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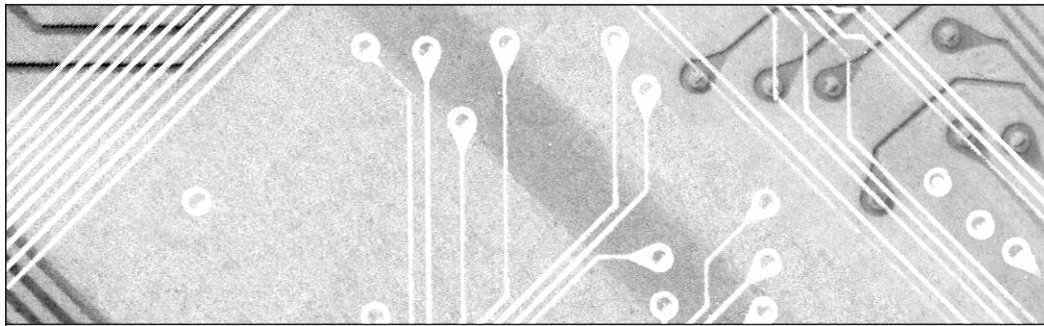
"With any substantial investment in new technology comes the question of value. Is there enough value in the mountain of unstructured social media data to justify the expense and effort of examining it?"

**— Matt Ganis and
Avinash Kohirkar,
Guest Editors**

The Value of Social Media Data Analytics

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Cutter IT Journal

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Part of Cutter Consortium's mission is to foster debate and dialogue on the business technology issues challenging enterprises today, helping organizations leverage IT for competitive advantage and business success. Cutter's philosophy is that most of the issues that managers face are complex enough to merit examination that goes beyond simple pronouncements. Founded in 1987 as *American Programmer* by Ed Yourdon, *Cutter IT Journal* is one of Cutter's key venues for debate.

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Editor Emeritus: Ed Yourdon
Publisher: Karen Fine Coburn
Group Publisher: Chris Generali
Managing Editor: Karen Pasley
Production Editor: Linda M. Dias
Client Services: service@cutter.com

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Opening Statement

by Matt Ganis and Avinash Kohirkar, Guest Editors

Anything can be measured in an attempt to show its value. Of course, there are many ways to measure a return on investment, but the question we pose in this issue of *Cutter IT Journal* is: "How do you measure the value of social media analysis?"

Actress Salma Hayek once remarked:

People often say that "beauty is in the eye of the beholder," and I say that the most liberating thing about beauty is realizing that you are the beholder. This empowers us to find beauty in places where others have not dared to look.

We believe this is true with social media analysis — that there is value in places we haven't yet explored. In this issue of *CITJ*, we address the value of Big Data analysis of social media content and provide guidance, insight, and actual case studies on whether or not the knowledge and insight derived from this data is worth the resources spent.

With the widespread adoption of social media sites such as Facebook, LinkedIn, and Twitter, social media has become one of the larger sources of Big Data. This increased volume of data has created a slew of new IT issues that need to be considered, the most significant one being "What do we do with all this data?" As a result, we're seeing an increased demand for more storage capacity, enhanced needs for computing power, and the introduction of new technologies (such as Hadoop), all of which make undertaking a social media monitoring campaign no small task.

As IT requirements grow, so do budgets and the level of investment required. With any substantial investment in new technology comes the question of value. Is there enough value in the mountain of unstructured social media data to justify the expense and effort of examining it? At some point, senior management must wonder if it's really worth it. Are we learning anything new from this analysis? Are the insights and knowledge gleaned sufficiently important to justify the investments in this new technology?

When we have vast amounts of data, we as humans tend to get overwhelmed. As we collect and organize that data, we start to call it "information." By applying logic and reasoning (and other sources of information), we turn that information into knowledge, something that (hopefully) gives us a competitive advantage over others. While Francis Bacon may have observed that "Knowledge is power," in the case of social media analytics, we may want to listen to Irish essayist Robert S. Lynd's words instead: "Knowledge is power only if man knows what facts not to bother with."

With the widespread adoption of social media sites such as Facebook, LinkedIn, and Twitter, social media has become one of the larger sources of Big Data.

In the case of social media analytics, we might be able to determine our customer's view of our latest product (the positive or negative sentiment). Surely there is value in knowing this. But how do we translate that into its monetary form? If our organization has spent thousands of dollars to implement a social media listening program and determined that some percentage of potential customers don't like the color of our latest product, does that justify the investment we made in establishing that listening program? Maybe. But if the investment is in the millions, and the insights aren't as clear-cut, would our answer be the same?

Let's say we are a major movie studio, and we're about to release a new multimillion-dollar film into the theaters. With a social media listening program in place, we might determine that there is very little chatter about our upcoming release, while there appears to be an overwhelming amount of discussion about a competitor's movie due to be released on the same weekend. If we can determine that the "buzz" around our

movie needs to increase, and we immediately take action to raise the public's awareness (thus saving our "box office draw"), can we claim that the social media program has proven its value to us?

What is "value"? Is it an investment, a hedge against the future, or knowledge?

As Jim Love observes, even though the potential value of a social network grows with its size, the *actual* value realized depends on how effective one is at eliminating the vast amount of extraneous and redundant information.

IN THIS ISSUE

We begin the issue with an article by Cutter Senior Consultant Jim Love, who observes that even though the potential value of a social network grows with its size, the *actual* value realized depends on how effective one is at eliminating the vast amount of extraneous and redundant information. This is exemplified by the "law" formulated by science fiction author Theodore Sturgeon: "Ninety percent of everything is crap." Love suggests that in the highly competitive business climate we live in, discovering and delivering value from social media requires a strategy and an approach grounded in measurement. He argues that organizations need to discover their *social media path to value* or else "risk the disaster of measuring the wrong things." Love offers practical tips

UPCOMING TOPICS IN CUTTER IT JOURNAL

NOVEMBER

Scott Ambler

Disciplined Agile Delivery: Part II

DECEMBER

Matt Ganis and Avinash Kohirkar

Value of Social Media Data: Part II

JANUARY

Lynn Winterboer

Does Agile = Better BI/DW?

with real-life examples for using measurement to "drive the cultural and behavioral change that sustains results."

Our next piece, coauthored by P Gopa Kumar, Girish Khanzode, and Mallika Bahety, begins by providing a good introductory overview of the broad landscape of social media data analytics. While the "incredible volume of data on the social Web is a gold mine of market research and consumer understanding," the authors write, it creates "the need for a high-quality social intelligence platform enterprises can use to derive actionable and meaningful insights for real-time decision making and proactively beating the competition." They argue that an optimal listening platform would be based on *netnography*, which is the application of ethnography to social media in order to gauge the sentiments and desires of online consumers. Such a platform would "help organizations become highly mature in their social listening capabilities and culminate in building influential supportive communities that would become a source of sustainable value creation." The authors then discuss a maturity model by which an organization can assess its level of knowledge building and determine where it needs to go next.

Thad Scheer offers a different perspective on the strategy for extracting business value from social media. "Most of what passes for social media analytics today is questionably accurate buzzword data," he observes, and when every company in a particular sector listens to the same feeds, analyzes them using the same tools, and tracks the same variables, the resulting business lift is minimal anyhow. So why are enterprises so in thrall to social media analytics? Because, Scheer says, they are "real, raw, and now," not the products of surveys and focus groups. As enticing as this is, he contends that the missing link in social media data analytics is usually a *data analytics strategy*, as distinct from social media strategy. Rather than listen to "buzz," organizations can "apply advanced analytics to discover new value from data, value that is of strategic importance because it informs executives about unique sources of new revenue, new markets to open, or other opportunities." This is where social media's triple-digit returns can be found, Scheer argues, not in buzzword counts and sentiment trends.

Next, Nick Kadochnikov looks at the insights and value that a number of different organizations are gleaning from social media. Describing some very revealing use cases, Kadochnikov shows how organizations can sometimes get answers they didn't expect. In one such instance, he relates how a company was looking to

understand consumer opinion on price reductions versus packaging changes, only to find that they wanted neither! When seeking clarification on one topic, they found a completely different insight — one that saved them from making a costly investment or shrinking their margins.

Finally, recognizing that no organization can derive value from a social media program if the data that drives it is flawed or incomplete, Cutter Fellow Steve Andriole advises us on how to select the right social listening partner. He offers seven criteria for choosing a capable vendor, ranging from the vendor's ability to collect, filter, structure, and analyze social media data to whether it can measure its own effectiveness. Andriole does a wonderful job of looking at what an organization requires to successfully implement a social analytics program and provides a useful matrix for determining which vendor's offerings best meet the particular needs of your organization.

IS SOCIAL MEDIA WORTH IT?

Understanding consumer sentiment and opinions isn't new. But in this brave new world of social media — where everyone has the opportunity to express an idea,

a grievance, or (if we're lucky) a compliment — the sheer scope of the task can seem daunting. In this issue, we take you from the justification for this type of analytics, to a discussion of frameworks to support it, to an examination of how to sustain this work with the help of industry partners. We hope this issue of *CITJ* makes the path into this new world a bit clearer and, with luck, helps you find value in a place you never thought to look.

Matthew Ganis is an IBM Senior Technical Staff Member (and Certified Scrum Professional) within the IBM CIO organization and part of the ibm.com site architecture team. He is the Chief Architect for IBM's Internal Social Media analysis initiative. Dr. Ganis is a Senior Member of the ACM and cochair of the Agile New York City user group. He also serves on the editorial board of the International Journal of Agile and Extreme Software Development and has authored a number of papers/books on his experiences with Agile methods, including Practical Guide to Distributed Scrum. He can be reached at ganis@us.ibm.com.

Avinash Kohirkar is an Executive Project Manager within the Social Insights Group as part of the IBM CIO organization. He has a strong technical and business background across various disciplines based on numerous projects executed within IBM as well as with IBM customers. Mr. Kohirkar currently manages social analytics projects for the benefit of IBM business units utilizing internal and external social media sources. He can be reached at kohirkar@us.ibm.com.



By the Numbers: Using Social Media Measurement to Drive Results

by Jim Love

It is a tale told by an idiot, full of sound and fury,
signifying nothing.

— William Shakespeare, *Macbeth*

THERE OUGHT TO BE A LAW ...

One of the benefits of having worked in both product management and technology for over 35 years is that you gain a certain perspective. We live in an endless stream of invention. It seems as though everything is new. But to the astute, the observant, even in an explosion of discovery, patterns emerge.

If you are brilliant, you see these patterns earlier than others. Intel cofounder Gordon E. Moore observed in 1965 that the number of integrated circuits (remember those?) would double every two years. This brilliant insight came to be known as Moore's Law, and it predicted and explained the growth in technological capability and the decrease in cost — and hence the ubiquity — of computing.

Today, everyone knows Moore's Law. Far fewer, however, have heard of Metcalfe's Law. Metcalfe, the coinventor of Ethernet, observed that the value of a network could be expressed as the "square of the number of connected devices." The best explanation I ever got of Metcalfe's Law was several years ago from a friend who used the analogy of fax machines. What is the value of one fax machine? Nothing. It's not until you have two devices — a network — that value emerges. Each additional device adds not linear but exponential growth to the value of the overall network. Fax machines may be a dated analogy, but the principle remains.

Proponents of social media have argued a proposition similar to Metcalfe's Law. The value of your network is directly correlated to its size; that is, the number of "nodes." It's a tempting proposition. Metcalfe, like Moore before him, was a genius and visionary, something I clearly am not. Nevertheless, I am going to have the temerity to correct social media "gurus" and dispute with Metcalfe himself — at least in this context. I would

argue that the number of connected nodes on a network does not give the network *actual* value. It gives the network *potential* value. The capability to create value may grow exponentially, but the actual value does not.

Call me cynical, but the actual value of many human networks is moderated by another law, this one taken not from science but from science fiction. Theodore Sturgeon, a 1950s-era science fiction writer observed in the March 1958 issue of *Venture*¹ that "ninety percent of everything is crap." Sturgeon was referring to science fiction writing, but he extended his observation — initially called "Sturgeon's Revelation" — to include all art.

My own personal revelation with regard to any electronic network is that understanding the *real* value created by or within those networks requires the combination of Metcalfe's Law and Sturgeon's Law. Our own office anachronism, the fax machine, often spews out an endless stream of nonsense. A quick glance at your inbox will clearly demonstrate that most email is worthless and a waste of precious time. There are countless examples that show Sturgeon's Law is alive and well within any network.

Yet we never seem to learn. As each new technological innovation enters the market, we seem to see only the big numbers and the *potential* for value and not the inevitable deluge of "crap" that accompanies the growth of any human network. Social media is an absolute case in point. Everything seems driven by the large numbers. The number of friends. The number of contacts. The number of messages sent and received.

As a result, social media in a business sense has often given rise to two armed camps. There are the believers — those who confuse the potential value with the actual value. I call them "Sturgeon's Law deniers." On the other side, there are the cynics. These maintain that anything "social" is a time waster. It's not real work or capable of generating real value. As Oscar Wilde said, a cynic is "a man who knows the price of everything, and the value of nothing."

Somewhere in between is the truth. Part of that truth is that human beings crave connectivity. As much as we complain, few of us are willing to cut ourselves off from social media even though we despise wading through the detritus of communication. Dealing with the vast amount of a crap is a price we are always willing to pay for content and connectivity.

There is another truth we cannot ignore. Those who find and focus on the *value* and not the *volume* in social media find commercial success. In the modern enterprise, it's essential. Every person and every organization is strapped for time and resources as never before. Our marketplace is not merely competitive, it is hyper-competitive. This is the central question and the real challenge of social media strategies: how do we use them to find and leverage the value and minimize the waste?

It is possible to do — by leveraging measurement to discover, drive, and deliver value.

Measurement forces you through the rigor of developing a clear approach targeted at results. It makes you start from the results you want and work backward. We all know that focusing on measurable results *gets* results. You get what you inspect, not what you expect. Despite this, it is the antithesis of what many social media campaigns do.

Measurement is also essential to drive the cultural and behavioral change that sustains results. Regular measurement drives the step-by-step, behavior-by-behavior change that builds habits and, eventually, a cultural change.

THE BUSINESS IMPERATIVE: MASTERING THE DIGITAL — AND SOCIAL — SPACE

One of my consulting clients is IT World Canada, the leading publisher to the IT community in Canada. “Client” doesn’t do justice to the relationship, though. Publisher Fawn Annan originally brought my colleagues and I in to work on a specific project but subsequently asked us to stay and help the company transform every aspect of its business. She had one condition — that I would agree to become the CIO of the company for the term of the transition and transformation. It was a challenge I couldn’t refuse.

Why? If most business has moved to a period of hyper-competition, we need a new superlative to describe what is happening in the publishing industry. As Annan said in a recent speech, “Who is our competitor? Everyone!” It is true throughout the industry.

Blogs, newsletters, Web pages, and social media presence all compete with every publisher for the attention of the same audience. Every “free” offering that comes to market does so by offering to deliver some form of advertising. While the competition for audiences grows, the price of advertising plummets. For publishers, it’s a perfect storm. Those who fail to innovate and compete simply fall by the wayside.

Those who find and focus on the *value* and not the *volume* in social media find commercial success. In the modern enterprise, it’s essential.

