



# REAL-TIME ANALYTICS

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## for Operations

9 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, operations leaders must know their business and their customers, but how do they do that when everything happens through software?

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 analytics tools allows operations leaders to better understand not only how their software performs but also how their business is performing—while there's still time to do something about it. Real-time analytics—a key component of software analytics—helps operations 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 operations 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 operations 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](https://newrelic.com).

# INTRODUCTION

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 operations managers and decision makers 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 operational value out of real-time analytics—and with the generous support of New Relic—we collected answers to the following question from 9 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 operational decisions and actions, and 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 operations.



All the best,  
David Rogelberg  
Editor



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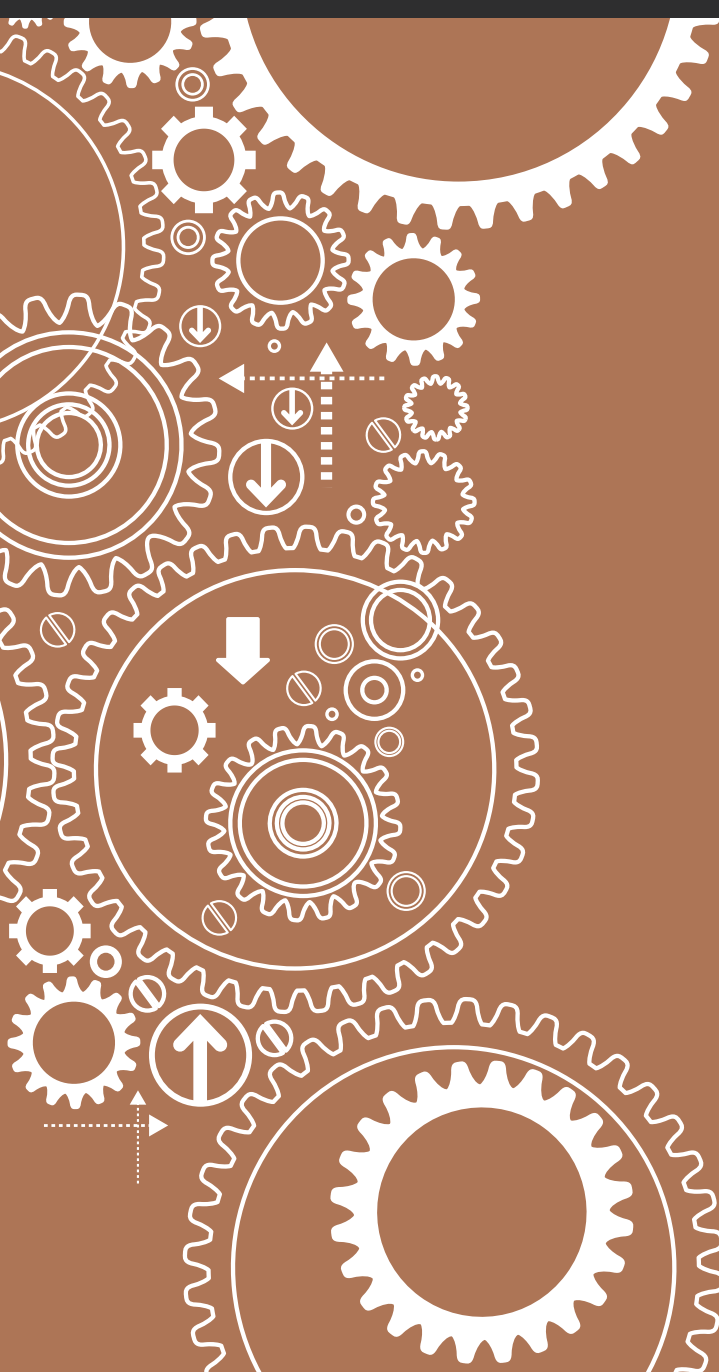
Mark Shaw  
CTO & Co-Founder



We are *all* data nerds.



