that worked in two shifts, ensuring continuous and timely review and response. Next, it looked for a product that could provide social listening, real-time analytics (share of voice, sentiments, time to resolution), workflow, and reporting. After it had selected a product and trained its team, the company defined the process-es and business rules for handling and coordinating customer queries, issues, and rants—and how to properly engage.

By using real-time analytics and organizing teams and processes for real-time response, the company's social customer service team had a big impact on customers and improved brand reputation. Real-time response management and the ability to analyze interactions provided the company with unprecedented insights into its customers' issues, attitudes, and behavior.

Real-time analytics was also tremendously valuable for identifying emerging issues (service down in a geography, delays in meeting service levels) and for preparing responses to any incidents. In addition, the company monitored its competitors and observed their weaknesses and strengths in real time. It was able to generate leads from customers who were unhappy with the competition or who had just moved into the target geography.

Within a few months, this company went from just another Internet and cable services provider to one that was considered agile, sensitive to customer needs, and responded to its customers within minutes of their post. It not only made its customers happy but lifted its brand value—all through the smart use of real-time analytics.

> " A social customer service team can have a big impact on customers and improve brand reputation. "

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PRATIK BANG

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Pratik Bang is the Director of Alliances for the Data & Analytics group at Equifax, where he is responsible for developing partnerships with third parties and helping develop the overall analytical strategy. Before that, he was a consultant for McKinsey & Company, working on technology strategy studies for clients in many industries. He has held various leadership positions at Genesys Telecommunications, most recently Senior Manager of Engineering. Pratik has an MBA from Emory University and M.S. and B.S. degrees in computer engineering from the Georgia Institute of Technology.

⊕
Website

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Companies are increasingly looking to real-time analytics to generate insights from the vast volumes of data they are collecting, and then using those insights to improve their profitability. Analytics have been used in a variety of situations, from streamlining company operations to improving customer acquisition, management, and retention strategies. Here is an example where real-time analytics is fundamentally transforming how companies conduct business.

Call centers pervade every industry today and typically track several metrics to assess their operational efficiency and adherence to customer contracts. For example, large corporate customers of a financial institution are guaranteed a wait time of no longer than 20 seconds when they call in, or the institution could face severe financial penalties. An increase in the time to handle calls may indicate issues with agent performance or inadequate training, leading to increased costs and lower profitability.

❝ Companies are increasingly looking to real-time analytics to generate insights from the vast volumes of data they are collecting. ❞

KEY LESSONS

1 CONSTRUCT CUSTOMER SEGMENTS INTELLIGENTLY TO GENERATE RELEVANT ANALYTICS.

2 REAL-TIME ANALYTICS INTRODUCES A NEW PARADIGM FOR HOW TO MANAGE CUSTOMER SERVICE.

3 INTERPRET THE INSIGHTS GAINED FROM THOSE ANALYTICS PROPERLY.

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Pratik Bang is the Director of Alliances for the Data & Analytics group at Equifax, where he is responsible for developing partnerships with third parties and helping develop the overall analytical strategy. Before that, he was a consultant for McKinsey & Company, working on technology strategy studies for clients in many industries. He has held various leadership positions at Genesys Telecommunications, most recently Senior Manager of Engineering. Pratik has an MBA from Emory University and M.S. and B.S. degrees in computer engineering from the Georgia Institute of Technology.

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Traditionally, performance reports are generated at the end of the day and manually analyzed by managers the following day; however, any corrective action taken at that point will not negate the penalties incurred or the impact to operational metrics. In such a scenario, real-time analytics introduces a new paradigm for how to manage customer service. By gathering call center and agent performance data in real time, categorizing and aggregating that data across customer-defined dimensions or segments and applying sophisticated business rules to highlight areas of concern, managers and customer service executives can immediately detect where problems are occurring and remedy them, thereby achieving their target metrics and improving profitability.