Annan was quick to realize this challenge. Prior to joining the publishing industry, she had made her name in trade shows and had delivered innovative programs, often taking on much larger competitors and building some large and enduring successes. In this other — also highly competitive — world, she’d learned to anticipate changes early and to adapt with a refreshing creativity. Sometimes, this meant taking chances. At one point, she had her team dress up in uniforms to make a highly theatrical presentation to a very conservative client. That risk taking paid off and developed into a multi-million-dollar, multiyear opportunity. Other successes followed. So did the challenges.

In this case, Annan was equally bold. She sat with her team (including me) at the boardroom table almost two years ago and asked, “What would happen if we stopped *printing* any of our publications and went totally digital?” It wasn’t really a question. Annan had done the numbers and saw the writing on the wall. Objective measurement told her a story that no one could deny.

In an industry where revenue still came from subscriptions, where advertisers understood and liked the idea of advertisements in printed publications, it was a bold move. You only had to look at the shocked faces around the table to realize that. But it’s one thing to announce this to your employees. It’s quite another to also go to your shareholders and say what amounts to this: “We are going to forgo what is still a significant revenue stream in favor of a largely untested theory that advertisers will follow us into a new, totally digital world.” That took corporate courage.

The fact that almost every major tech publisher has since followed suit proves that, in hindsight, the project we called “Stop the Presses” was indeed the right move.

From Frying Pan to Fire?

Although Annan believed that the move to totally digital delivery was essential, there was another inescapable reality. The digital space was itself evolving rapidly. Social media was redefining how publishers created and delivered. As much larger publications (newspapers in particular) proved, simply delivering the same model or experience online was not enough. On the other hand, the emerging success of publications like the *Huffington Post* or blogs like *Mashable* seemed to indicate that those who embraced and mastered the new reality could prosper.

Our perspective on that new reality was that publishing might be in decline, but communities and great content were enduring and perhaps even growing in a new digital social space that few truly understood. IT World Canada had to change more than its business. It had to change the culture. It would survive and thrive if it could do a number of new things — including mastering this new digital social space in a very short period of time.

Organizations that have a clear path to value know exactly what they have to measure. Those that do not risk the disaster of measuring the wrong things.

MEASUREMENT AS A TOOL OF TRANSFORMATION

Those who know me or have read my work know that I am passionate about measurement. For many years, I’ve seen the power of measurement to effect change. I’d lived by the mantra I noted earlier in this article: “It’s not what you expect, it’s what you inspect.”

Over the years, however, I also began to appreciate that the power of measurement was a double-edged sword. Time and again, I’ve repeated what I’ve had the chutzpah to call “Love’s Revelation”: the *right measures* can pull an organization into alignment with its strategy and deliver incredible value, but the *wrong measures* can destroy value and devastate an organization.

That leads to the big question: how do we know what the right measures are? This is where a strategy with clear measurement goals is essential. Without it, the emperor

has no clothes. Goals alone are not enough, however. You have to have a simple understanding of how you *get* to those goals — something I’ve termed the “path to value.” Organizations that have a clear path to value know exactly what they have to measure. Those that do not risk the disaster of measuring the wrong things.

As I looked at social media, it struck me that in so many cases, this path to value was exactly what was missing.

THE SOCIAL MEDIA PATH TO VALUE

Too many organizations confuse activity with purposeful action. For them, especially in a crisis, it’s important to do *something*. The worse the crisis, the more pressure there is to act. If you follow this path, at best your success will have had more to do with luck than with planning. At worst, you will do damage — sometimes serious damage.

Those who are late to the social media party covet the results that others seem to have achieved. They feel left behind — they feel that they have to do *something*. A recent case drove this home to me. I know a self-confessed Luddite who runs a consulting firm. While that sounds strange for those who make their living in IT, it’s surprisingly more prevalent than one might think. Too many supposed leaders of technology companies live by the adage “Technology is my business; it’s not my skill.”

This person made the great leap from social media skeptic to convert when his daughter, in her early twenties, won him over with a passionate speech about social media being the “way of the future.” It echoed what he’d read in the trade press. Her facility with social media made it look easy. When she pointed out that he could get three student interns from a local university to start the program for free, he was sold.

In one fell swoop, he fell victim to two great myths of social media that confound any measurement approach. The first myth is that “only the young really understand social media.” That’s absurd. Facility at using a *medium* doesn’t make you an expert at applying it for business. People use telephones every day. Does that make them exceptional telemarketers? People use email every day. Does that make them sought-after email marketers? Thousands of us purchase products from websites. Does that make us e-commerce experts?

The clear answer to all of the above is “of course not.” So why is it we think that because someone uses social media — in a totally different context — he or she is qualified to advise on its use in business? Especially

when the target customers for that business are often twice the person's age? How can you get anyone to invest in a business under that principle?

Partly, I think, it's due to a second myth — that *social media costs nothing*. In the case of this consultant, his daughter had also convinced him that unpaid interns could be recruited to launch a social media campaign that would take little effort to sustain. The siren song of unpaid or low-paid resources was too much for him.

The result was an unmitigated disaster. The first campaigns brought a lot of followers to the company's social media pages and Twitter accounts. While the volumes and activity grew, the results never materialized. One reason, which I pointed out quite early in the process, was that few if any of these "followers" were potential customers. Why was this so clear to me and no one else? In a word, "measurement." It wasn't rocket science. It was Marketing 101.

No serious marketing professional would start a "classic" marketing campaign without knowing how to qualify who is a potential client and who is not. Without that basic knowledge, how do we answer the other key questions, such as "What needs and problems do they have?" and "How can we address those better than anyone else?"

Anyone who has run a marketing or sales department knows that this is hard, disciplined work. You would never trust your corporate marketing and brand image to someone with no experience, so why would we do this in social media?

This is a pattern I've seen all too many times, in businesses large and small. One very large company that has spent tens of thousands on social media campaigns and measurement has a large staff working on social media campaigns. A manager there recently confessed, "I have a lot of data. I just don't know what insight I can get from it."

In Search of Actionable Insight

It's precisely insight that could and should drive social media — insight that leads to action. Insight into who is your potential customer and who is *not*. If you can't answer that, you'll never be able to get insight into other essential areas. Insight into what will help those potential customers *find you or respond to your outreach* in a world where they are overwhelmed by information and offers. Insight into how you can demonstrate value that *differentiates your offering and builds a lasting relationship* with that customer that will lead to purchase.

Measurement starts with at least a theory of what these answers are. It's then and only then that you can begin the hard work of *listening and learning* — by measuring and analyzing. Once you have this theory in place, it becomes much, much easier to design the type of targeted social media program that will drive success.

One example of this that I cite frequently is a company called Curata. I was looking for curation software a few years back to replace a client's existing homegrown system. So I did what I usually do: I searched for the players, read the forums, and assembled a list of who the real players were. Curata was then a relatively new offering, but they demonstrated that they had understood the basics of social media.

Curation was a relatively new subject area. The systems that supplied it were many and diverse. Everyone had a different approach and a different set of features. Curata had spent some time ensuring that if there was a conversation on curation taking place, they had some presence. They had thought about what someone would search for and had designed their content to be found in these searches. This eventually took you to their website, where they provided more valuable content (see Figure 1), including things such as tools for evaluating curation software, which were generic in nature and not obviously stacked toward them. The materials were perfect for sharing. In short, Curata had created the conditions for a virtuous cycle.

I'm amazed at how much information Curata gives away for free. But if you know who your clients are and what they need, it's not a cost — it's an investment in attracting and nurturing potential customers.

Listen While You Lurk

I used to deliver a sales workshop that I called "Sit Down, Shut Up, and Sell." It came from a realization I'm sure others came to much earlier than I did. *When I talked the least, I tended to have the best results.* Once the customer started talking and I started listening, I got more and more successful.

I realized as well that I'd applied this principle in my most successful work in social media. Instinctively, I looked for places where people were asking questions and looking for help. When I started my consulting company in 2003, we had no corporate identity. We knew that we were in the technology space, but we could do a lot of different things. I spent a lot of initial time on forums looking for what problems people and companies had. As I worked through this, it was natural to post advice. I never thought about selling. We

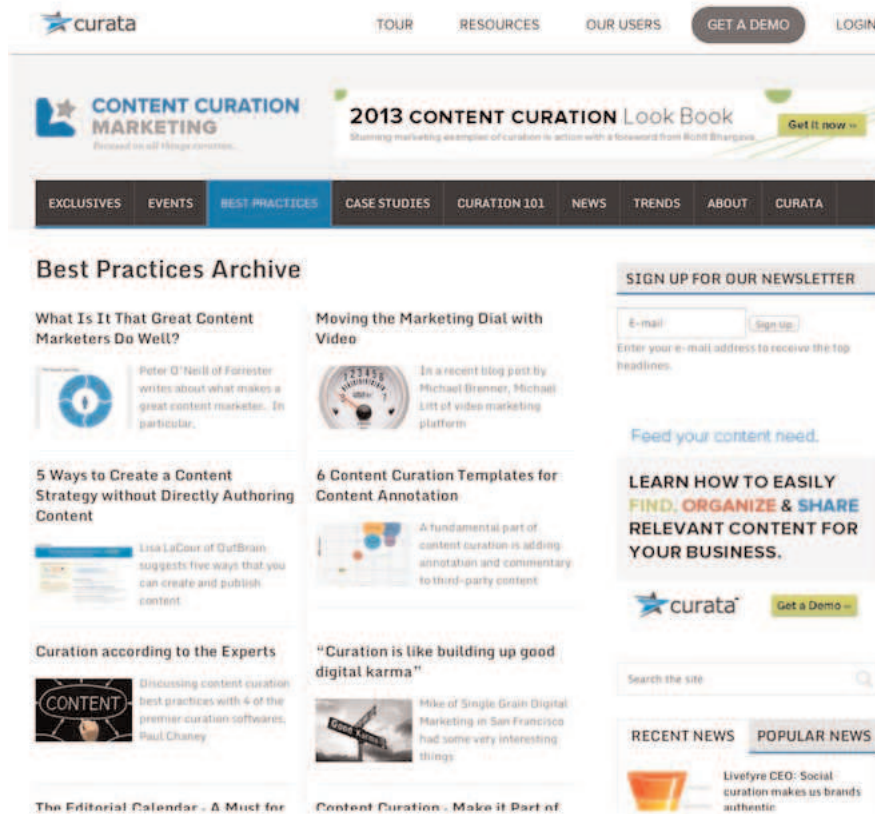


Figure 1 — The Curata site, like others that “get” social media, is full of high-quality content. Each article has a full set of social media sharing buttons to encourage dissemination of content.

kept our contact information subtly available on our posts and worked to solve problems or added value to conversations.

I was surprised at the results. People called us. We also vaulted to the top of the page in a number of key search terms. Months and even years later we got people who came to our website or just called us to say, “It looks like you know what you are talking about.” In absolute terms, the traffic to our site and our number of followers were still relatively modest. Yet our closing ratio was one in every two or three inquiries. In corporate sales, that’s “off the scale.” How did we discover all this? Measurement.

We looked for every opportunity to measure — even when we weren’t sure of what or why. When we did email drops, we could tell you what time of day was best for sending. How? We found that our email campaign software could measure the number of emails opened and at what time. So we tracked it.

How do you apply this to a wider social media conversation beyond forums and into other social media? Today we still use measurement. In the last year, we found a vendor called Next Principles, which provides

a social media measurement package that allows us to monitor and measure conversations. Using their software, we set up “trackers” to monitor conversations across all social media. Whether it’s Facebook, Twitter, blogs, or what have you, we get reports on what is happening.

What can we tell by this? We see what people are “talking” about and who they are. We supply keywords based on our knowledge of our clients and prospects. The software tracks and measures these keywords but goes beyond that. In addition to the keywords or topics that we are searching, simple word counts present other topics of interest (see Figure 2). They help us discover what else people are talking about.

The software also measures something crucial: degrees of influence. As my good friend and networking guru Dave Howlett always says, “It’s not who you know, it’s who knows you.” In the social media world, understanding who the influencers are and how to reach them is key to success. We use measurement for this as well. There are a number of great tools and measurement techniques, and I’ll mention some specific tools and examples, but you can find your own approaches or even toolsets.

Who is an influencer? Well, once you know your topic, search is one way to find out who an influencer is. HubSpot, the company that really defined inbound marketing, watches for prolific downloaders. If you have a great deal of excellent content and can monitor who is downloading it, look for those who are downloading a lot. Regular downloading is a sign of a potential customer. Excessive downloading indicates not potential customers but rather influencers who are learning about an area or a product. If your only interest is in those who have purchase intentions, you'll miss the opportunity to engage influencers in your topic or product area.

The good news is that there are lots of software packages that not only measure this activity, but can also bring it together and link it to a variety of CRM packages. Act-On, HubSpot, Pardot, and a host of others will allow you to use scoring to identify early interest, hot leads, or influencers. Next Principles has what they call an "Uber Profile" that links with packages like Salesforce and Sugar CRM.

Once you can identify who is responding to your social messages or getting on your website and downloading the content, you can use measurement to watch their interactions. On a website, Google Webmaster Tools can help you monitor and learn from behavior. There are "funnels" built into even the free Google toolset. These allow you to establish goals for customer use cases and help you measure how potential clients journey through from initial encounter, to engagement, to how they respond to a "call to action." They'll tell you how many people start the journey and how many drop out at each stage. Most of these tools are free or available at very modest cost. They require only a little technical skill to master. But without a clear understanding of who your customers are and what measurable steps they should follow from encounter to purchase, this is all of very little value.

You can do some exploration with measurement tools. Analytical tools such as Raven and other similar packages go a step further, comparing your site to competitor sites. Another feature can do a semantic analysis of your website and show you objectively what messages it is *really* conveying. Seeing which messages come through and which don't is a real eye opener.

Even people who don't come to your site can still be measured and mined. Using our measurement tools, we have set up our own tracking algorithms to look for potential customers based on a formula that we control. This control is important. For example, we don't care how many Twitter followers someone has; we give

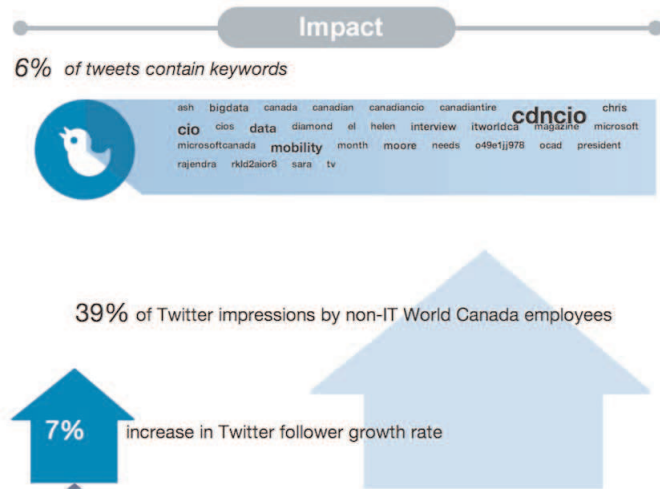


Figure 2 — This is a real-time graphical analysis from our social media measurement tool (Next Principles). It shows the keywords we are searching and displays a tag tree display of related terms.

We can also see at a glance how many of these keywords are generated by our own people. Since this is relatively early in the campaign, you can see that our own staff leads the discussion. If a topic takes off, the numbers will show that movement. We can also see whether this discussion leads to growth in Twitter followers for the accounts we identify.

more weight to who is being "retweeted." We figure that people with the most influence are quoted more often than others, and we transfer that logic into our measurement.