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# THE POWER OF TRANSFORMATION WITH REAL-TIME ANALYTICS



**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.





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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. 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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# 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.

“Real-time analytics is not just for smarter marketing.”

## 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 STRENGTHS 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 processes 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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# THE KEY TO REAL-TIME VALUE IS MEANINGFUL REAL-TIME ACTION



## JUNE DERSHEWITZ

Director of Digital Analytics,  
Apollo Education Group

June Dersheiwitz has had a 15-year career driving analytics strategies for major corporations. Currently, she is the Director of Digital Analytics at Apollo Education Group, the parent company of University of Phoenix. Before that, she was a member of the leadership team at Semphonic, a prominent analytics consultancy now part of Ernst & Young. As a long-standing advocate of the analytics community, June was a co-founder of Web Analytics Wednesdays. She's also a Director Emeritus of the DAA.



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Imagine real-time data visualization splashed across the largest display in your corporate office. The images shift and move, revealing beautiful details as you stare at it with rapt attention, your mind blank.

Now snap out of it! That's precisely the wrong way to tap the potential of real time.

If you want to transform your company with real-time analytics, put the visualizations aside. Instead, start by imagining the value of real-time action.

In the era of big data, it's easy to accept the promise of data-driven decisions: start with data, develop insights, and then take action. But how long does that data-to-action cycle take? It depends on how the action plays out.

Often, a valid data-to-action cycle can take many days, especially when multiple people are involved. If your CEO needs to approve a strategic data-driven action, it simply won't happen in real time—nor does it need to.

So, if the key to finding value in real-time analytics is not in visualization and not in most decisions where people are involved, then where is it?

“Start business transformation by imagining the value of real-time action.”

## KEY LESSONS

- 1 CLOSED-LOOP AUTOMATED SYSTEMS HOLD THE GREATEST PROMISE FOR REAL-TIME ACTION.
- 2 IF YOUR CUSTOMERS CAN'T TRANSACT WITH YOUR BUSINESS, EVERY SECOND COUNTS.
- 3 REAL-TIME ANALYTICS IS ONLY WORTH DOING WHEN THERE IS A MATERIAL BENEFIT TO HAVING A TIGHT FEEDBACK LOOP.



# THE KEY TO REAL-TIME VALUE IS MEANINGFUL REAL-TIME ACTION



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Sometimes, a swift data-driven action is both achievable and worthwhile. That's exactly the sweet spot for real-time analytics.

What makes a real-time action achievable? Closed-loop automated systems hold the greatest promise for real-time action. Take several examples from digital marketing. Personalization, retargeting, and bid optimization—they all use details known in the moment to act in real time and deliver value. Automation infrastructure may come with a high overhead, but it's the most effective way to shorten the data-to-action cycle.

Humans, although no match for automated systems, can play a role in real-time analytics, too, but they must be compelled to “jump” when they see the data. Mission-critical processes like operational monitoring deserve real-time action. If your customers can't transact with your business, every second counts.

What makes a real-time action worthwhile? Just because it's possible to act in real time doesn't mean you should. You have a choice: you could invest in a system to make real-time decisions possible, or you could accept a lag.

Before you launch any real-time initiative, consider this: If you are able to act on an insight within two seconds instead of two days, how much do you stand to gain? Real-time analytics is only worth doing when there is a material benefit to having a tight feedback loop.

Here's my challenge to you: find the points in your business where real-time action is achievable and worthwhile. Then—and only then—will real-time analytics hold the potential to transform your business.

“

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## PRATIK BANG

Director of Alliances,  
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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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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.