However, this strategy is successful only if (1) the dimensions or segments are constructed intelligently so that insights derived from the analytics are relevant (e.g., segmenting agents by location versus by manager versus by function or product line, depending on how decisions are implemented in the organization) and (2) the insights are interpreted properly (e.g., a trend showing an increase in the wait time for a call center in Minneapolis could be interpreted as poor agent performance in handling the calls but is actually the result of poor weather conditions hampering staffing at the call center).

As the world becomes more digital and the amount of data available to companies increases exponentially, real-time analytics will help them better determine what their customers want, how to engage them, and how to deliver services in a more efficient and timely fashion. So far treated as a luxury, real-time analytics will become critical to a company's strategy, allowing it to differentiate itself from its competitors.

> " So far treated as a luxury, real-time analytics will become critical to a company's strategy. "

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Chris Rieth joined Socrata to help governments, nonprofit organizations, and nongovernmental organizations find new and exciting ways to measure performance, improve transparency, and empower citizens to better understand and track progress toward a better future. Chris previously served as a senior aide to Governor Martin O'Malley. A steadfast proponent of public-sector innovation, he enjoys finding new ways for citizens to engage with government to help solve our most pressing public policy challenges.

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We are living in an age of data, and citizens are demanding smarter, more sustainable cities; safer communities; and better educational outcomes than what we have achieved to date. The old way of "promises absent data" has given way to the new politics of performance. Citizens don't just believe that their government can or should do more, they are demanding a whole new pattern of engagement with their leaders.

Citizens are choosing leaders who understand the power of engaging citizens directly, setting measurable goals for all to see and sharing the underlying data so they can see how goals will be met and progress measured. They are choosing leaders who understand how to operate in real time with transparent and open data.

States like Maryland are breaking down traditional silos of information, bringing agencies in the room together along with citizens and stakeholders to find solutions to problems as large as climate change and childhood hunger. And they're giving citizens a window into how they can take action to move the needle on these urgent challenges.

KEY LESSONS

1 PEOPLE ARE CHOOSING LEADERS WHO UNDERSTAND OPERATING IN REAL TIME WITH TRANSPARENT AND OPEN DATA.

2 LEADERS MUST CREATE TRANSPARENCY AND REAL-TIME ACCESS TO PROCESSES AND DECISIONS.

" We are living in an age of data, and citizens are demanding smarter, more sustainable cities; safer communities; and better educational outcomes. "

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Cities like Chattanooga, Tennessee, are launching an urban revolution powered by gigabit fiber and built by citizens and government exchanging information and ideas in ways previously not thought possible. Everything is connected in these new digital cities. The city's street lights power up or down to make an evening walk safe for families or to conserve energy. Fire engines are reporting back their water and oxygen levels in case they need backup during an emergency, all while downloading the floor plan for the building the firefighters are about to enter.

Citizens and public officials alike are also getting a window into their real-time data-powered city. Analytics from their open data portal and city website are available online in real time. This information becomes an actionable feed, allowing the city to respond in real time to the needs of citizens and visitors.

This new data-centric view of our public institutions is reshaping the connections between governments and citizens and will power new forms of on-demand, real-time services delivered by private enterprise, as well, ultimately leading to the creation of brand-new markets.

Somewhere along the way, we might just find that we're living in a world a little less cynical about our ability to effect change and a little more optimistic about the future.

> " Data-centricity is reshaping the connections between governments and citizens. "

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KEN HERRON

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Multiple Tech Startups

Ken Herron drives revenue by developing stronger emotional connections between companies and their customers. He has held executive-level marketing and sales leadership positions in multiple Web and mobile tech companies. A graduate of Stanford Graduate School of Business' Marketing Management program, Ken earned his MIM from the Thunderbird School of Global Management. Ranked the #2 CMO on Twitter worldwide by *Social Media Marketing Magazine*, he is an author and frequent speaker on leveraging technology for marketing. Follow Ken @KenHerron.

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The two most powerful tools for business-to-business and business-to-consumer marketers? Two little words: "What if?"