Using the graphics and drill-down feature on software like Next Principles, I was able to confirm what I knew all along. A lot of high-volume social media conversations do not involve potential customers. Instead, there are a lot of consultants and vendors talking to each other. When we started looking at people who had posted just a few messages and then examined *their* profiles, we started to see target customers. Size really doesn't count. In finding our customers, our rule is "less is more."

That's why, especially with qualitative information searches, having some form of visual analysis is absolutely critical. I think of myself as having an analytical mind, but I struggled with stats 30 years ago, and while I love measurement, pure numbers don't interest me. When I can see the results visually and in real time, when I can get insights — that's when measurement makes sense. Putting the variables together and getting a visual map is what brings it home (see Figure 3). I would never have had my "less is more" epiphany if I hadn't had a visual map and a drill-down capability.

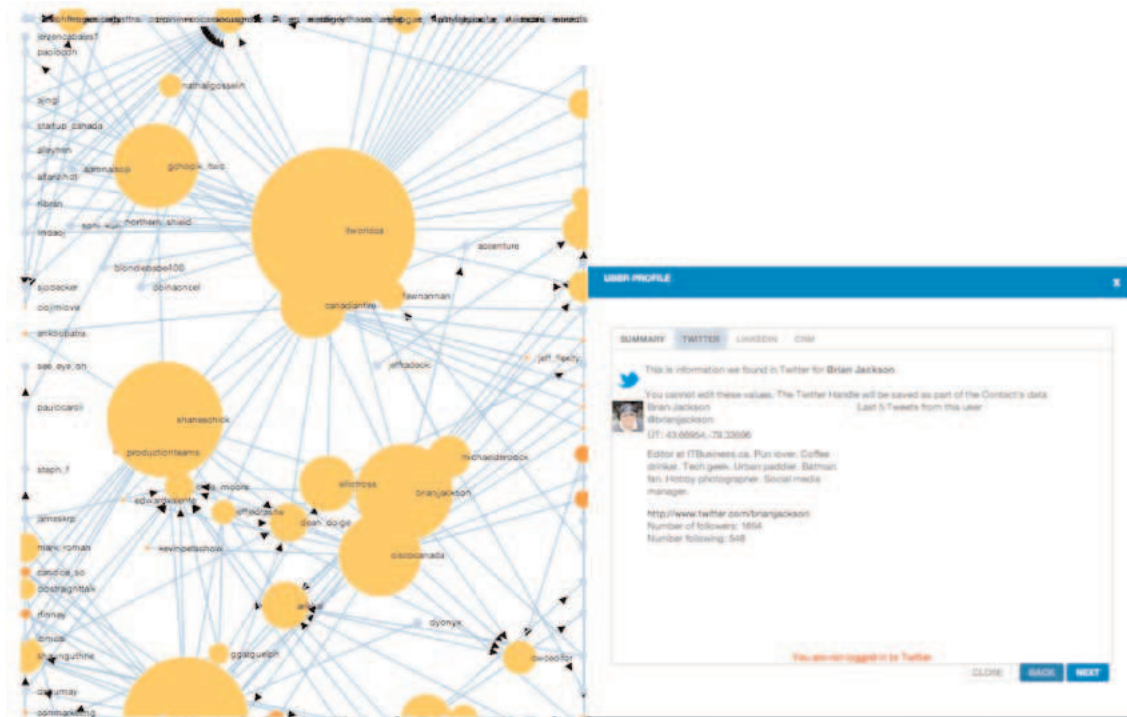


Figure 3 — The toolset we use (Next Principles) allows us to visually monitor conversations to see who the influencers are. In this map, we can see the degree of an individual's influence by the size of the icons. We can also drill down to the profile of any person in the conversation and find out more about him or her. The tools we are using also allow us to see the CRM profile of a person or to add him or her to our CRM system.

The tools are there, and over the years they have become even more sophisticated. All this will work for you if — and only if — you have a strategy for measurement, have a clear plan, and are prepared to do a lot of good old-fashioned hard work.

Crowdsourcing and Outsourcing

The biggest challenge in any social media program is ultimately building and sustaining it. Ideas are easy. Starting new programs is also relatively easy. Few do the proper level of up-front work, but even if you do, that's only the start. If your measurement and listening programs don't cause you to rethink and rejig your approach, then you've learned nothing.

The pros know that the real value of social media lies in listening. Companies pay tens of thousands for market research tools, but few really listen to their customers. It just takes too much effort and time. How do you make use of measurement and analysis? How do you do that when your own staff is stretched to the limits?

At IT World Canada, the challenge is particularly interesting. The company itself needs a strong social media presence and has to learn and move forward based on measurement. That said, this publisher also has many

clients for whom they do social media measurement initially as an adjunct to the core business of content creation and distribution. Who better to generate content, participate in conversations, and provide compelling white papers and video than a publisher?

As in all businesses, the customer comes first, so it's difficult to find time to do what we know is important but not urgent — namely, keeping up with our own social media activities. All social media campaigns start with a burst of enthusiasm. Then they disappear, as T.S. Eliot said, "not with a bang but a whimper." That is, unless social media participation becomes a habit — part of the culture. That's where measurement comes in again. Taking a page from gamification, IT World Canada measures all the social media presence of our staff based on target conversations in which the organization needs to participate. We turn the measurement on ourselves and make contributions visible using the same visual mapping techniques.

To be fair, you can't just measure. You have to make it easy to succeed. So at IT World Canada, we came up with a strategy of posting topics and even have suggested content and messages tailored for the precise audience on the specific social network we are targeting. Staff members are free to take this content and

change it, adapt it, or even toss it out and create their own fully original material. The point is that every day people *see* what we are expecting. (Remember: it's not what you expect, it's what you inspect.) Once we create these favorable conditions for social media participation, we measure our staff's contributions.

This program is an attempt to use measurement to build a team environment based on the same principles that successful crowdsourcing initiatives follow. It's easy. It's fun. You can see your progress and contributions — and so can everyone else. Creative and *tenacious* measurement gets results, and it comes from being both realistic and determined to succeed.

Everyone starts out with great intentions. But everyone is busy. Every social media program will eventually drift. If you measure tenaciously, watch, and encourage, if you understand that everyone “falls off the wagon” but can be encouraged to get back on, you'll get results. It even happens to me. In the past couple of weeks, I confess I haven't done the social media work I should be doing. Even as CIO, I get my daily reminder, and everyone sees my contribution or lack of it. That alone is enough to make sure I find the time — even when things get busy.

CUT THE CRAP

Success in social media requires new behaviors and tough choices. Will we achieve the promise of Metcalfe's Law, where the growth in our network is one of exponential increases in value? Or will we succumb to Sturgeon's Law and be part of the 90% that is “crap”?

Getting to social media success is not easy. It requires companies to adopt new and often radically different behaviors and even attitudes. It values listening over telling. It demands a focus on providing real information as opposed to brochures. It requires companies to really participate in the online community. It demands

that companies speak authentically. It requires them to decentralize — internally crowdsourcing their messaging. It recognizes what we know or should know. Customers and not companies are in control of the buying process. It focuses companies on delivering a high level of value, even to those who might not be their immediate customers.

Despite all the changes in corporate culture in recent years, these new behaviors are not just countercultural, they are unnerving and even threatening. When we are threatened or uncomfortable, we tend to move back to old habits. In most cases, we don't even see ourselves backslide or rationalize our way back to old, comfortable, and (in the case of social media) dangerous behaviors.

If we can't hold a mirror up and see ourselves, others will do it for us. Measurement is that mirror. It helps us discover value, deliver value, and build new habits to survive in this new hypercompetitive market.

ENDNOTE

¹“Sturgeon's Law” (Wikipedia).

Jim Love is a Senior Consultant with Cutter Consortium's Business Technology Strategies practice. He is also the CIO of IT World Canada and a founding partner of Performance Advantage, a strategic IT and business consulting company focusing on outsourcing for the mobile, social, and IT as a service world. Over a 35-year career in business and technology, Mr. Love has served clients ranging from multinational firms to entrepreneurial startups. Prior to founding Performance Advantage, he was a global VP with DMR Group (now Fujitsu Consulting) and a Principal at Ernst & Young. Mr. Love is a sought-after speaker and a part-time professor at the University of Waterloo in the master's program at the Centre for Business Entrepreneurship and Technology (CBET). In recognition of his contribution to the profession of management consulting, Mr. Love was made a Fellow of the Institute of Certified Management Consultants (FCMC). He publishes a monthly blog called Change the Game (www.changethegame.ca). He can be reached at jlove@cutter.com.



Creating Sustainable Value from Social Analytics

by P Gopa Kumar, Girish Khanzode, and Mallika Bahety

Markets change, tastes change, so the companies and the individuals who choose to compete in those markets must change.

— Dr. An Wang

The amount of social data continues to explode. As of 2013, more than 400 million tweets are sent every day,¹ and more than 1.7 billion social network users worldwide engage in online conversations.² This incredible volume of data on the social Web is a gold mine of market research and consumer understanding, which is creating the need for a high-quality social intelligence platform enterprises can use to derive actionable and meaningful insights for real-time decision making and proactively beating the competition.

Social media has fundamentally altered how consumers perceive and engage with brands. It has become one of the primary means by which organizations understand consumer behavior, improve brand reputation, innovate new offerings, and address customer concerns.

As more goods and services get purchased over the Internet, consumers are increasingly relying on the opinions of other online buyers and friends before taking the buying decision (see Figure 1). This has reduced the importance of traditional advertising in favor of online brand perception and brand influence, both of which can directly affect the bottom-line performance of a company.

In order to survive and prosper in this new digital world, organizations are responding with new digital strategies and additional resources to increase the

impact of their social media presence and leverage the opportunities these platforms of free expression offer. As consumer interactions continue to grow at an exponential rate, there is a pressing urgency on the part of organizations to monitor social media interactions through active social listening (see Figure 2).

The impact of social media on the daily life of consumers is significant. While netizens can easily access desired knowledge in seconds due to the power of the Internet, what happens behind the scenes? Why is it that people talk about some brands more than the rest? Why is it that even without trying a product, people automatically assume a particular brand is better than the others? The science that lies behind all these brand perceptions is the secret to deriving the value from social data, which organizations can then leverage to leap ahead of the competition.

AN OPTIMAL LISTENING PLATFORM

In order to derive benefits from online social interactions, social business strategies should focus on relating the results of social data analytics to a revenue number. We feel it is important to embrace “netnography,” a combination of Internet and ethnography, as the basis for a social intelligence platform that can convert online interactions into valuable insights (see Figure 3). Conceived by social media and branding expert Robert V. Kozinets, netnography is a set of cost-effective research techniques based on the concept of applying ethnography to social media to access the minds of online consumers.³

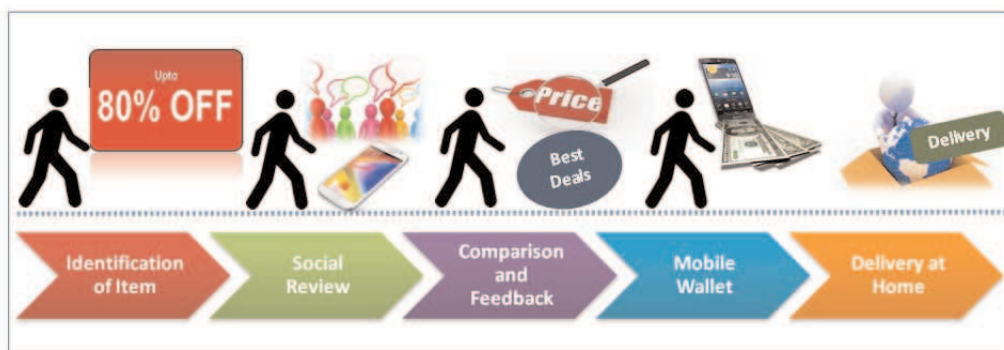


Figure 1 — Social media on the move — now an integral part of daily life.

Netnography targets blogs, forums, and chat rooms in an unobtrusive manner to collect opinions. Organizations can consider these opinions unbiased and accurate due to the anonymity and freedom of expression enjoyed by the participants. These accumulated consumer insights provide precious clues to new and creative opportunities for products, services, and new segments.

When performing a Google search for a topic of interest, we get millions of results in a fraction of a second, but these may or may not be relevant for our analysis. However, with the help of netnography techniques, we can identify all the relevant sources of data, such as social networks, microblogs, online news sites, and social communities. The desired information could take the form of advertisements, reviews, comments, shares, reposts, or many other types of interactions. While we

might fetch a lot of data for a topic, a balance must be maintained between adequacy of data and rigor of analysis. Computationally assisted netnography is extremely useful in striking this balance. When we perform social media analytics — that is, sentiment analysis combined with statistical analysis — we gain valuable insights on consumer engagement, brand reception, and competitor activities. All these insights are very useful for deriving value from social media.

A netnography-based social intelligence platform would listen to relevant online interactions of users and relate them to the offerings of organizations. It would analyze the collected data and provide valuable insights to improve most organizational functions (see Figure 4). This platform could deliver even greater value if it had a combination of outward listening and inward action

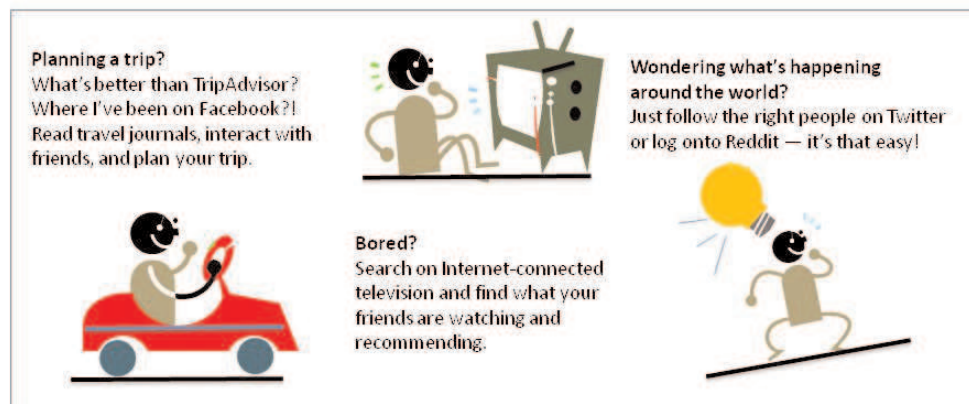


Figure 2 — The social media activities of netizens generate a gold mine of data for insights into market trends and consumer behavior.