# FROM LUXURY TO NECESSITY: REAL-TIME ANALYTICS FOR BETTER CUSTOMER SERVICE



## PRATIK BANG

Director of Alliances,  
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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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# REAL-TIME ANALYTICS AND THE LAST MILE CHALLENGE OF BIG DATA



## DR. KIRK BORNE

Professor,  
George Mason University

Dr. Kirk Borne is a Data Scientist and Professor at George Mason University. Having worked for nearly 20 years in positions supporting NASA projects, he has extensive experience in big data and data science, including data mining and data systems. Kirk was named a 2014 Big Data and Analytics Hero by IBM and was identified as #1 Big Data Influencer on Twitter in 2013.



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The twin towers of big data are massive static data and streaming real-time data. In the case of massive static data, the biggest challenge is the “first mile challenge”: data inertia—that is, the difficulty in terms of resource engagement, workflow choreography, and bandwidth bottlenecks of getting massive, distributed, heterogeneous data moving in and out of storage devices, memory, and databases. In the case of streaming real-time data, the data are already moving (streaming into the system or through the processing system); consequently, the biggest challenge is the “last mile challenge”: learning from and making decisions based on streaming data in a fast, dynamic environment—in other words, deriving actionable insight on the fly.

Part of the reality check of real-time analytics is accepting that complex models or deep data integration is probably beyond the scope of most organizations. With the exception of massive Internet giants, most companies do not have the computational and network resources necessary for that degree of complexity. However, there are some ways to improve, streamline, and automate the real-time workflow.

“ In the case of streaming real-time data, the biggest challenge is the “last mile challenge”: learning from and making decisions based on data in a fast, dynamic environment—in other words, deriving actionable insight on the fly. ”



## KEY LESSONS

- 1 COMPLEX MODELS OR DEEP DATA INTEGRATION IS PROBABLY BEYOND THE SCOPE OF MOST ORGANIZATIONS, BUT THERE ARE WAYS TO IMPROVE, STREAMLINE, AND AUTOMATE THE REAL-TIME WORKFLOW.
- 2 EXISTING STANDARDS SUCH AS BUSINESS PROCESS EXECUTION LANGUAGE (BPEL) AND PREDICTIVE MODEL MARKUP LANGUAGE (PMML) CAN BE APPLIED TO ENABLE MORE EFFECTIVE, EFFICIENT, AND REPRODUCIBLE REAL-TIME ANALYTICS.

# REAL-TIME ANALYTICS AND THE LAST MILE CHALLENGE OF BIG DATA



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One of those ways is the Business Process Execution Language (BPEL). Although this tool is considered outdated by some business process experts, it is nevertheless a vetted international XML-based standard that encodes and shares tasks (including analytics or any other business task) across a distributed computing environment. BPEL allows you to define the executable tasks down to the atomic unit of execution, the business rules that govern them, the triggers (inputs) that drive them, and the results (outputs) generated from them. Another standard that is particularly applicable to analytics is the Predictive Model Markup Language (PMML), an XML-based standard language developed by the Data Mining Group to represent, describe, and exchange learned analytics models across multiple tasks and processors.

In your real-time analytics deployment, as models are updated and learned from streaming data (e.g., the discovery of new customer behaviors, new segments of the population, emerging trends), you can quickly deploy these analytics models to other processors through PMML and implement them dynamically through BPEL (or an equivalent language). Standards such as these enable more effective, efficient, and reproducible real-time analytics.



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You can quickly deploy analytics models to other processors through PMML and implement them dynamically through BPEL.

”





Data helps us  
revolutionize fashion.

Camille Fournier  
Chief Technology Officer

**RENT THE RUNWAY**

We are *all* data nerds.





# CREATING A DATA-DRIVEN CULTURE WITH REAL-TIME ANALYTICS



**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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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,

“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.”

## 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.



# CREATING A DATA-DRIVEN CULTURE WITH REAL-TIME ANALYTICS



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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.