Asking the question, "What if?" gives you and your team the freedom to pursue as many out-of-the-box ideas you can conceive, but until recently, there has been a problem. No, it's not you and your team. You have no shortage of ideas to increase customers, sales, and profits. What you have not had, however, is the ability to know the impact your ideas are having on results—in real time. Rather than take the risk of driving blind, you have been forced to limit yourself to "safe" roads, eliminating your riskiest—and most likely your most transformational—ideas. Real-time analytics gives you the superpower of knowing the results of your marketing ideas fast enough to take advantage of market windows. Here are just two real-life examples of how I used real-time analytics to increase revenues from hotel bookings.

KEY LESSONS

1 REAL-TIME ANALYTICS LETS YOU KNOW THE IMPACT YOUR IDEAS ARE HAVING ON RESULTS IMMEDIATELY.

2 ANALYTICS FREES YOU TO FOCUS ON ACCELERATING CUSTOMER AND REVENUE GROWTH.

> " Real-time analytics lets you know the results of marketing ideas fast enough to take advantage of market windows. "

KEN HERRON
Advisor,
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Valentine's Day was coming up. My team and I asked ourselves, what if we could increase revenues by convincing some of the couples booking romantic getaway weekends to book a hotel suite in Paris instead of Las Vegas? (Yes, we made a lot more money booking hotel suites in Paris.) Using real-time analytics, we were able to rapidly test multiple marketing messages and images until we found just the right combination that convinced Vegas-bound couples to swap the lights of the Vegas Strip for the lights of the Eiffel Tower. We *liked* being marketing superheroes.

People sometimes forget that hotel rooms are just like bananas—perishable. If you don't sell all of them, you end up leaving a lot of money on the table. When we would have hotels with unsold inventory, we used real-time analytics to identify the smallest possible incentives that would convince travelers to book in those hotels.

Real-time analytics empowers you to answer—without limits—the marketing question, "What if?" It frees you to focus on accelerating customer and revenue growth for your brands.

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> " Real-time analytics frees you to focus on accelerating customer and revenue growth for your brands. "

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Dorothy Creaven is Co-Founder and CEO of Element Wave, a software company specializing in Mobile Marketing technology and Mobile CRM. Featured in such publications as *The Sunday Times* and *VentureBeat*, she is regularly asked to speak at conferences in the area of mobile engagement and retention technology for the mobile app market. Element Wave's award-winning product is a mobile user engagement and customer retention tool that dramatically increases app usage for brands, through mobile analytics and push messaging, a proven way to significantly increase mobile app revenues.

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Real-time analytics is key when it comes to successful mobile marketing campaigns. Without it, mobile app publishers and brands are wasting valuable opportunities to connect with their target audience.

As a general rule, our handheld devices are rarely more than a meter away from us at any time. For brands, this opens a powerful and effective marketing channel through the highly persuasive combination of targeted push notifications and mobile app analytics. The live aspect is important here, because real-time feedback is critical to influencing mobile app users at exactly the right time. Through this live feedback mechanism, it's now possible to influence a buying decision in real time, which can greatly impact the success of a mobile marketing campaign, leading to significantly higher mobile revenues for brands.

Airlines use the power of real-time analytics extensively. For example, the relevance of a particular message depends strongly on the customer's context at the time. If a customer is at home four hours before his or her flight, a traffic alert relevant to the customer's location could be beneficial and goes a long way toward building brand loyalty.

KEY LESSONS

1 THE CONSTANT PROXIMITY OF MOBILE DEVICES OPENS A POWERFUL MARKETING CHANNEL.

2 USER ENGAGEMENT IS CRUCIAL TO SUCCESSFUL MOBILE APPS.

3 CREATE AN IMMERSIVE EXPERIENCE FOR YOUR MOBILE CUSTOMERS.

> " Real-time feedback is critical to influencing mobile app users exactly at the right time. "

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Co-Founder and
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Alternatively, if the customer is already at the airport but has not yet checked in, a last-minute special offer to upgrade to first class could be a great way for the airline to upsell. Either of these marketing messages in the wrong context, however, would be highly ineffective. Analytics such as real-time location combined with an awareness of the customer's context offers brands incredibly powerful ways to engage with their customers.