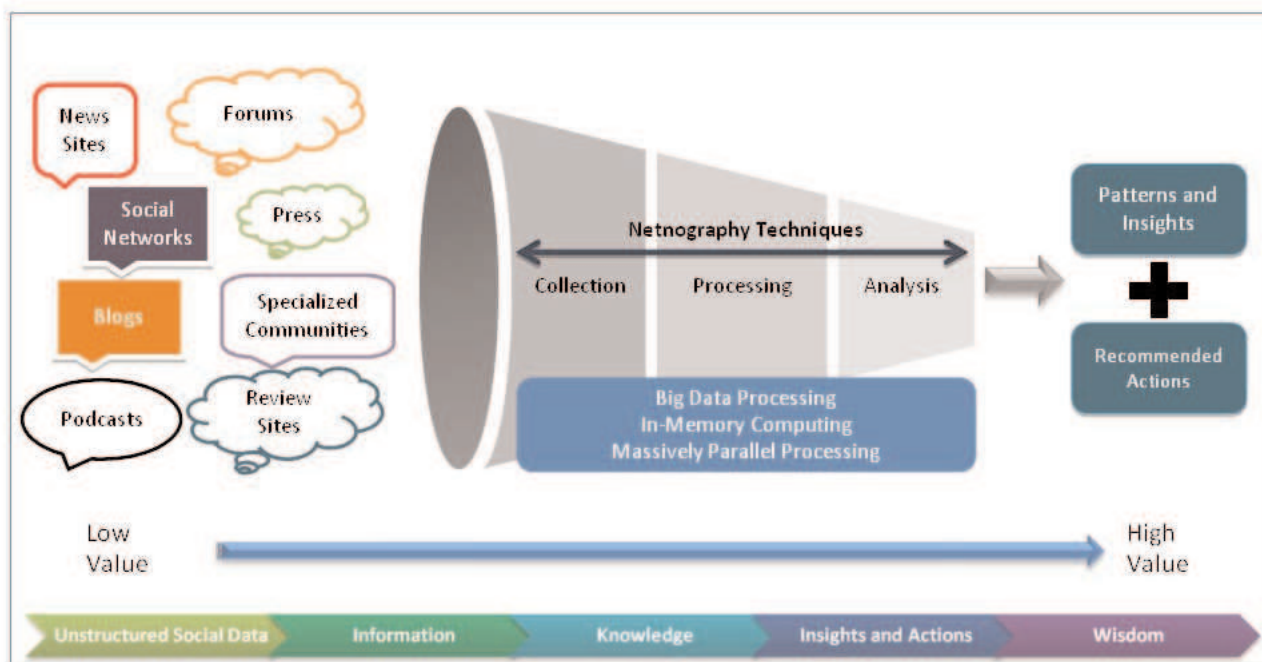


Figure 3 — Steps in netnography.

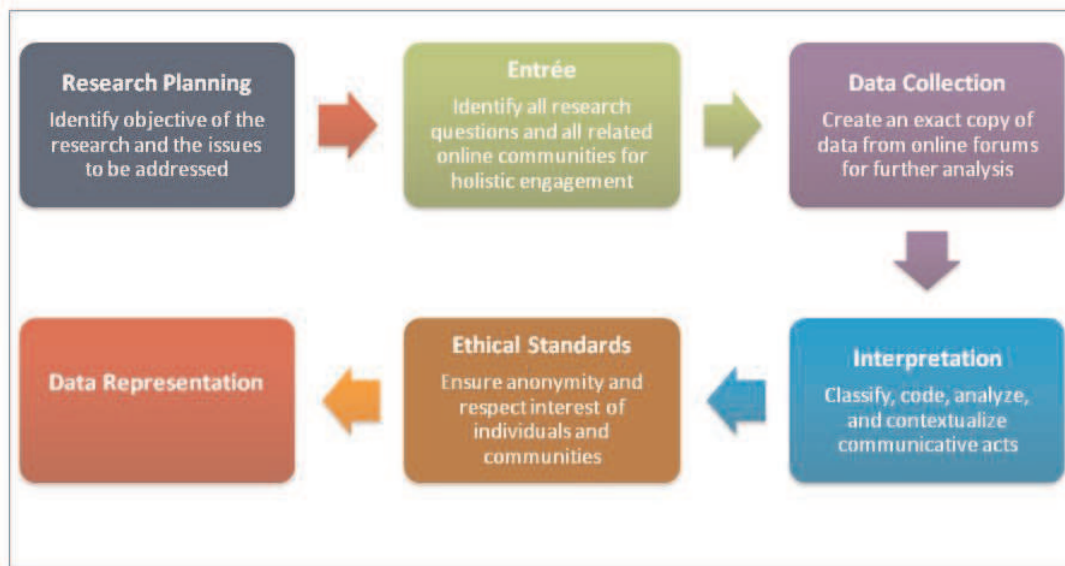


Figure 4 — Value creation using an optimal social business intelligence platform.

built into it. It would perform predictive analysis of the market space based on current social trends. The objective should be to identify the opportunity loss or gains based on the analyzed data to fine-tune future social strategies toward optimized efforts and budgets for improved value creation.

Tons of books and papers have been published on retail consumer behavior in the physical world and how organizations can implement strategies to improve sales. For example, when the dairy case is placed near the bread, the sales of both milk and bread will be higher, since a consumer buying one item will most likely be prompted to buy the other one, too. However, translating the conquests of the physical world to the online world can be a challenging and daunting endeavor.

The traditional rules of *speed to market* have significantly changed due to the emergence of social media, since information can be instantly shared with a large number of global recipients. A couple of decades back, one could not have imagined sitting in the comfort of one's home and purchasing goods on Amazon or eBay with the click of a button. What makes the buying process even more interesting is the fact that a consumer is also aware of what other buyers are saying about these items, which can influence the purchasing decision. This puts a lot of onus on the marketing/PR teams to keep their ears to the ground to the maximum extent possible. Well, in this case, to keep their ears to the social media buzz.

The platform we envisage would help organizations become highly mature in their social listening capabilities and culminate in building influential supportive communities that would become a source of sustainable value creation.

The Process of Converting Social Chatter into Organizational Value

This social intelligence platform should process social conversations in multiple steps, as shown in Figure 5. The final step creates actionable insights that identify profitable opportunities.

It is important that a good platform go well beyond just analyzing the sentiment and advise platform users on how to positively transform the overall social experience of the brand for better returns on each and every dollar spent. The computation (conversion/social share) * (average online sale/cost per impression) can be used to gauge the effectiveness of a social media strategy. The higher the value of this computation, the higher the impact of the social media strategy in question. When this computation indicates positive returns, we can use another computation to project expected revenue based on the social sentiments trending at a given point of time in the social space. This second computation will indicate that the social strategy continues to be effective, if we assume that the sentiments trending on the social space are a fair indication of the brand or product popularity. The second computation is (average online sale/cost per impression) * (positive sentiments/

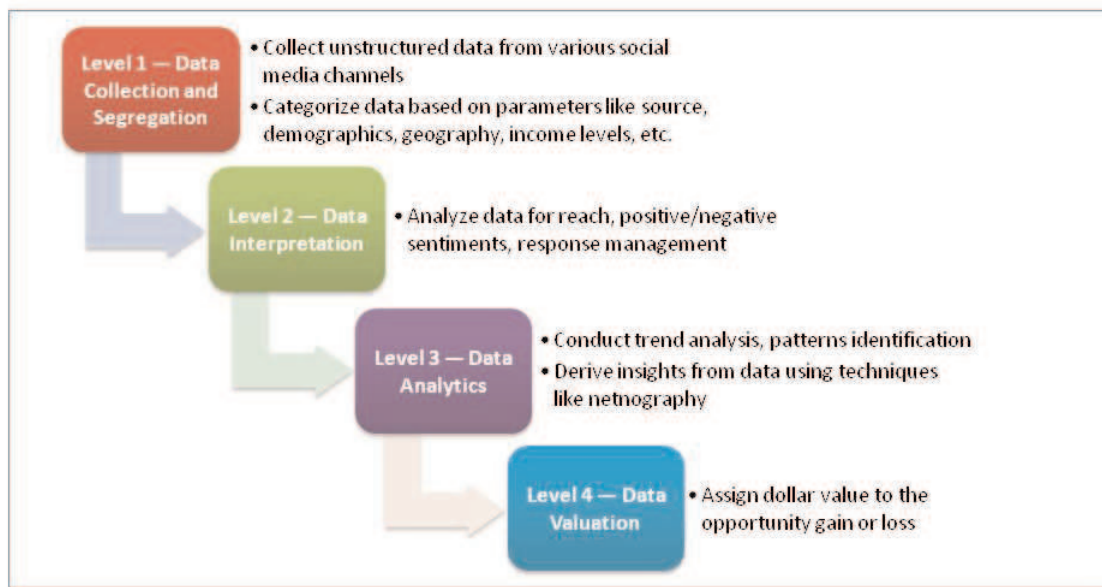


Figure 5 — Value creation process of the platform.

negative sentiments), and it would provide a good indication of the continuity of the upward trend at a given moment based on sentiments and actual conversions.

Marching Toward Higher Value Realization

In order to enhance the effectiveness of their social presence, companies should map their overall social media strategy to the maturity model shown in Figure 6. It will help fine-tune the investments for social media initiatives and create a strategy to move toward a higher-value phase in order to improve returns. Organizations at the highest level of social strategy maturity will find their value creation exponentially higher than those at the lower levels. This is due to the power of social connections, the value of which grows exponentially as the number of network nodes grows.

Measurable metrics are critical in analyzing user-generated feeds. Organizations these days find it very difficult to drill down to the metrics that are most relevant to them. While there are a plethora of metrics available, we recommend a narrow set applicable in most common scenarios that will provide the highest ROI/desired results for the majority of organizations (see Table 1). These metrics broadly belong to four major focus areas:

1. Brand awareness (reach)
2. Market program effectiveness
3. Business outcome
4. Customer satisfaction

Based on the complexity and maturity of your organization's social media initiatives, however, you may want to include additional metrics.

In our experience, a typical sales cycle starts with the organization reaching out to customers by launching new marketing campaigns, which results in creating positive awareness about the product. This activity is primarily covered by two metrics areas — brand awareness/reach and market program effectiveness. As these initial activities trickle down into new sales, business outcome becomes the important metric for measuring success. Finally, as the customer starts using the product, customer satisfaction becomes the more relevant metric.

From the perspective of a consumer lifecycle, which ranges from awareness to advocacy of the product, it is important to analyze different aspects of metrics to derive the best possible results (see Figure 7 on page 19).

CREATING BUSINESS VALUE ACROSS FUNCTIONS

Efficient and smart use of social media can add substantial value to enterprises. A survey of organizations found that social media use improved sales by 16%, improved communication efficiency by 80%, and cut the cost of development by 50%.⁴ Another study found that, when used within and across enterprises, social technologies can improve productivity of high-skill knowledge workers by 20%-25%.⁵ Efficient social listening and analysis can deliver immense business value for organizations in most functional areas, from product development to sales and after sales.

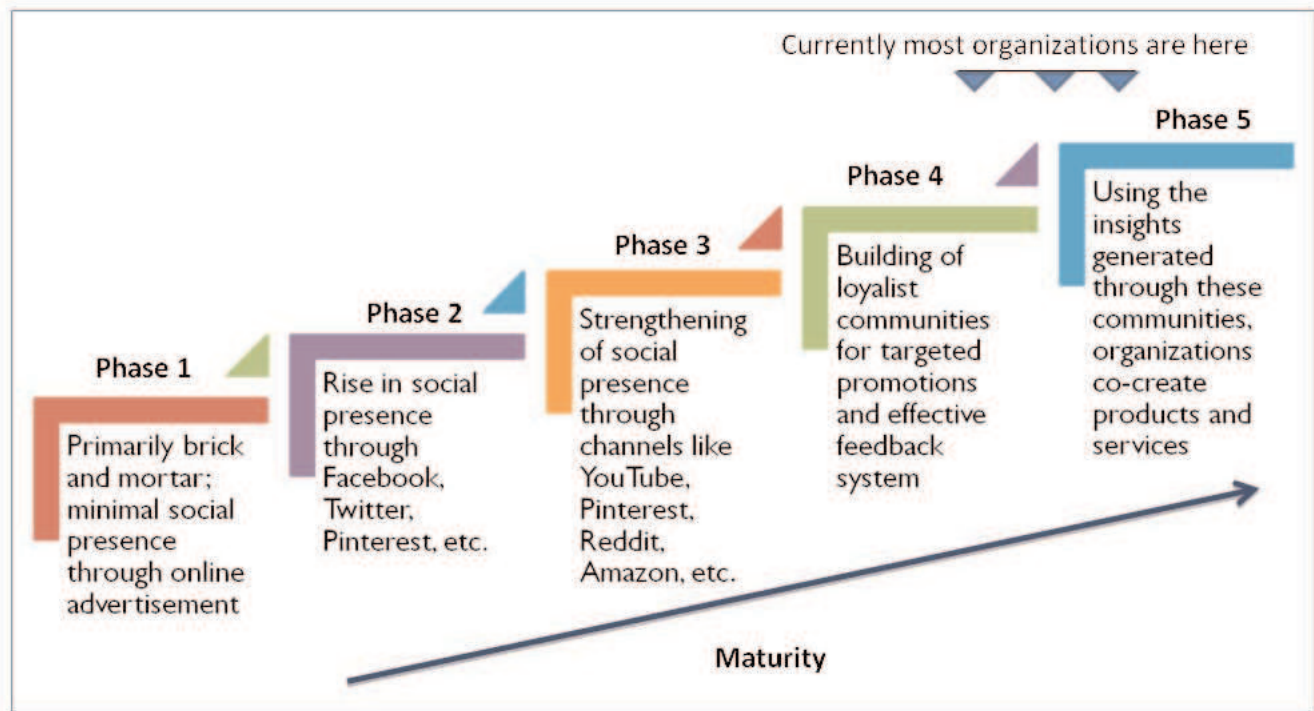


Figure 6 — Maturity model for effective social media strategy.

Table 1 — Key Metrics for Measuring Effective Value Creation from Social Media

Metrics Focus Area	Objective	Recommended Metrics
Brand awareness	Identify netizens who are listening to and actively following the organization.	<ul style="list-style-type: none"> Broad audience size Actively engaged audience size Reach through data-sharing activities, along with similar data for competitors Usefulness of content, as determined by a tool like EdgeRank Number of prominent individuals (key influencers) talking about your brand offerings Support of followers in online communities
Market program effectiveness	<p>Make sure that your market program has all the right ingredients in the right places — words, pictures, insights, and experiences.</p> <p>Ensure that robust marketing efforts are being employed to engage with the target audience.</p>	<ul style="list-style-type: none"> Number of marketing programs initiated by competitors Percentage increase in audience based on a new program Increase in positive mentions and decrease in negative mentions Percentage increase in website visits from social media sources
Business outcome	Measure bottom-line improvements.	<ul style="list-style-type: none"> Per-visit value achieved Economic value Number of downloads, registrations, and sales Percentage increase in conversions from online brand impressions
Customer satisfaction	<p>Remember that it is always more profitable to focus on existing customers than to acquire brand-new customers.</p> <p>Ensure that existing customers are happy and well served.</p>	<ul style="list-style-type: none"> Strength of the positive/negative sentiments about the brand Assessments of similar sentiments for competitors (so as to gauge their strengths and weaknesses) Rate at which customer grievances are addressed Incidents of customer delight New references by existing customers

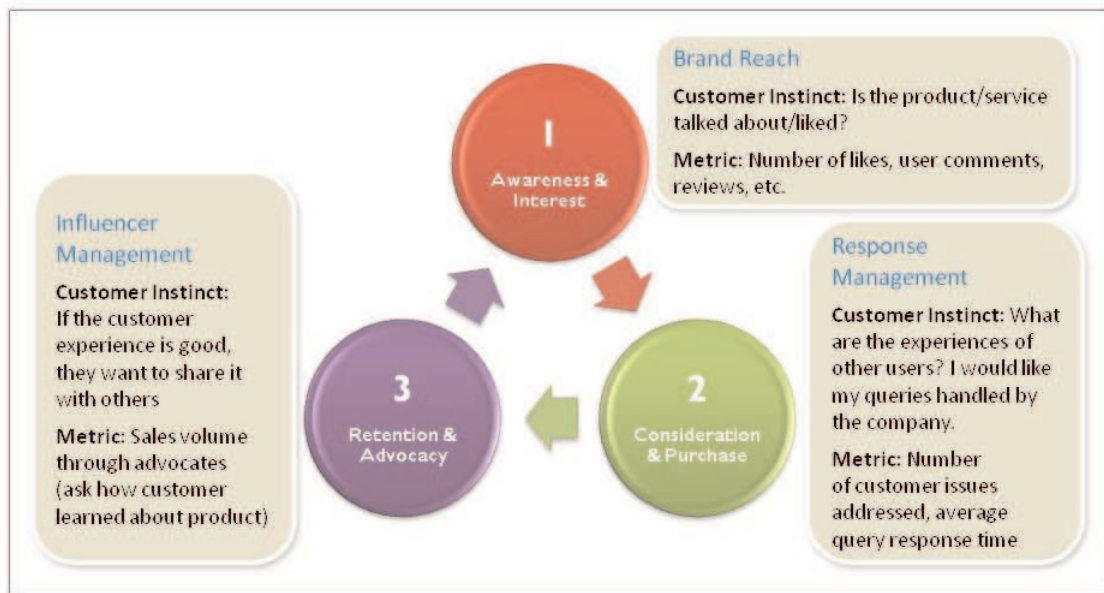


Figure 7 — A typical consumer lifecycle on social media.