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# USING WHAT'S AVAILABLE, WHEN IT'S AVAILABLE



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Founder,  
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Richard Sink is the founder of Critical Connections. He has more than 30 years of tech experience and 10 years of experience in online business optimization. He is well versed in how new technologies, search engine optimization campaigns, Web development, and social media strategies can solve business problems, improve business processes, and achieve a competitive advantage that will positively affect his clients' bottom-line results. You can find Richard on LinkedIn, Facebook, Twitter, Pinterest, and Google+.



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Whether your goal is to save money, improve a product, or employ smarter marketing, today's savvy business owners need deep analysis of how their consumers are behaving online. Businesses must identify target audiences, build social channels, listen to social conversations, and know where potential clients are investing their online efforts.

Today's consumers live in an always-on, always-connected world, and their attention spans are fleeting. They can move from one topic to the next in a matter of seconds. From weather concerns to financial trends and political affairs, search queries give valuable insight into what matters most to people at a specific moment. And given the proliferation of mobile devices, consumers are searching in a way that provides valuable insights into discovery and research. If you can address your consumers' needs through quick response, you put your business at a significant advantage.

Resist the temptation to focus only on what happens on your website. Instead, prioritize what happens around your customer's journey. If you focus your attention on every action, purchase, and sign-up, you can start to understand how your business functions.

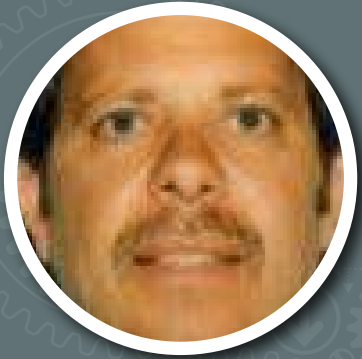
“ Resist the temptation to focus only on what happens on your website. ”

## KEY LESSONS

- 1 PRIORITY WHAT HAPPENS AROUND YOUR CUSTOMER'S JOURNEY, NOT JUST ON WEBSITE VISITS.
- 2 KNOW WHY YOU'RE SUCCEEDING.
- 3 TRACK WHAT YOUR CUSTOMERS ARE DISCUSSING ON SOCIAL MEDIA.



# USING WHAT'S AVAILABLE, WHEN IT'S AVAILABLE



**RICHARD SINK**

Founder,  
Critical Connections

Richard Sink is the founder of Critical Connections. He has more than 30 years of tech experience and 10 years of experience in online business optimization. He is well versed in how new technologies, search engine optimization campaigns, Web development, and social media strategies can solve business problems, improve business processes, and achieve a competitive advantage that will positively affect his clients' bottom-line results. You can find Richard on LinkedIn, Facebook, Twitter, Pinterest, and Google+.



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Knowing you're succeeding is one thing; knowing why is even better. Most analytics tells us what's happening, but it's more important to know who's doing it, how they found us, what their profile is, and what they're purchasing.

Where can you find the signals for improving your business? One strategy is to follow what your customers and prospects are posting and discussing on social media. Make lists of relevant topics, ideas and trends. Follow popular industry blogs and pay attention to the posts that generate the most feedback and comments. All industry, company, and executive mentions should be captured and monitored to ensure a positive brand image. Sign up for Google Alerts to be notified of specific topics. Over time, relevant insights will begin to emerge, and you'll adapt your business operations accordingly. Armed with this data, you can begin to shape your customers' opinions and influence their purchasing behavior in ways never before imagined.

The next-generation Web (Web 3.0) is all about the data and analyzing it to produce more efficient and actionable results. Until that's a reality, you have to use what's available, when it's available.



***Download the full e-book: Real-Time Analytics***



Over time, relevant insights will begin to emerge, and you'll adapt your business operations accordingly.





# AVOIDING THE BOTTLENECK



**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.

“What happens when the bottleneck is in our processes and people?”

## KEY LESSONS

- 1 AVOID RELIANCE ON CENTRALIZED DATABASES.
- 2 EMPOWER USERS TO ACCESS AND ANALYZE THE BUSINESS DATA THEY NEED TO GET ANSWERS.