Crucial to the success of any mobile app is user engagement. One of the best ways to keep your mobile audience engaged is to get to know the customer app life cycle, and then develop a strategy around mobile customer relationship management. By using real-time analytics to understand the customer's context in different situations, you can create mobile moments to streamline the customer experience.

Furthermore, by analyzing drop-off points for your mobile app customers, you can preempt where they may disconnect and introduce incentives to encourage them to stay connected with the app.

For example, mobile gaming companies use real-time analytics to monitor a customer's path through a game and engage with the customer at opportune times. When the player has reached a certain level or accumulated a threshold of points, brands can engage with that customer in real time to continue his or her excitement and sense of achievement. This creates an immersive experience for the customer and ultimately leads to more usage and higher revenue for the brand.

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> "By analyzing drop-off points for your mobile app customers, you can preempt where they may disconnect and introduce incentives to encourage them to stay connected with the app."

GARY ANGEL

Principal, EY

As President of Semphonic, Gary Angel led his company's growth from a two-person organization to one of the leading digital analytics practices in the United States. When Ernst & Young acquired Semphonic in 2013, Gary became the leader of EY's Digital Analytics practice. Voted the most Influential Industry Contributor by the Digital Analytics Association, Gary writes an influential blog, has published numerous white papers on advanced digital analytics, and is a frequent speaker at industry events.

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The single worst example of real-time analytics I was ever a part of occurred when I was in a team of analysts monitoring Web traffic from a Super Bowl buy. We sat by our monitors, producing minute-by-minute reports of traffic and sending them off to an executive team (most of whom were too busy watching the game to notice). By halftime, we knew our buy had generated disappointing results. It was useful knowledge... for next year.

People can fail at analytics transformation in countless ways, but three reasons collectively account for a substantial percentage of that failure:

- Confusing real-time events with real-time analytics
- Performing analytics without an operational strategy
- Picking the wrong problems

Everything happens in real time—Super Bowl ads are shown, prospects show up at the website, cash registers ring. But just because you collect data in real time doesn't mean that your analysis must or should be in real time. Real time matters when you need to (and can) make decisions immediately following observations.

The only real-time decision from our Super Bowl effort was that the chief marketing officer got a jump on updating his resume.

> **No matter how good your analysis is, it isn't worth anything if you don't have the operational wherewithal to take advantage of it.**

KEY LESSONS

1 DON'T CONFUSE REAL-TIME EVENTS WITH REAL-TIME ANALYTICS.

2 BEFORE PERFORMING ANALYTICS, YOU MUST HAVE AN OPERATIONAL STRATEGY IN PLACE.

3 TRANSFORMATION DOESN'T COME FROM LITTLE PROBLEMS.

GARY ANGEL
Principal, EY

As President of Semphonic, Gary Angel led his company's growth from a two-person organization to one of the leading digital analytics practices in the United States. When Ernst & Young acquired Semphonic in 2013, Gary became the leader of EY's Digital Analytics practice. Voted the most Influential Industry Contributor by the Digital Analytics Association, Gary writes an influential blog, has published numerous white papers on advanced digital analytics, and is a frequent speaker at industry events.

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Which brings me to operationalizing analytics. No matter how good your analysis is, it isn't worth anything if you don't have the operational wherewithal to take advantage of it. That's critical in real time, because it can be so difficult to "productionize" real-time decisions. Without the ability to serve personalized content on your website, all the analytics in the world won't matter. By focusing on operations when you first choose your analysis project, you increase your chances of success by an order of magnitude.