Market Research and Product Development

Organizations can create value by engaging customers on social media and by monitoring their conversations to generate insights about their offerings and market intelligence, which can then be used in improving products and services. They can identify and execute co-creation projects with social network users and specialized communities to tap into their creativity, enthusiasm, experience, ideas, and knowledge. It is estimated that 75% of new offerings fail.⁶ To ensure a higher success rate, organizations can test acceptance of new innovations with social users before launching new products.

Sales and External Correspondence

Compared to traditional channels, social channels and platforms offer a much cheaper mechanism for online selling of products and services. Channels such as YouTube, Facebook, Pinterest, and Twitter can be further utilized to strengthen marketing efforts by pushing out relevant content to target users in order to improve brand awareness and create buzz.

When a negative incident erupts, organization can use social channels like Twitter to provide relevant updates in real time. Proactively communicating the steps taken to address the issue will help arrest brand erosion.

Customer Support

“Word of mouth” takes on a more tangible form in online chatter. Consumers expect faster response to their

queries and concerns; they demand quick acknowledgment and appropriate action by the organization. With the help of various social channels, organizations can look into and address complaints and objections more efficiently. Technologies like Social CRM can be used to deal with customer needs and concerns at very low cost, as well as to collect instant feedback and propagate updates to user communities.

BEST PRACTICES

Successful social media analytics not only includes active optimal listening and data analysis but also effectively managing your organization’s online presence to ensure maximum user inputs and engagement. Further, the organization also needs to respond to ongoing conversations in real time in order to mitigate the influence of negative talk and encourage positive talk. The online communities you are able to nurture must be engaged to create sustainable business value and to act as positive influencers. Below we identify some of the best practices for successfully deriving maximum value from social media.

Social Strategy

A vital component in social media analytics is to have a well-defined social strategy governing all efforts. Given the multiplicity of social platforms that each organization operates on, without a focused strategy, the listening process would not result in effective management of social presence and would fail to produce actionable

insights for your business. Some of these focused strategies could include crowdsourcing of ideas, improving brand awareness, increasing repeat sales, or improving customer satisfaction.

Social Media Maturity

While applying the metrics and measuring social performance, your company's maturity level becomes an important consideration. If you have just entered the social space, reaching the maximum audience and creating brand awareness may be the most important concerns. If you have been in the field for a while and have already introduced a campaign, conversions would become a more relevant metric.

Optimizing Presence

With shrinking budgets, social media is not about being present everywhere. As with every other media form, you should be present where it matters the most. Devote significant time to identifying the areas where you should make your maximum efforts. You can identify these focus areas based on the active presence of the relevant target audience. This also facilitates a more focused approach to carrying out analytics on the data, and the results produced tend to be richer and far more meaningful.

Avoid "Me Too"

Do not be present on social media in general or additional social media platforms just because others are there. If you do not have the ability to respond to online comments and concerns effectively, your presence on a platform may do more harm than good.

Strictly Real-Time

In the new world of digital marketing, you need to monitor social media 24/7 in order to respond in real time and avoid damage to the organization's reputation due to negative buzz going viral.

Competitive Intelligence and Benchmarking

Social media analytics and the attempt to create business value from it must take into account competitor activity in the social space. Track the initiatives, performance, and engagement rates of your competitors in order to understand their strengths and weaknesses and develop an optimized response strategy.

Bringing Data Sources Together

Integrate and analyze social data with your internal customer and transactional data. This combination helps you understand the association between your customers' social behaviors and their decisions, such as buying goods online or filing a complaint.

Human Expertise and Intervention

Social media analytics requires active listening in a contextual environment, which makes human intervention critical. Many social applications claim to be highly accurate in processing social media data for actionable insights. However, when analyzing conversations containing irony, tone, slang, and sarcasm, you'll need human involvement for accurate processing. With more and more industry domains present on social media, it is becoming vital to utilize the expertise of industry specialists to accurately interpret the conversations.

ETHICS IN SOCIAL MEDIA ANALYTICS

With the growing need to deliver results, companies often end up encroaching on the personal sphere of netizens, which may violate several aspects of privacy. This can create issues regarding compliance, intellectual property, and liability. It can also result in negative consequences such as loss of customer and stakeholder faith, brand erosion, and fines. As an example, Netflix awarded US \$1 million to a team of statisticians and computer scientists who won a three-year contest to analyze the movie rental history of 500,000 subscribers and improve the predictive accuracy of Netflix's recommendation software by at least 10%. Later it had to shelve plans for a second contest, bowing to privacy concerns raised by the US Federal Trade Commission and a private litigant.⁷

Social analytics efforts should adhere to privacy regulations in order to avoid negative consequences. When collected in internal repositories for analysis, social data should be anonymized whenever possible to protect it from misuse. Organizations should assess the impact of analytics on the trust in the company held by stakeholders. It should also verify that the use of analytics reflects cultural and social norms. Accountable processes must be used while carrying out analysis. An organization should assess whether its use of analytics involves sensitive areas and, if so, accompany it with reasonable safeguards proportionate to the risk.⁸

Analytics capabilities have become so highly advanced that sometimes they can produce personal insights that the individual him- or herself is unaware of. Organizations must be careful in issuing personalized recommendations to consumers based on analytics because, in some cases, they can make recipients uncomfortable. In general, organizations annoy consumers when they secretly collect personal data and consumers fail to understand how organizations use that data or how this organizational activity benefits them.

There has also been an exponential increase in the number of paid reviews: *"It's easy — give me a 5-star review and take a freebie in return."* It's true that incentivizing reviews can lead to an instant boost in sales, with soaring likes, ratings, and positive reviews about the product or service. However, a better long-term approach to getting good reviews is to actively engage the real customers on a forum and do active follow-up. This exercise can deliver an equal number of reviews, but those reviews will be authentic. Thus, the organization avoids the risk of getting caught soliciting paid reviews, with the trust issues that would inevitably raise.

CONCLUSION

The real power of social media lies in the hidden value inside the online conversations of stakeholder communities. Enterprises can use social listening and analysis to identify opportunities and reduce the cost of operations. Given the vast mass of data available, organizations need to apply social technologies effectively to get the best results on a real-time basis. Netnography has been identified as the best technique for holistically analyzing data from all sources. Measurable metrics are critical in analyzing these user-generated feeds. In this article, we have identified specific metrics for covering the entire product/service lifecycle to maximize ROI.

Social media analytics has immense potential for creating real and tangible business value for organizations, from product development to after sales. The techniques we have discussed here, along with the best practices and ethical standards, are key to success. The path to creating value from social channels is not easy. However, those who can master the art will leap ahead of the competition and establish themselves as the brand leaders in their segment.

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⁸Schwartz (see 7).

P Gopa Kumar works closely in emerging trends like social media, sustainability, and mobility and assists teams in delivering value to Fortune 500 clients using these new technologies. He holds a postgraduate degree from WeSchool. He can be reached at Gopa_Kumar@infosys.com.

Girish Khanzode is a products and platforms innovator for futuristic technologies at Infosys. He is a veteran in enterprise software product design and development with more than two decades of professional experience. He has built and led large product engineering teams to deliver highly complex products in a variety of domains, covering the entire product lifecycle. His areas of interest include emerging technology areas such as enterprise data security and privacy, enterprise collaboration, the digital workplace, social analytics, smart cities, Big Data, and the Internet of Things. Mr. Khanzode holds an MTech degree in computer engineering. He can be reached at girish_khanzode@infosys.com.

Mallika Bahety works closely in the areas of social, cloud, analytics, mobility, and sustainability. She holds a postgraduate diploma in management (PGDM) degree from the Indian Institute of Management, Shillong. She can be reached at mallika_bahety@infosys.com.



The Missing Link in Social Media Data Analytics

by Thad Scheer

When something important seems to be missing, it is usually hidden in plain sight. In the case of social media data analytics, the missing component is “strategy.” I don’t mean social media strategy, which is relatively commonplace, or even a Big Data strategy. Rather, the missing link is *data analytics strategy*. The reason for investing in data is to leverage a unique capital asset, and the reason for investing in capital assets is to open new markets or otherwise gain asymmetric competitive advantage. However, this is not what organizations are doing with social media analytics. In most cases what passes for analytics tools in social media is a plethora of trend-o-meters, buzz-o-meters, and predict-o-meters that count words and measure sentiment. The marketing department is the primary consumer of social media analytics, and a big day for them is watching themes trend up or down in connection with a marketing campaign or publicity stunt. What exactly they *do* with all that trend information isn’t always clear.

Ignore for a moment the fact that theme extraction and sentiment analysis are incredibly inaccurate (they are), because even if an ideal sensor could accurately report exactly how sentiment was trending up-down-left-right-diagonal, then what? Theoretically, a continuous feedback loop between marketing’s creative collateral and the public would strengthen the brand’s relationship with consumers. Such responsiveness would lead to consumer loyalty, higher sales, and record profits. That’s the pitch, anyhow. In reality, the output of social media analytics is a slide deck with graphs tracking relative voice volume and sentiment between Brand A and Brand B. The business lift from these slide decks is questionable.

Social media analytics has become a “me too” game that everyone plays only because everyone is playing. For most companies, the businesses lift one can hope to achieve from reacting to trend lines is low single-digit growth, if any at all. In most highly contested categories, it is difficult to secure high ground over competitors by using social media analytics because everyone in the category will buy the same feeds, use the same tools and algorithms to analyze what people

are saying, and track the same four variables: trend, voice, volume, and sentiment, usually with some demographic/geographic segmentation thrown in. Any market intelligence that Brand A is likely to gain from social media analytics will have no statistical advantage over what Brand B has. To some extent, this is a prison sentence for both brands, because they are compelled to invest in a social media analytics arms race just to maintain parity over what is probably only a 1% or 2% swing.

When all you look at is a trend line, it’s hard to envision opening new markets.

— Chris Kauffman,
Sphere of Influence data analytic strategist

Digital strategy consultants give great advice about brand engagement via social media channels and stress the importance of gathering data and listening. The latter language about “gathering data and listening” is code for employing analytics to measure what is being said about the brand and about topics of interest, then analyzing sentiment and segmenting consumers demographically and geographically. Typical social media strategy advice stops there, falling short by not providing a detailed framework that guides a brand’s reaction to the inevitable mountain of data that will be collected. For example, when sentiment trends down instead of sideways, what is the appropriate business strategy response? What does the data mean, how should the business interpret trends, and — more importantly — how should it react to changes in trends? Business lift is about the response, not graphs and trend lines. Unfortunately, social media strategy often fails to address exactly how analytics output becomes strategy input.

The industry offers abundant advice instructing brand managers to listen as part of their social media strategy, but scarce advice about what to do with all that information. The lack of knowing what to do with data prevents social media analytics from having a full strategic impact that might double the trailing 12-month revenues through some sort of business model shift.

Despite strong analytics, if the business response is weak, the lift will still be minor.

There are no simple answers for how to apply social media analytics to stimulate business lift; that is, in fact, the essence of good corporate strategy. If we are honest, most of what passes for social media analytics today is questionably accurate buzzword data. To the extent there are valuable uses for this type of data, and there are, the uses are widely known and employed by all parties, negating most asymmetric advantages.

One limiting factor is that marketing departments and other consumers of social media analytics don't often know what the underlying science of advanced analytics is capable of. Therefore, technology vendors limit their products to the usual metrics of trend, voice, volume, and sentiment, even if under the hood those products leverage state-of-the-art statistics and machine-learning algorithms. New social media analytics platforms continue to focus on old-style, trend-line and buzz-o-meter reports that simply aid marketing teams in tracking existing business models, not on aiming strategists at new markets or ways to radically expand business opportunity. This could be viewed as misapplied technology because a larger business lift is more likely to come from a more potent use of advanced analytics.

DATA ANALYTICS STRATEGY

Backing away from social media for a moment, let's consider two ways to think about the general concept of data analytics strategy (see Table 1).

In Strategy 1, the concept is "you are what you are; don't change." The business knows what it is good at, and the strategy is to stick with it. Analytics is focused on managing the deltas — increasing sales, increasing market share, decreasing costs, decreasing risks, and so on. There is no thought to opening new markets, finding new sources of revenue, or radically rethinking how the business earns money. Under ideal circumstances, a successful investment in data analytics using this approach might yield an 8%-9% increase over trailing 12-month revenues (typically much less). Applying the

word "strategy" to data analytics in this case evokes a specific recipe involving analytics tools, platforms, and data science.

In Strategy 2, the concept is "you don't know what you don't know." The goal is to apply advanced analytics to discover new value from data, value that is of strategic importance because it informs executives about unique sources of new revenue, new markets to open, or other opportunities. In these situations, an investment in data analytics can sharply increase total revenues by establishing entirely new business lines. Because data is the new oil, this is one way to turn a US \$5 billion brick-and-mortar company into a \$10 billion brick-and-mortar + digital company. The data analytics strategy in this case refers to a *corporate* strategy that reacts to data analytics insights to exploit supernormal returns.

This is not an either/or proposition. It is often smart to employ Strategy 1 and Strategy 2 together to achieve different but complementary goals. Grow the existing established business lines by some modest percentage with Strategy 1, while growing the entire business by a large percentage with Strategy 2.

Business leaders should be looking at social media data analytics strategy from these two perspectives.

THE ERA OF ADVANCED ANALYTICS

Unfortunately, there is naiveté in the business community regarding advanced analytics and how business lift can be created through its use. When we hear the term "data analytics," most people think of old-school analytics that non-data scientists learn in college, not the advanced analytics of today. The old perception of data analytics is ordinary statistics, regression analysis, and trending, sometimes adding a dab of operations research. The ubiquity of this perception becomes a significant limiting factor in how data analytics gets applied both in business circumstances and in social media. For example, even though most modern social media analytics platforms use advanced analytics, those tools often produce familiar trend reports instead of

Table 1 — Two Data Analytics Strategies

	Strategy	Goal	Impact %
1	Data analytics as a platform to enhance or improve an existing business model	Increase market share in each category/segment and cut costs in each business	Single-digit returns
2	Data analytics to leverage data as a unique capital asset	Open new markets, explore creative revenue sources, and generate business opportunity	Triple-digit returns

being pushed to generate novel behavioral profiles or powerful segmentation analysis. Thus, the newer technologies produce somewhat more accurate trend lines with their advanced analytics but stop short of informing the business at a higher level of meaning with respect to what might be in the data.