# AVOIDING THE BOTTLENECK



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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.



**[Download the full e-book: Real-Time Analytics](#)**

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

”

# FUELING THE HR FIRE WITH ANALYTICS



**KURT BALLARD**

CEO, ACT Bridge Inc.

Kurt Ballard has spent 20 years in the human capital management field. Prior to coming to ACT Bridge in 2011, he had co-founded talent measurement leader PreVisor, helping to build a global leader in cloud-based talent measurement. As CEO at ACT Bridge, Kurt is leading the expansion of the company's products and services. Kurt is an industry speaker and past contributor to *BusinessWeek*, *Human Resource Executive*, *SourceCon*, and the Human Capital Institute.



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If talent is the fuel that powers your organization, analytics is the performance accelerant. Human resources (HR) metrics and how they're used have been changing rapidly over the past several years. Talent, organizational development, and HR leaders should upgrade to cloud-based systems with powerful functionality and analytics that align to business outcomes. Here are a couple of areas to consider.

Using analytics to develop and deepen talent pools has never been easier or more readily available. Yet, Deloitte reports in its *2014 Global Human Capital Trends* that although HR leaders are beginning to use analytics for recruitment and development, 54 percent say they are still “weak” in this area. HR professionals should develop skills and comfort with data, statistics, and analytics. Talent analytics can be applied to identify the top sources of talent, build talent communities through social media, and cultivate prospective new employees using candidate relationship management tools to nurture passive job seekers. Analytics can be used to enable recruitment teams to collaborate about the candidate pipeline and gauge the efficiency of the talent-acquisition process. This collaboration saves time and resources by immediately sharing data across a disperse recruitment team. Companies that leverage big data and powerful analytics will improve the quality and efficiency of talent acquisition.

“If talent is the fuel that powers your organization, analytics is the performance accelerant.”



## KEY LESSONS

- 1 COMPANIES THAT LEVERAGE BIG DATA AND POWERFUL ANALYTICS WILL IMPROVE THE QUALITY AND EFFICIENCY OF TALENT ACQUISITION.
- 2 TALENT MANAGEMENT LEADERS MUST LEARN TO LEVERAGE QUANTITATIVE METRICS THAT CONNECT TO BUSINESS OUTCOMES.
- 3 CULTIVATE TALENT THROUGHOUT YOUR EMPLOYEES' CAREER BY PROVIDING THEM WITH DATA-DRIVEN CAREER PATH-BUILDING TOOLS THAT USE ANALYTICS TO PRESENT OPPORTUNITIES.

# FUELING THE HR FIRE WITH ANALYTICS



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Kurt Ballard has spent 20 years in the human capital management field. Prior to coming to ACT Bridge in 2011, he had co-founded talent measurement leader PreVisor, helping to build a global leader in cloud-based talent measurement. As CEO at ACT Bridge, Kurt is leading the expansion of the company's products and services. Kurt is an industry speaker and past contributor to *BusinessWeek*, *Human Resource Executive*, *SourceCon*, and the Human Capital Institute.



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Using analytics doesn't end when talent is hired, either. Analytics have replaced the annual employee engagement survey and performance review. Today, talent management leaders must learn to leverage quantitative metrics that connect to business outcomes. Measurables such as compensation histories, performance ratings, time and attendance, and training program participation can all be correlated with business outcomes. Take this even further and use analytics as part of an engagement strategy. Cultivate talent throughout your employees' career by providing them with data-driven career path-building tools that use analytics to present opportunities that align with the personal skills and aspirations of internal candidates. This will increase engagement and improve retention of top talent.

Using the appropriate metrics and taking action to improve people processes helps any organization build the best workforce possible.



**[Download the full e-book: Real-Time Analytics](#)**

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Analytics have replaced the annual employee engagement survey and performance review.

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Data helps us make  
messaging more fun.

Guy Fighel  
Director of Engineering



We are *all* data nerds.