Finally, transformation doesn't come from little problems. Identifying funnel errors in real time is probably a good application for real-time analytics. It's practical and valuable, but it's not transformative. Tuning digital campaigns in real time is likely a similar case, although there are times when dramatically reducing the cycle time on marketing analytics can be transformative. If you can expunge 50 percent of the cost of underperforming campaigns and shift it into better marketing drives, you may well deliver something close to transformational improvement.

> " For most businesses, real-time analytics is transformational only when they use it to tailor the customer experience. "

For most businesses, real-time analytics is transformational only when they use it to tailor the customer experience. Inventory and lifetime value pricing, real-time offer matching, gamification, and massive path optimization are the places where real-time analytics can drive fundamental transformation.

Understanding the difference between real-time data and real-time decision making, choosing analytics projects because you have a clear path to production, and focusing on the things that will deliver true competitive advantage are key to effective real-time analysis.

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New Relic.

Data helps us
revolutionize fashion.

Camille Fournier
Chief Technology Officer

RENT THE RUNWAY

We are *all* data nerds.

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Anu Chitrapu works in the Vendor Analytics group at Bank of America. With 20 years of experience in business intelligence, analytics, marketing, and general management, Anu has a passion for using analytics to make smart business decisions. She holds an MBA from the MIT Sloan School of Management and is President of Vision Aid, a nonprofit organization that serves the visually challenged in India. She is also on the advisory board of Saheli, an organization that seeks to empower victims of domestic violence.

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Real-time analytics is the ultimate manifestation of the old adage, "time is money."

Broadly speaking, real-time analytics can be tremendously useful for its cost-saving ability as well as to increase revenue. These benefits come from two drivers:

- Spotting a relevant event faster than you otherwise would
- Responding to an event faster than you otherwise would

By spotting and responding to an event faster, you can make money. High-frequency trading on Wall Street is a good example: by identifying patterns in stock movements milliseconds before the competition, hedge funds have made a killing. Moving from Wall Street to Main Street, fashion retailers that spot the next must-have trend can not only be the first to market with hot products but can also preemptively lock up sources of supply before the competition gets wind of it.

By spotting and responding to an event faster, you can save money, as well. If the **Checkout** button on your e-commerce site isn't working, every second can cost you thousands of dollars. Before you know it, frustrated customers are venting on social media. Real-time monitoring of key sections of the site, coupled with analytics that can determine whether what is happening is normal or anomalous, can flag these problems and avert disaster.

> " By spotting and responding to an event faster, you can make money. "

KEY LESSONS

1 BY SPOTTING AND RESPONDING TO AN EVENT FASTER, YOU CAN MAKE AND SAVE MONEY.

2 FOCUS ON A PROBLEM, OR FOCUS ON DATA.

ANU CHITRAPU

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Anu Chitrapu works in the Vendor Analytics group at Bank of America. With 20 years of experience in business intelligence, analytics, marketing, and general management, Anu has a passion for using analytics to make smart business decisions. She holds an MBA from the MIT Sloan School of Management and is President of Vision Aid, a nonprofit organization that serves the visually challenged in India. She is also on the advisory board of Saheli, an organization that seeks to empower victims of domestic violence.

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As you examine your business environment for opportunities to apply real-time analytics, start with two places: focus on a problem, or focus on data.

Take a pressing business problem and brainstorm it: "Can I solve this problem better if I had more timely data?" Similarly, take data that has recently become available (perhaps because of the completion of an IT project) and brainstorm it: "To which problem areas is this data pertinent? What can I do with this data to make a dent in this area?" If you get stuck with one approach, switch to the other.

The most impactful applications of real-time analytics have three ingredients: data, a problem, and imagination. Only you can provide that last ingredient!