Social media analytics tools essentially turn the world's social media channels into gigantic sensors.

Advanced analytics has many definitions depending on whom you listen to. Generally speaking, advanced analytics involves more than simple statistics, regression, trending, and operations research. Some of the ingredients are:

- **Data at scale.** Almost any solution that would be considered advanced analytics is specifically geared to work on Big Data. Increasingly, we are seeing Big Data analytics being cost-effectively applied to real-time streaming data at big-pipe scale, which is a game changer in many industries.
- **Hypervariant.** Advanced analytics will process hundreds or thousands of simultaneous feature dimensions. This is like studying a machine with 500 unlabeled gauges and being informed as to which individual gauges, combinations of gauges, or readings thereof indicate tipping points in the bigger system being monitored.
- **Nonparametric.** Advanced analytics will make no assumptions about probability distributions. The systems learn distributions from the data itself and react accordingly.
- **Clustering and correlation.** Advanced analytics often employs sophisticated approaches to autonomous clustering and correlation. Out of millions of social media posts, which posts can be sensibly grouped together according to similarity of content or intent without any predefined guidelines about the number of groups, use of language, definition of similarity, or the topics themselves? This capability is extremely applicable to consumer segmentation analysis because it moves us away from traditional (ineffective) demographic classification and oversimplified lifestyle segmentation models. With advanced analytics, it is possible to do full psychographic segmentation on a

population when sufficient feature dimensions are provided.

- **Machine learning.** The definition of advanced analytics usually includes some form of machine learning, either supervised or unsupervised. Within advanced analytics, machine learning is typically used for anomaly detection or subject classification.
- **Prediction.** Whereas conventional analytics approaches make predictions based on extrapolating trend lines, advanced analytics can make predictions based on combining simultaneous feature dimensions and then speculate on specific future events. Thus, if you have major gaps in data for some features, the technology can still make sensible predictions based on aggregating the statistical confidences.
- **Graph theory.** More recently, we increasingly see advanced analytics include various forms of graph analytics. This gives technology the ability to infer identity and/or nonobvious relationships based on limited visibility into known relationships and connections.
- **Other.** Advanced analytics is still in the “craft brew” stage; thus, there are many other approaches that vendors and data scientists add to their own recipes.

The point in describing advanced analytics is that along with the rise of Big Data, the universe of data analytics is experiencing something of a renaissance. The main advantage advanced analytics offers over old-school analytics/business intelligence (BI) is the ability for data to do the talking. This means companies can approach data with minimal assumptions and then, without introducing assumption bias, let the data itself highlight where the important patterns are, suggest informative classification taxonomies, and isolate interesting or unusual patterns from extremely high-noise signals.

SOCIAL MEDIA AS A NONIDEAL SENSOR AND DATA SOURCE

Social media analytics tools essentially turn the world's social media channels into gigantic sensors. However, there are certain properties that distinguish a good sensor from a bad sensor. These properties are:¹

- Accuracy
- Discrimination
- Precision
- Errors

- Drift
- Sensitivity
- Linearity
- Hysteresis (i.e., dependence of a system not only on its current environment, but also on its past environment)

Radar (a pretty good sensor) is reasonably accurate in measuring distance and velocity; can discriminate between types of objects (tree vs. car); offers a level of precision consistent with its accuracy; introduces only controlled error bias; has minimal and predictable measurement drift; offers adequate sensitivity to avoid being fooled by interference (e.g., rain droplets); degrades predictably; and is relatively independent of the distant past.

Social media analytics has none of these qualities.

When we think about social media in terms of being a sensor, it reveals itself to be a relatively bad source of data. Social media is unstructured, uncategorized, malformed, misspelled, full of noise, highly biased, and extremely situational. Even using the most advanced analytical science, it is still challenging to get moderately good data from a social media feed. Basic theme extraction and sentiment analysis are incredibly difficult to achieve with any level of accuracy, despite tremendous sophistication on the part of the technologies. Analytics tools end up producing data that has impressive precision in terms of trends but lacks the accuracy and consistency one would expect from even a rudimentary sensor in any other signaling domain.

The obvious question, then, is why are companies attracted to social media analytics with such eagerness? The answer lies in three words: real, raw, and now. Social media is a direct line to real people unfiltered in a raw state. Social media posters aren't focus groups, panels, employees, or survey takers; they are just real people doing what they naturally do. The other attractive quality is that social media is "now," as in 500 ms ago, not last week or yesterday. In light of these advantages, the human bias, hysteresis, chaotic errors, and precision over accuracy melt away. The mere idea of getting feedback that is real, raw, and now is too enticing to pass up. It almost doesn't matter that accuracy never comes close to precision.

Ultimately, social media analytics is useful at a tactical level but is not very strategic.

LIFE AFTER WORD TRENDS

Despite the current renaissance in data analytics, most of the business world is stuck in the old ways of data mining and BI. With respect to social media, this has more to do with the fact that people in the marketing department are the primary consumers of analytics. In marketing, attention is often fixated on trends, and thus trends are what analytics technologies report and what marketing reports to C-suite executives.

While many C-suite executives appreciate the importance of social media for driving business activity, social media analytics is mostly seen as an implementation detail that is just part of the feedback loop. These executives and their strategic advisors aren't overly concerned with what buzzword is trending today versus yesterday but will still pay close attention to reports from marketing on the latest trend, voice, volume, and sentiment stats. After all, even if they aren't going to use it for anything, C-suite people love good data, especially data that appears precise, portends future events, and talks directly to the brand perception.

Why are companies attracted to social media analytics with such eagerness? The answer lies in three words: real, raw, and now.

Unfortunately, because few in marketing or the C-suite know exactly how to respond strategically to social media trend data, there's limited demand for more powerful analytics. Thus, companies get caught in a do-loop of launching marketing campaigns, running the social media war room, aggregating social media analytics, briefing executives on the analytics (accurate or not), and repeating it all again after tweaking the collateral. This results in business lift that you need a micrometer to measure and no sustainable advantage over competitors because all the competitors are doing exactly the same thing.

Social media analytics vendors are also caught in a do-loop of constantly improving features such as their ability to measure sentiment. Vendors assume the social media strategists and marketing pros know how to interpret the results and formulate an appropriate response, which in reality is an unreliable assumption.

IT DOESN'T HAVE TO BE THIS WAY

With the general increase in awareness that seems to be orbiting around Big Data and the accompanying interest in analytics as part of digital strategy, C-suite executives are slowly starting to awaken to the possibilities. When this awakening begins to happen at scale, the buzz-o-meter trend charts of today will no longer satisfy executive appetites for social media analytics. With executives increasingly demanding hard insights over indistinct trend reports, the mandate for an elevated standard will flow through the marketing departments. For those who connect the dots between corporate digital strategy and social media analytics, buzz-o-meter output will be replaced by more sophisticated sensors and technologies that deeply process the meaning contained in social media content. This shift will yield real-time insights about people and culture that can only be obtained through sophisticated data analytics.

The people directing the business need to know if there is something special or actionable about a population or a recent cultural phenomenon, and accuracy from the social media sensors will be much more important. If social media analytics can inform business strategy, then suddenly it becomes a powerful tool instead of a simple novelty. In that scenario, analytics becomes essential for brand positioning and even for designing products and services, not just for following trends. Buzzword counts and trends would be relegated to mere tactical data.

The tricky part about digital strategy is determining who the customer is and who the product is, because in a digital universe, humans generate a lot of data, and

this data allows them to be regarded as either product or customer depending on the business strategy. People who would have traditionally been regarded as the customer might actually best serve the company as the product, by supplying valuable data that can be transformed into opportunity or insight that the company sells to another party. Strategists ask, how might the company's data on a population be valuable to a third party? The answers require deeper analytics because we first need to "know what we know" about people and current culture. It might be necessary to identify behavioral or psychographic patterns, detect emerging culture shifts, or cluster consumers to isolate subtle anomalies that could correspond to product and service opportunities. These are things business leaders should be demanding from social media analytics.

ENDNOTE

¹To be clear, these properties are common to any sensor. For example, there's no such thing as a sensor without error. However, when the error is predictable and small compared to sensitivity, then the sensor is considered good. When the error is unpredictable and/or large with respect to sensitivity, then it's considered bad. Thus, for some features, more equals better, while for other features, less equals better.

Thad Scheer is one of four Managing Partners at Sphere of Influence, a Virginia, USA-based software studio, where he leads product design and innovation services. Mr. Scheer has been deep in several projects that apply advanced analytics to problems such as predicting consumer loyalty, finding rogue employees with cyber security behavior profiling, and developing tools for social media analysis. He can be reached at Thad.public@SphereOI.com.



Assessing the Value of Social Media Analytics

by Nick Kadochnikov

In today's economic environment, it is getting more and more difficult to roll out new projects without first understanding their economic benefits. With discretionary spending line items coming under additional scrutiny, the decision on where to invest frequently requires a financial business case or ROI justification. While several approaches have been suggested to measure the ROI for social business or to quantify the value of "presence" on social media, assessing ROI for social media analytics projects has proven to be a challenge.

My approach to assessing the monetary benefits of implementing social media analytics requires asking two key questions:

1. Where can social media analytics be applied?
2. What KPIs are affected by implementing social media analytics for each type of application?

In order to address these questions, I will leverage two sources of information:

1. A study conducted by the IBM Institute for Business Value (IBV) on social business¹

2. The portfolio of successfully implemented social media analytics projects (use cases) completed by IBM

Figure 1 demonstrates that while many enterprises are already embracing social media across a range of business functions, these numbers are expected to grow even higher within the next two years. For example, 58% of respondents are already monitoring customer comments for new ideas, and 87% are expecting to do so within the next two years.

Figure 2 clearly demonstrates that the use of social business is becoming widespread across a variety of organizational functions, ranging from traditional applications in PR to sales, customer service, and IT.

The findings from the IBV study correlate very well with what IBM customers are actually doing with social business and social media analytics. Namely, they are using these techniques across a range business functions, both internally to improve engagement and collaboration among employees and externally to better understand customer voice.

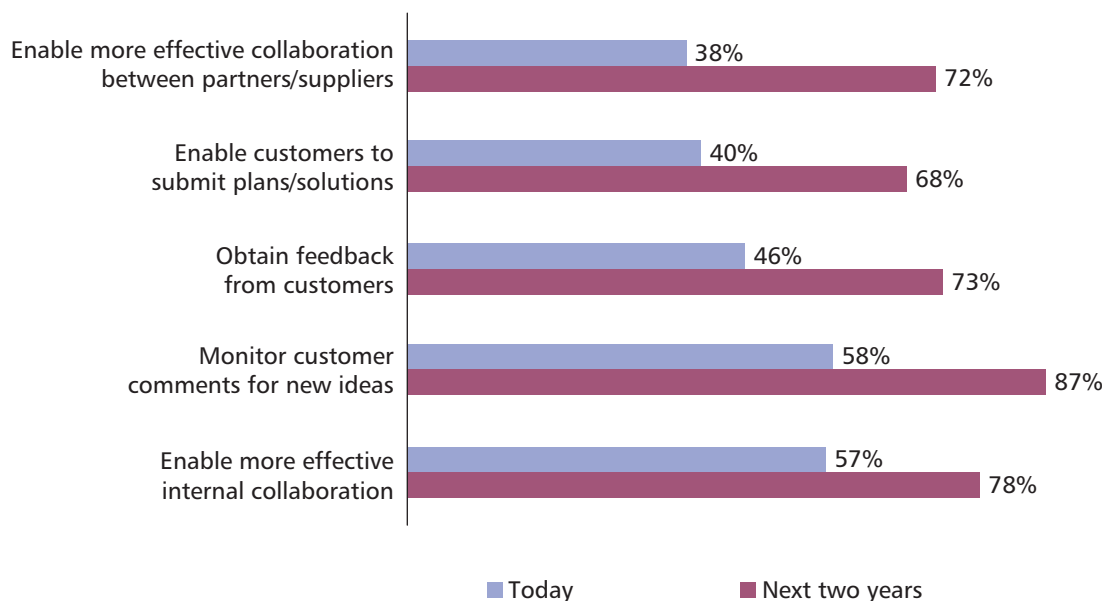


Figure 1 — Uses of social business. (Source: Cortada et al.)

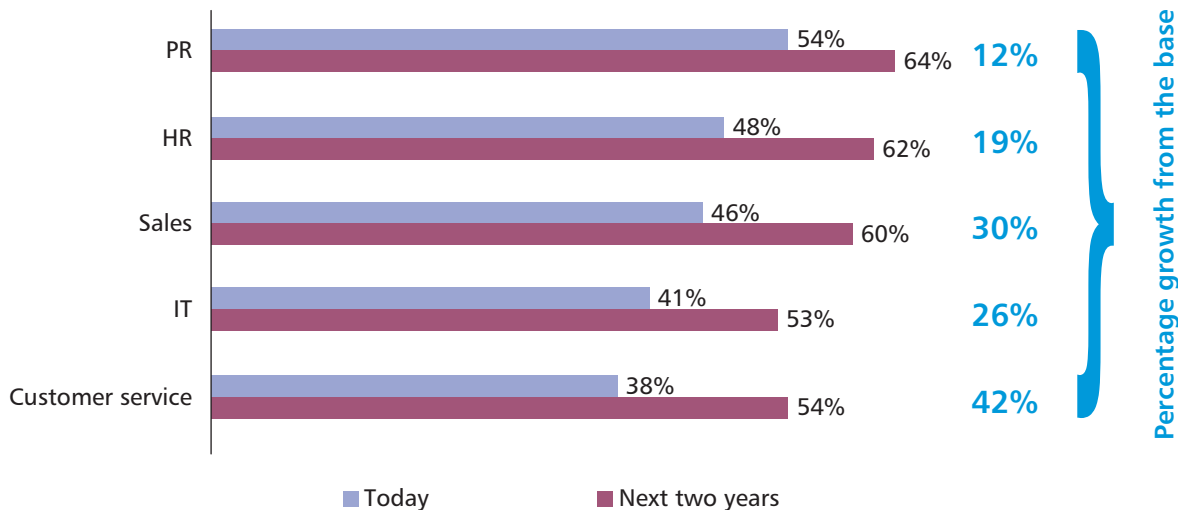


Figure 2 — Top functions applying social approaches. (Source: Cortada et al.)

SOCIAL MEDIA ANALYTICS IN ACTION

Now let's review some individual use cases.

Movie Studio Ad Campaign

Our first use case concerns a traditional TV advertising campaign for a new movie. The studio invests in TV ads airing its trailer in the hope that the ads will drive customers to theaters, where they will buy tickets to the movie. Afterward, they may wish to purchase movie-themed merchandise. Measuring the true impact of such a campaign is rather challenging, though. The only way to measure the impact of the campaign with proper statistical significance would be to separate the customers into two groups (those who saw the advertisements and those who never saw them) and then create a model (e.g., multivariate linear regression) to evaluate whether the impact of the ad campaign was statistically significant.

While this truly scientific approach works well in other applications — for example, you can easily test the effectiveness of a new drug by separating the patients who received the actual drug versus patients who received a placebo — making it work for a TV ad campaign would be next to impossible. Imagine the cashier at the movie theater spending several minutes asking you a set of questions about where and how you heard about the movie you are interested in seeing and trying to determine which of all those sources was the most influential in your decision to show up at the cinema. Between TV, radio, Internet banners, ads on mobile devices, driving by the theater, and word of mouth, there's only so much a customer would be able to recall. Can you also imagine the lines this interrogation process would create? And even if all this could be

orchestrated, the studio would still have to deal with measures of time lag between the customer's seeing an ad and making the decision to visit the cinema.

Even after looking at all these mission-impossible tasks, the marketing department will have a few unresolved but very important questions to answer, for example:

- How should they rate the effectiveness of their campaign?
- Did the ads reach the target recipients?
- Did the target recipients like the trailer? Did they find it entertaining enough to visit the cinema that day?
- And last but not least, what can the marketing department do to make their advertisement more effective?

Of course, some of these metrics — such as the degree of appeal of the TV ad — get measured via traditional customer panels, polls, and focus groups, but most often these results simply come too late in the game. Companies frequently burn through over two-thirds of their ad campaign budgets before this information starts trickling in, making it too late to adjust the marketing message.

So what can social media analytics do for the marketing department at this movie studio? First it can assess how much "buzz" this campaign is generating by analyzing the spikes (representing the number of tweets) associated with the advertised movie and plotting them on a trend line — down to the day, hour, and minute — against when a particular advertisement was aired. This will help measure the effect of the ad on overall chatter about the movie. If the chatter doesn't show any spikes

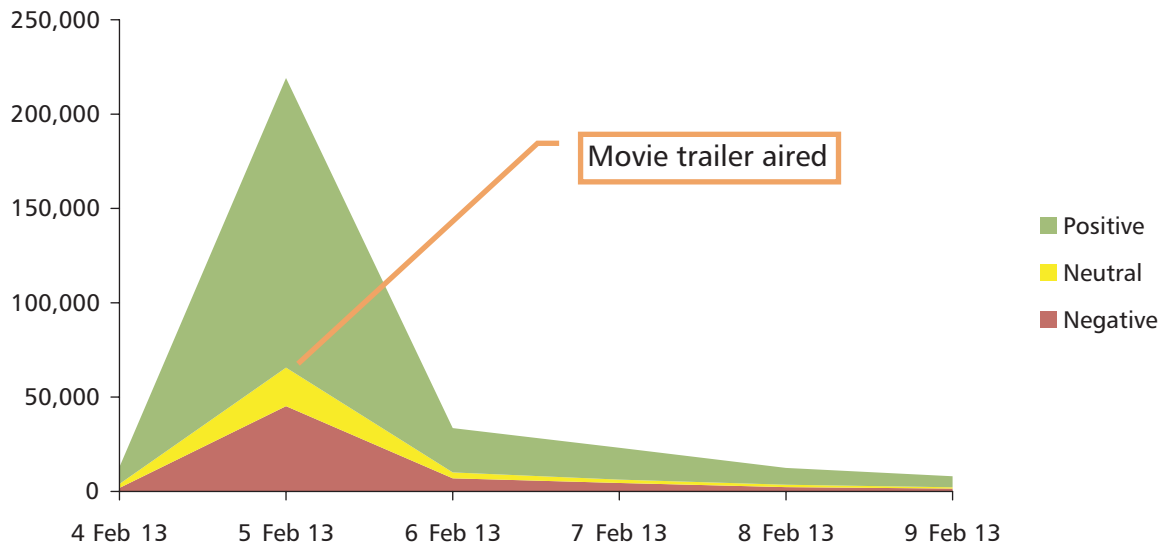


Figure 3 — Buzz and sentiment plot by date.

Table 1 — Benefits Calculation for a Movie Studio Ad Campaign

Increased Revenue	Reduced Marketing Expense	Reduced Primary Research Costs	Improved Image
Driving more customers to movie theaters	More targeted advertisement	Fewer customer focus groups	Increased customer loyalty
Increased sales of theme merchandise	Increased word-of-mouth advertisement	Fewer research panels	Improved ability to collaborate with customers; engage; co-create
	Improved ability to engage influencers		
	Better understanding of viewer profile		

aligned with the dates and times of the TV ads, the likelihood that the TV campaign is working is really low. By comparing the level of chatter or spikes to the studio's historical average and prior campaigns (assuming consistent social media monitoring across multiple campaigns over time), or even to ad campaigns run by competitive movie studios at the same time, a social media analyst can tell a really compelling story about the effect of this particular advertisement.

The second piece of information comes from analyzing the sentiment associated with these spikes. It is not very actionable to just say the TV advertisement generated buzz. At the very minimum, the marketing department will want to understand what kind of buzz it generated — was it positive, negative, or neutral (see Figure 3)? Did the viewers like the message? Did they indicate in their posts an intent to watch the movie?

The next step would be to leverage all this information to improve the advertisement. Social media analytics can break down individual messages and create a matrix in which each element of the trailer can be evaluated to understand what worked (generated positive viewer sentiment) and what did not work (generated negative viewer sentiment). Table 1 shows the benefits of these applications of social media analytics to the movie studio's ad campaign.

Municipal Government

Now let's consider a completely different use case — leveraging social media analytics to better understand city residents' opinions. What do they think about the services the city provides, its policies and regulations, and new development or redevelopment projects? What are their top concerns? For example, traditional crime

rate statistics may portray a very different picture than an analysis of what people are saying about the crime rate. What are residents saying about the performance of key government services such as water, electricity, street sanitation, fire service, and police? Is traffic a real concern, and where does it hurt residents the most?

Of course, this sort of information has traditionally been made available to city leaders, at least to some extent. In one case, a city government hired student interns to sift through local newspapers and try to decipher what types of issues citizens were really concerned about. We can also picture a meeting at city hall in which several concerned citizens give their elected officials an earful about a neighbor's dog barking at 5 o'clock in the morning.

There are multiple problems with these approaches, aside from the obvious lack of cost-effectiveness. We can start by asking whether looking through the prism of professional reporting really paints an unbiased picture of what is going on in the city. Or whether a few concerned citizens showing up for the quarterly meetings at city hall are really representative of the entire city population and their opinions about the city's top concerns. Then the problem of consistency arises: can our newspaper-reading students consistently classify the type of feedback each article portrays?

Newspaper-reading challenges aside, the information must be made actionable. And what better way to make it actionable than by quantifying the impact? While we can reasonably measure the Twitter chatter for a specific topic or issue, providing the same type of measurement on the newspaper articles is far from trivial due to the very small sample size (i.e., a couple of articles).

Similar to every other application, social media analytics applied in the city environment will have the most impact when overlaid with other sources of information. By combining social media data with all the other information available to local government officials — reported power outages, construction work permits, police reports, weather conditions, and so forth — one can draw a lot more accurate conclusions about what is going on in the city. This information put into action can make the city not just more pleasant for the residents, but also safer (and, incidentally, a safer bet for the elected officials seeking reelection).

Social media analytics can indeed have a positive impact on the safety of residents. Public safety agencies are becoming more sophisticated in their monitoring of social media and are integrating social media intelligence with other risk intelligence sources to improve overall situational awareness. Social media has turned

out to be an important informational component of “predictive policing,” where police officers are proactively deployed to hotspot areas to prevent crime from taking place. In Richmond, Virginia, USA, the police department has been using data mining and predictive analytics for a variety of law enforcement and intelligence applications (including tactical crime analysis, risk and threat assessment, behavioral analysis of violent crime, and proactive deployment strategies) over the last decade.² These preventive measures and analytically led deployments are particularly important as police departments across the US are being consistently asked to do more with less.³ Monitoring social media also helps the emergency management community, including medical and public health professionals, to better respond to disasters⁴ by improving their preparedness, agility, and ability to communicate with affected residents.

As prior research⁵ has demonstrated, safer cities attract more local businesses and enjoy increased property values,⁶ so there is a strong link between public safety and municipal revenue. Table 2 shows the benefits of a social media analytics initiative for a city government.

Auto Manufacturer

Next, let's consider an automobile manufacturer that is leveraging a single social media analytics infrastructure to assist with four areas of the business:

1. New product development
2. Feature and option selection
3. Early quality warning
4. Marketing

For new product development, social media represents the largest panel or focus group the manufacturer has ever experienced. It acts as a source of inspiration, provides information about the functionality customers are looking for in a specific vehicle make and model, and supplies a plethora of insights about how customers are currently using their vehicles and what they like and dislike. Of course, this information is not limited to just specific vehicle makes or models. The product manager works closely with a social media analyst to understand what customers are saying about the model's current competition. They create a matrix of key vehicle features and functions (engine, fuel efficiency, performance, safety, etc.) and measure the level of “buzz” as well as the sentiments across the social media sources for their model as well as the top six competing models. Creating a matrix and corresponding scores allows the social media analyst to convert traditional unstructured

Table 2 — Benefits Calculation for a Municipal Government

Increased Funding/ Revenue	Reduced Costs	Improved Quality	Improved Image
Ability to attract more tax-paying businesses	Lower costs for information collection and management	Improved resident care	Increased likelihood of reelection for elective officials
Higher property values	Reduced administrative overhead	Improved resident satisfaction	Improved transparency
	Reduced spending on projects not seen as valuable by residents	Improved communication/ collaboration between agencies/ departments	Improved citizen trust and confidence
			Better demonstration of good outcomes

social media data into a structured format and assign quantitative weights for each of the parameters so they can be measured.

Monitoring buzz over time helps pinpoint the exact events that triggered large spikes in the buzz, and classifying the sentiment delivers the insights (what happened and whether social media response was positive or negative) to the social media analyst, which he or she can make really actionable. For example, getting to the root cause of a spike in negative sentiment about a competing vehicle becomes the insight the marketing department can leverage for the benefit of the manufacturer. At the same time, a spike in positive sentiment about the competing vehicle is information the product manager needs in order to aid in the development of the next generation of the model.

Besides traditional sentiment classification (positive, negative, neutral), social media analytics software captures behavior-related sentiment and can parse the messages into *user*, *recommender*, *detractor*, and *prospective user* categories by identifying behavior patterns based on text analysis rules. For example, users are authors who mention they “have” or “use” a certain product or service. Recommenders are authors who say, “You should use X.” Detractors are authors who say, “Stay away from X.” Finally, prospective users are authors who mention that they “want,” “would like,” or “can’t wait to buy” a product or service. This behavioral sentiment simplifies the task of message categorization between different business functions.

Information coming from current users helps form an early defect warning system. If a number of customers are voicing concerns about a specific problem, overlaying this information with current dealer service department reports will allow the manufacturer to

detect a quality issue much sooner. Addressing the issue quickly, both at the assembly plant and through the dealer network, will result in lower warranty service costs. The insights provided by either recommenders or detractors can be leveraged to emphasize the features that the audience finds appealing and augment or reengineer the elements that the audience does not care for. For example, the manufacturer can offer an additional choice of engine if detractors are complaining that the current engine is “underpowered” or emphasize good fuel mileage if recommenders are raving about the model’s “great MPG.”

Finally, monitoring the feedback from prospective users provides a wealth of insights about current customer preferences, particularly when combined with other data streams such as sales data coming from the dealers’ lots. This information helps ensure the vehicles rolling off the assembly lines have the right combination of features, packages, options, and colors to cater to customer preferences. Mapping this insight with financial data will enable the manufacturer to focus on the most profitable trims of its vehicles. Adding geographic location data (i.e., where each particular vehicle has been sold) can further increase the accuracy of this information by identifying potential regional variations in vehicle feature preferences. Table 3 lists the benefits of social media analytics for the auto manufacturer.

Beauty Products Company

A beauty products company was assessing their options for reviving stalled product sales. After they analyzed sales trends over the last several years and collected the intelligence on sales of competing products, it seemed as though the only option would be to redesign the product packaging and lower their prices to better

compete with new market players. Both options were costly and rather unappealing.

Before making the final decision, the company decided to turn to social media analytics to analyze customer discussions to see if any alternative actions were plausible. The information came as a big surprise: customers were neither looking for a lower price nor new packaging. What customers were really seeking was guidance on how to apply the company's products. Consumers wanted to get personalized advice on product uses but were struggling to find relevant information on the company's website. Eventually they turned to competing offerings.

After the company revamped their website and began providing customers with the required information, sales immediately went up, without any pricing adjustments or sales incentives. The company is now following a similar strategy to better understand

customer voice for the rest of their product lines. Table 4 shows the benefits of social media analytics for a beauty products company.

CONCLUSION

While measuring the value of social media analytics down to the penny proves very challenging, the framework provided in this article will help create a foundation for such measurements. Adopters of social media analytics can start leveraging this methodology to get initial estimates based on discussions with internal subject matter experts and business process owners. As they progress, new data will start replacing the initial estimates with hard numbers across multiple categories, making the business case even more solid and paving the road to adopting social media analytics in other parts of the organization.

Table 3 — Benefits Calculation for an Automobile Manufacturer

Increased Revenue	Improved Margins	Reduced Primary Research Costs	Reduced Service Costs
Increased new car sales	More profitable trims/options	Reduced advertisement spending	Reduced warranty service costs
Faster response to marketplace changes	Reduced offers, incentives, and discounts	Increased word-of-mouth advertisement	
Driving more customers to the dealers' lots	Improved collaboration with vendors/suppliers	Fewer customer focus groups	
	Faster inventory turns	Fewer research panels	
	Improved demand forecasting		

Table 4 — Benefits Calculation for a Beauty Products Company

Increased Revenue	Improved Margins	Reduced Primary Research Costs	Reduced Service Costs
Increased product sales	Reduced markdowns	Reduced advertisement expense	Improved customer loyalty
Improved ability to cross-sell other product lines	Reduced offers, incentives, and discounts	Reduced in-store promotion expense	
	No packaging redesign expense		

ENDNOTES

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Nick Kadochnikov is Executive Program Manager within the IBM Business Analytics Transformation team. Over the last 15 years, Mr. Kadochnikov has completed numerous analytical projects covering multiple areas of the business, such as marketing, sales, product development, and finance. His work has ranged from improving the effectiveness of marketing campaigns, to optimizing sales resource allocations, to increasing the efficiency of software development processes. Mr. Kadochnikov was responsible for multiple analytical initiatives within IBM, utilizing advanced data mining techniques, building econometric models, and working with Big Data. These included: client wallet estimates, segmentation, ROI for smart initiatives, propensity-to-buy models, and development productivity. He can be reached at nkadochn@us.ibm.com.



Social Media Due Diligence: Selecting the Right Social Listening Partner

by Steve Andriole

Social media is everywhere, all the time. It's about participation — by everyone. There are a billion blog posts and tweets a month, and the volume is growing at well over 50% a year. Companies need to decide what they should do about — and with — social media and how they should routinely deliver social business intelligence (SBI) to multiple business functions. How should they acquire social media listening/analysis/engagement services? There is more to the process than meets the eye: all social media vendors are not created equal.

CRITERIA FOR SELECTING A SOCIAL MEDIA PARTNER

Should companies develop their own social media listening/analysis/engagement capabilities, or should they buy them in the marketplace? The data clearly shows that the majority of companies have outsourced their social media listening/analysis/engagement requirements to a whole host of companies that specialize in social media or have added "social business intelligence" to their suite of products and services.¹ But are companies asking the right questions? Are they selecting the best vendors?

This article discusses some criteria that companies can use to select the right social media listening/analysis/engagement vendor to support their search for SBI. Taken together, the criteria constitute a due diligence strategy designed to optimize the social media vendor selection process.