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> " As you examine your business environment for opportunities to apply real-time analytics, start with two places: focus on a problem, or focus on data. "

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Anil Batra is a Digital Marketing and Analytics professional with 15 years of experience. He has worked with companies ranging from Fortune 50 to startups, including Microsoft, SmartMoney.com, ESPN, T-Mobile, Hoovers, RealNetworks, Starbucks, and TheStreet.com. Anil holds a B.Tech. in Electronics and Communication Engineering from India and an MBA from the University of Washington, Seattle. He has taught digital marketing and analytics for the past nine years at UBC and the University of Washington, spoken at conferences, blogs, and served on the Board of the Digital Analytics Association.
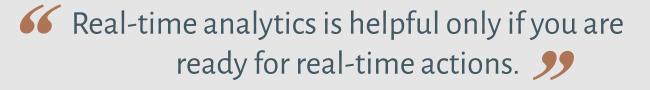
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Real-time analytics is helpful only if you are ready for real-time actions—which you should be. To capture customers' mind and wallet, you must be able to act in real time.

Real-time Web analytics provides a view into what's happening on your site at that moment. It allows you to see the issue as well as take corrective actions—in real time. It allows you to drive more action from your site visitors.

Here are a few cases where you might want to use real-time Web analytics:

- You launched a new campaign— paid search, an email newsletter, a television ad—and would like to see how people are reacting to it.
- You placed new promotions on your site and want to see how visitors are reacting to them so that you can tweak the promotions in real time.
- You added new stories, links, and so on and want to see if anyone is clicking them so that you can make changes based on instant feedback.
- You designed a new site and would like to make sure that everything is working as expected. Real-time analytics is a great quality assurance tool.

> " Real-time analytics is helpful only if you are ready for real-time actions. "

KEY LESSONS

1 REAL-TIME ANALYTICS HAS TO RESULT IN REAL-TIME ACTION TO BE USEFUL.

2 REAL-TIME ACTION RESULTS IN MORE ACTION FROM WEBSITE VISITORS.

ANIL BATRA
Consultant

Anil Batra is a Digital Marketing and Analytics professional with 15 years of experience. He has worked with companies ranging from Fortune 50 to startups, including Microsoft, SmartMoney.com, ESPN, T-Mobile, Hoovers, RealNetworks, Starbucks, and TheStreet.com. Anil holds a B.Tech. in Electronics and Communication Engineering from India and an MBA from the University of Washington, Seattle. He has taught digital marketing and analytics for the past nine years at UBC and the University of Washington, spoken at conferences, blogs, and served on the Board of the Digital Analytics Association.

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- You launched a new feature on your site, added a video, or deployed a new game and would like to know if your visitors are using it so that you can push out alternative versions, if necessary.

- You analyze the data in real time and personalize users' experience in real time, to show the next logical piece of content or push a product that they might be interested in.

Here's an example. About seven years ago, I was working with a large business-to-business technology company. The agency I worked for launched a beautiful new site with some great functionality. The client spent millions of dollars driving visitors to this wonderful new experience.

One of those new features was a landing page with an interactive map. This map allowed visitors to chose their country and go down a path that was created for that country in their local language. Unfortunately, in some browsers, that "cool" functionality did not work, resulting in high page abandonment. We didn't know about this bug until the next day, when we analyzed the data. It would have been really nice to have real-time analytics back then.

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> " In some browsers, that "cool" functionality did not work, resulting in high page abandonment. We didn't know about this bug until the next day. "

CHRIS NEUMANN
CEO and Co-founder,
DataHero

Chris Neumann is CEO and co-founder of DataHero, the leading platform for visualizing data from online services. After helping create the Big Data space at Aster Data Systems, he has spent the past three years evangelizing an industrywide shift to the cloud, helping to position DataHero as the first truly freemium business intelligence platform in the cloud space. Chris holds an M.S. in Computer Science from Stanford University and a B.S. in Computing Science from Simon Fraser University.

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As data practitioners, when we think about the challenges of real-time analytics, we naturally focus on the technical bottlenecks: How can we make our systems faster and more efficient at delivering answers to our users. But what happens when the bottleneck isn't technical? What happens when the bottleneck is in our processes and people?