There are seven criteria:

1. The ability to collect, filter, structure, and analyze social media data
2. The ability to integrate social data across platforms
3. The ability to model social media data
4. The ability to perform derivative analytics
5. The ability to facilitate internal/external/active/passive listening-to-engagement
6. The ability to conduct real-time analysis of social media data
7. The ability to measure social media listening/analysis/engagement effectiveness

Ability to Collect, Filter, Structure, and Analyze Social Media Data

Many companies and their social media listening partners only *sample* social media data streams, using (sometimes small) subsets of posts, tweets, and blog entries to profile sentiment, customer service, and brands. Social media listening companies frequently purchase social media data, which could be a legitimate approach, except that they buy only relatively small percentages of the social media content that is out there. The companies do this because collecting/filtering/structuring social media data is not their core competency — even though they may style themselves "social media listening companies." They also do this because even if they could collect all the data they needed to fulfill client requirements, the cost of collecting or buying the data is often too high for them to remain profitable, so they sample rather than buy.

Ideally, a social media listening/analysis/engagement partner would collect — and process — a high percentage of social media data so the analyses conducted on behalf of their clients are comprehensive and accurate. They can collect this data themselves, or they can buy it. Regardless of how they acquire the data, they should be collecting and analyzing as much as possible in order to deliver accurate reports to their clients.

The buyers of social media listening/analysis/engagement should understand why most social media listening companies get only partial feeds from sites like Twitter and Facebook and why they don't go deep into the Web to collect data from the hard-to-find communities and industry-related websites relevant to their clients' business. This is because the majority of the most relevant websites are extremely difficult to

penetrate (not to mention the privacy laws that constrain access) and that full feeds from social networks are expensive to buy. So most social media listening companies just don't hear them. Buyers should actively seek out those vendors that do.

What should a social media listening company be able to do with data? Here's a list of capabilities that the due diligence team will want a social media vendor to have:

- The ability to collect hundreds of millions of social data snippets daily
- The ability to classify, index, and store hundreds of millions of items/day in real time, with average latency times of 40 milliseconds
- The ability to use lexical, semantic, and statistical filters
- The ability to use machine-learning techniques to continuously improve data filters
- The ability to extract author and publisher information, harvest demographics, and augment demographics through the use of statistical models and machine-learning techniques
- The ability to use supercomputing, multilevel systolic pipelines and MapReduce (beyond the capabilities of Hadoop), cloud resource scheduling and process migration (across thousands of CPUs, terabytes of memory, and petabytes of storage)

Ability to Integrate Social Data Across Platforms

Integration is also on the short list of requested social media capabilities. The processes around customer service, for example, are traditionally defined around client services, conflict resolution, and larger supply chain efficiencies, which means that social process integration — the integration of social media data into conventional process models — needs to occur within existing functions, such as CRM, brand management, customer service, innovation, and crisis management. These are some of the functions impacted by social media. In CRM, for example, social CRM (SCRM) assumes the collection, analysis, and inspection of social media data. It assumes that social media data is used to add depth to the analysis of customer relationships, to add explanatory power around why customers buy more — or less — and yield to up-selling and cross-selling opportunities.

Enterprise platforms are notoriously fickle when it comes to integration: proprietary software applications seldom cooperate with one another. Social media listening companies need to understand the structures and

processes of numerous software applications — after they structure all the unstructured social data they collect and filter. This means that structured social media data must integrate with at least the major platforms such as those from IBM, Oracle, SAP, SAS, and Microsoft. Within these vendors' worlds are various CRM, BI, statistical analysis, ERP, and DBM platforms, all with their own unique technology and process integration requirements. Social media listening teams must be able to feed these platforms as though social media data was made to seamlessly integrate into their technology and functional operating models.

Social media listening companies should be able to perform the following integration tasks:

- Define social process definitions across major corporate functional areas
- Structure filtered social media data
- Integrate structured/filtered social media data into enterprise platforms such as CRM, BI, statistical, and DBM software applications represented by the major technology vendors

Ability to Model Social Media Data

Social media data is sometimes perceived as random, disjointed, and inconsistent chatter about brands, products, and services. In fact, social media can reveal much more about what customers, employees, and suppliers think, believe, and feel. Social media data — when expertly modeled — can yield explanatory and predictive insight that otherwise would simply fall between the analytical cracks of keyword-based listening.

But what can be modeled? Can social media, for example, reveal predictive insight into the state of a company's "wellness"? Can a diagnostic set of social media indicators of corporate wellness (growth and decline) be identified and validated? Can traditional empirical corporate performance metrics be integrated with social media indicators to build comprehensive predictive models of corporate wellness? Can specific wellness outcomes be correlated with social media? Can Twitter and Facebook predict behavior, such as box-office receipts, new product success, and the next fad?

Tweets have already been used to predict movie sentiment and box-office revenue with amazing accuracy. Note the work of Sitaram Asur and Bernardo A. Huberman of HP's Social Computing Research Group, who predicted the movie *Dear John* would earn US \$30.71 million at the box office on its opening weekend. It actually generated \$30.46 million. For the movie *The Crazies*,

they predicted a \$16.8 million opening: it generated \$16.07 million.²

Social media can predict a wide range of events and behaviors. The US military is looking at social media for “indications & warning” (I&W), the early prediction of unpleasant global events. Consumer companies are using social media to predict if a new product will soar or crash, and analysts are tapping into social media blogs, tweets, and posts to determine the timing and nature of whole social movements. Who can deny the impact that social media has had on global political events like those we’ve recently seen in Iran, Egypt, and Libya?

Social media listening companies should have the ability to do the following:

- Identify diagnostic behavioral indicators
- Develop explanatory and predictive models across industries
- Validate adaptive explanatory and predictive models

Listening teams without these capabilities can only provide limited interpretations of what they hear. Companies considering hiring social media vendors should ask to see case studies where these models were developed and applied.

Ability to Perform Derivative Analytics

There’s another dimension to modeling that social media data enables: derivative analytics (DA). Here’s an example. If you listen to what readers of *Cosmopolitan*

magazine are saying about the magazine, you will quickly learn about what they like and don’t like, what articles they find most useful, and the clothes they absolutely must buy. The cover of “*Cosmo*” is always the subject of blog entries, tweets, and posts — especially if it has a celebrity sporting a special outfit (which it usually does).

If you listen closely, though, you can infer much more than what’s literally being said. It’s possible to profile the conversationalists by gender, age, physical location, time of day, race, religious orientation, influence, and other variables that together describe the total conversational context, which is what enables DA. In the case of female *Cosmo* readers, it’s possible to know exactly what they’re doing when they read the magazine. They might be drinking tea, polishing their nails, shaving their legs, talking to their mothers, FaceTiming their friends, texting, or eating pizza. What if a preponderance of readers were doing many of the same things, and what if *Cosmo* only advertised in a few of the active areas?

Social evidence that, for example, 22% of all *Cosmo* readers read in bed while drinking tea provides an immediate opportunity for tea vendors of all kinds to showcase their wares to an audience predisposed to what they’re selling. Showcasing could occur directly in the magazine, on the *Cosmo* website, and through *Cosmo* tweets, blog entries, and posts to their fans about all the tea merchandise they might purchase. For this empirically targeted audience — validated by DA — *Cosmo* could charge its advertisers a lot more than it now does.

As demonstrated by successful case studies available to the buyers of their services, social media vendors should be able to:

- Track, parse, and profile multiple conversations simultaneously
- Contextualize conversations well beyond initial, or trigger, content and discussions
- Infer from multiple levels of analysis

Ability to Facilitate Internal/External/Active/Passive Listening-to-Engagement

Much of the focus of social media is external — on what customers are saying and what competitors are doing. But lots of social media occurs within companies among their employees, suppliers, and partners. We also tend to think more about social media *listening* than social media *engagement*. In fact, one of the primary reasons to listen is to reactively and proactively engage stakeholders. Figure 1 presents a matrix that suggests where social media investments should be made.



Figure 1 — The social media engagement landscape.

All the cells in the engagement matrix are created equal. Employee demographics require companies to not only listen to their employees, but to enable their social preferences by providing social technology and processes that encourage social media-based communication and collaboration. Suppliers and partners also require social media capabilities, and all the internal social activity should be analyzed across all sorts of behavior and performance metrics. The external listening imperative is clear, and companies have embraced the need to listen to their customers and competitors.

Listening is unfulfilled social media; engagement converts listening into strategies and tactics. Both listening and engagement are internal and external pastimes.

Social media vendors should demonstrate and document — through cases — their ability to:

- Segment social media activities and targets with appropriate business processes and technologies that optimize listening and engagement opportunities
- Develop suites of internal/external/active/passive strategies and tactics designed to find the right listening and engagement combinations
- Pilot alternative listening/engagement opportunities, especially in areas that exploit the collaboration/connectivity strengths of social media, like crowdsourcing

Ability to Conduct Real-Time Analysis of Social Media Data

Some events and processes require real-time listening and response. The whole world of threat tracking and crisis management is one of the most important real-time areas.

Definitions are important when discussing real time, near real time, and slow(er) time. Real time is *real* time: immediate, with no delay. Near real time often refers to response times that are delayed by some measurable increment, which can range from minutes to (a few) hours. Responses that are days or weeks old are not near real time. Slower-time reporting can range from days to weeks to months.

Real-time listening is essential for a range of activities, behaviors, and events that create corporate risk — or unique opportunities. Threat analysis is an obvious example of the need for real-time listening. Certain financial events also require real-time listening and engagement. Real time is useful when action, reaction, and engagement are immediately required to mitigate some event or condition or to capitalize on some special

opportunity. While some real-time requirements are easy to understand, others are not. Financial events often require real-time reporting, as do the announcements and initiatives of key competitors.

Companies that procure social media services must decide about the need for real-time analysis and verify that prospective vendors can:

- Identify the events, behaviors, and conditions that qualify as real-time targets
- Build or buy a real-time listening/engagement capability
- Develop “what-if” scenarios for real-time listening/engagement

Ability to Measure Social Media Listening/Analysis/Engagement Effectiveness

Social media investment impact must be measured. Social media impact metrics should fall into at least two broad categories: total cost of ownership (TCO) and return on investment (ROI), and each of these categories should be further delineated.

TCO is a traditional metric that identifies and tracks all costs connected with an initiative. ROI is the business impact metric that assesses costs versus benefit. TCO is a driver of ROI, but business performance metrics are the essence of ROI calculations.

Social media analysis is not an especially expensive endeavor. When compared to the largest enterprise technology projects — such as ERP, CRM, BI, or network and systems management projects — social media analysis is relatively inexpensive. Even ultra-comprehensive TCO models that include everything a company might spend on social media will not indicate the need for especially large sums of money, unless a company decides, based on its core competency assessment, that it requires a large, sophisticated inhouse social media listening and engagement capability (which can indeed be enormously expensive). If a company outsources significant parts of its social media initiatives, its TCO will be low. The larger question concerns ROI.

ROI is about business impact, so the metrics need to address before-and-after effects of investments in social media “presence,” as on Facebook and Twitter (and numerous other platforms), and social media engagement, especially with existing and prospective customers. Traditional metrics around sales, customer service, physical and digital visits, and so on, will define the impact of social media initiatives.

Companies should focus on TCO and ROI, as follows:

- Develop a comprehensive social media TCO model
- Develop an aligned (to business objectives and requirements) social media ROI model
- Distinguish between short-term and longer-term TCO and ROI metrics and adapt calculations to initial social media initiatives and longer-term continuous listening/engagement requirements as the social media channel inevitably becomes permanent

SOCIAL MEDIA VENDOR SELECTION

Assuming that you have decided not to develop your own inhouse social media data collection/filtering/structure/analysis/engagement capability, the vendor selection criteria described above can be used to select among competing external vendors via a simple analytical methodology, as suggested in Figure 2. Each criterion is weighted for its importance relative to the other criteria (according to your priorities), and each vendor is scored against each criterion (according to their capabilities). Total vendor scores are calculated by simply multiplying the criteria weights times the criteria scores.³

THE WAY OF THE FUTURE

The age-old technology acquisition question applies to social media listening, analysis, and engagement: build or buy? The first option is classic: build an internal

social media listening capability by hiring and training professionals, build/license/acquire social media listening (and analytical) technology, and develop internal processes for leveraging social media across the enterprise. The second option is consistent with emerging acquisition and deployment best practices, as cloud computing rises in popularity and improves its capabilities: more and more companies are renting listening and engagement tools rather than building those capabilities inhouse.

The criteria and methodology discussed here can help companies select vendors likely to satisfy their social media requirements. Note that SBI is itself evolving, and thus the criteria discussed here will likely be augmented by additional ones going forward. At this point in time, though, the above criteria can help companies better understand what they need from social media vendors — and which vendors actually have those capabilities.

The need to analyze social media data will not go away. As the number of posts and tweets dramatically grows — as it is projected to do — and the requirements for wide and deep SBI also increase, the need for social media listening, analysis, and engagement capabilities will also grow. Given the costs and complexities of building inhouse social media listening organizations, external sourcing will expand. Criteria-driven due diligence is the path to selecting the right social media vendor, and it will help both buyers and vendors optimize their investments.

Selection Criteria/Vendors/Scoring	Ability to Collect, Filter, Structure, & Analyze Social Data	Ability to Integrate Social Data Across Platforms	Ability to Model Social Media Data	Ability to Perform Derivative Analysis	Ability to Facilitate Internal/External/Active/Passive Listening-to-Engagement	Ability to Conduct Real-Time Analysis of Social Media Data	Ability to Measure Social Media Effectiveness	Score	Score x Weight	Total Score
Vendor A										
Vendor B										
Vendor C										
Criteria Weights										

Figure 2 — Social media vendor selection worksheet.

ENDNOTES

¹*Social Media Examiner's* Michael Stelzner reported that social media outsourcing was up 128% in the past two years. See: Eridon, Corey. "Social Media Outsourcing Increases 128% in Two Years [New Report]." *Hubspot*, 4 April 2012 (<http://blog.hubspot.com/blog/tabid/6307/bid/32208/Social-Media-Outsourcing-Increases-128-in-Two-Years-New-Report.aspx>).

²Asur, Sitaram, and Bernardo A. Huberman. "Predicting the Future With Social Media." *Proceedings of the 2010 IEEE/WIC/ACM International Conference on Web Intelligence and Intelligent Agent Technology (WI-IAT '10)*, Vol. 1. IEEE Computer Society, 2010.

³The formal methodology for comparing alternative vendors is loosely based on the analytical hierarchy process (see Wikipedia, "Analytic hierarchy process"). Multi-criteria evaluation and decision making are the larger framework under which we can understand and apply criteria-driven social media due diligence (see Wikipedia, "Multi-criteria decision

analysis"). There are many off-the-shelf tools that enable multi-criteria evaluation and decision making. Some are extremely simple, yet effective, spreadsheet-based tools. Other tools are more complicated. The key is to select, define, and weight criteria useful in the evaluation and selection of specific vendors.

Stephen J. Andriole is a Fellow with Cutter Consortium's Business Technology Strategies practice and currently the Thomas G. Labrecque Professor of Business Technology at Villanova University, where he teaches and directs applied research in business technology management. Dr. Andriole was the Director of the Cybernetics Technology Office of the Defense Advanced Research Projects Agency (DARPA). He was also the CTO and Senior VP of Safeguard Scientifics, Inc., and the CTO and Senior VP for Technology Strategy at CIGNA Corporation. He is formerly a Professor of Information Systems and Electrical and Computer Engineering at Drexel University and the George Mason Institute Professor and Chairman of the Department of Information Systems and Systems Engineering at George Mason University. He can be reached at sandriole@cutter.com.

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