Today's business users have direct access to more data in more places than ever before. They rely on a myriad of cloud-based services for everything from customer relationship management to marketing automation to customer support. Although the monumental shift of enterprise services to the cloud has empowered business users like never before, however, it has also revealed a fundamental bottleneck in legacy business intelligence (BI) systems: our reliance on centralized databases and the BI teams themselves. Business users now have the data they need at their fingertips, but they aren't empowered to use that data without going through their company's BI team, preventing them from getting the answers they need when they need them.

KEY LESSONS

1 AVOID RELIANCE ON CENTRALIZED DATABASES.

2 EMPOWER USERS TO ACCESS AND ANALYZE THE BUSINESS DATA THEY NEED TO GET ANSWERS.

> " What happens when the bottleneck is in our processes and people? "

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I witnessed the growth of this bottleneck firsthand when I was at big data pioneer Aster Data. Companies in the emerging self-service BI space are trying to remove the process bottleneck inherent in centralized data architectures for the increasing number of situations when centralization doesn't provide any added value. How do you enable business users to get insights from the data they have access to in a safe, secure, and scalable way without having the BI team in the critical path?

Centralized big data systems will continue to be critical to our analytical infrastructure, but today's emerging category of self-service cloud BI solutions offers the potential for companies to empower their business users to get the answers they need in real time by removing the process and people bottlenecks inherent to our legacy systems.

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> " Self-service cloud BI solutions empower business users to get the answers they need in real time. "

As CEO of a startup in hyper-growth mode, I understand the challenges that other rapidly expanding businesses face as they attempt to rein in and leverage an avalanche of big data. But by taking advantage of business analytics, your team can increase efficiency and profitability in a variety of ways.

Employing proactive analytics can safeguard an organization's survival and promote its growth. Waiting hours, days, or weeks for analysts to comb through data is a luxury many businesses can't afford, and if you work for a startup or small to medium-sized business, you might find that you're charged with this mighty task without a support team. The ability to quickly build dashboards and reports allows for faster fact-based business decision making and identification of problems in real time.

You can employ analytics to fuel growth, prevent customer churn, increase sales, and implement data-driven decision making across all departments. Increasingly, companies are coming to understand that they can use "proactive analytics" to help address evolving business and customer needs in real time. Because businesses today face ever-increasing data loads, their analytics environment must scale with the data and keep up with company growth.

> **"Waiting hours, days, or weeks for analysts to comb through data is a luxury many businesses can't afford, and if you work for a startup or small to medium-sized business, you might find that you're charged with this mighty task without a support team."**

AMIT BENDOV
CEO, SiSense

A Software as a Service industry veteran, Amit Bendov is leading SiSense's rapid growth as a trailblazer in high-performance business intelligence software. Amit has been at the helm of SiSense's strategy, vision, and customer acceleration since July 2012, leading the company to triple subscription revenue growth, closing $10 million in Series B funding and $30 million in Series C funding, and significantly expanding SiSense's global footprint in 49 countries.

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KEY LESSONS

1 EMPLOYING PROACTIVE ANALYTICS CAN FUEL GROWTH, PREVENT CUSTOMER CHURN AND INCREASE SALES.

2 EMPOWER YOUR COLLEAGUES SO YOU CAN ELIMINATE QUEUES OF PENDING REQUESTS.

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It's important to develop a single source of truth that can funnel all of your growing data to one central point that users from the CEO down to the customer-facing support team can log in to from any device and leverage in a timely manner. By putting big data in the hands of business users, each department can build comprehensive dashboards on the fly and gain insights to achieve a variety of goals.

Where analytics used to be the exclusive domain of IT, it is now possible to put big data in the hands of sales, marketing, and operations. You can encourage a data-driven culture by providing business users with an easy-to-use visualization and analytics solution, freeing your IT team and engineers to focus on their core mission.

Empower as many of your colleagues as possible so that you're not faced with a long queue of pending requests from every department. Then, you can focus the energies of your tech team on queries whose answers are mission critical or require deeper know-how.

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> " Empower as many of your colleagues as possible so that you're not faced with a long queue of pending requests from every department. "

LISA ARTHUR
CMO, Marketing Applications, Teradata

As Teradata's Chief Marketing Officer, Marketing Applications, Lisa Arthur drives customer-centric initiatives and serves as global industry thought leader around data-driven marketing and Teradata's Integrated Marketing Cloud solutions. A 30-year marketing veteran, Lisa is the author of *Big Data Marketing; Engage Your Customers More Effectively to Drive Value*. Her industry thought-leadership blogs have appeared on the Forbes.com CMO Network, and she is a contributor to *Lean back*, a marketing blog of The Economist Group.

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When it comes to improving your business through smarter, customer-focused, integrated marketing using real-time analytics, one important fact you must remember is this: Real-time analytics don't all have to be performed in real time—they just need to be *used* in real time. In this sense, *real-time* is a relative notion.

Let me offer an example.

I have a friend who leads the e-mail marketing organization at a major online retailer. He's a wizard at real-time analytics, and e-mail is a core strategic channel his firm uses to stay engaged with customers. In conducting e-mail and digital campaigns, however, it's not uncommon for him to use customer attributes and communication history—data that might have been captured from an earlier online session or from other channels—as real-time criteria for decision making. Here, the analytics themselves don't all have to be executed in real time every time. As long as they're available to be used in real time, all is well, because customer engagement becomes stronger with more relevant messaging.

KEY LESSONS

1. KEEP AN OPEN MIND ABOUT THE KINDS OF METRICS THAT WOULD BE USEFUL FOR YOUR ENVIRONMENT.

2. DON'T LIMIT YOURSELF TO ONLY THOSE ANALYTICS THAT RUN IN AN INTERACTIVE ENVIRONMENT.

3. CHOOSE ANALYTICS THAT SPAN CUSTOMER ENGAGEMENT CHANNELS.

> " Real-time analytics don't have to be performed in real time—they just need to be *used* in real time. "

LISA ARTHUR
CMO, Marketing
Applications,
Teradata

As Teradata's Chief Marketing Officer, Marketing Applications, Lisa Arthur drives customer-centric initiatives and serves as global industry thought leader around data-driven marketing and Teradata's Integrated Marketing Cloud solutions. A 30-year marketing veteran, Lisa is the author of *Big Data Marketing; Engage Your Customers More Effectively to Drive Value*. Her industry thought-leadership blogs have appeared on the Forbes.com CMO Network, and she is a contributor to *Lean back*, a marketing blog of The Economist Group.

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To put this another way, for real-time analytics to be valuable, you don't actually have to be performing the analytics at the precise moment of customer interaction. Analytics on your data—any time you use them—will help you engage better with customers at any point of interaction.

This is a subtle but important distinction.

What this implies for data-driven marketers on the quest to implement "real-time analytics" is this:
- Take a broad view of the types of overall customer and business analytics that would be useful to you in real time.
- Don't limit your thinking only to analytics that can be run in an interactive environment (mobile app, Web, chat, customer care).
- Always remember: Often, it's customer analytics that span all customer engagement channels (not just real-time interactive environments) that offer critical insight that you can then use to guide the interactions that take place in real time.

Real-time analytics for effective customer interaction management involves a lot of moving parts that have to work in concert, within nanoseconds, to determine the best offer, message, or experience for every customer interaction. Underneath it all, a lot of data are flowing throughout an integrated marketing and analytical ecosystem, and any change in data quality anywhere along the flow can affect your customer's experience.

Always put your customer's ideal experience first, and your data and analytics will serve you well—in real time, every time.

> " Always put your customer's ideal experience first, and your data and analytics will serve you well. "

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New Relic.

Data helps us make messaging more fun.

Guy Fighel
Director of Engineering

Tango

We are *all* data nerds.