Profiting From Big Data

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Foreword

By Bob Thompson, CustomerThink Founder/CEO

Big Data. Everyone's talking about it. And rightfully so, because today's enterprise is awash in information, from internal and external sources, in structured and unstructured formats.

As we "instrument" more activities in our lives, from smart phones to washing machines to running shoes, that means more and more digital information companies can analyze and use. On the Social Web, people are tweeting over 200 million times daily, and Wordpress.com blogs account for nearly a *billion* new posts or comments on an average day.

Adding it all up, in 2011 researcher IDC found that the world's information is doubling every two years. Last year alone that means about 1.8 zettabytes was created. Don't know what a zettabyte is? Me neither. But 1.8 zettabytes is the equivalent of 200 *billion* HD movies. Does that help?

Such statistics are interesting and impressive, to be sure. But the question you should be asking is: **So What?**

What will you do with all this information to create a better experience for your customers? Run a more efficient enterprise? Make better decisions? And do so faster than your competitors.

That's why I've assembled this collection of 10 articles from CustomerThink authors, with food for thought as you build a strategy to profit from Big Data.

Be sure to learn more about each of the authors featured in this guide (alphabetical order):

- Lara Albert, Globys
- Gary Cokins, SAS
- Phil Fernandez, Marketo
- Seth Grimes, Alta Plana Corporation
- Bob Hayes, Business Over Broadway
- Maz Iqbal, Dynamica Consulting Group
- Harish Kotadia, Ph.D., Infosys Technologies
- Wim Rampen, Delta Lloyd
- Bob Thompson, CustomerThink
- Tony Zambito, Buyerology

All the best on using Big Data to create a more customer-centric business!

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Table of Contents

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Why Analytics Will Be the Next Competitive Edge

By Gary Cokins

Analytics is becoming a competitive edge for organizations. Once a "nice-to-have," applying analytics is now becoming mission critical.

An August 6, 2009, New York Times article titled, "For Today's Graduate, Just One Word: Statistics" reminds me of the famous quote of advice to Dustin Hoffman's character in his career breakthrough movie *The Graduate*. It occurs when a self-righteous Los Angeles businessman takes aside the baby-faced Benjamin Braddock, played by Hoffman, and declares, "I just want to say one word to you – just one word – 'plastics.'" Perhaps a remake of this movie will be made and updated with the word analytics substituted for plastics.

This spotlight on statistics is apparently relevant, because the article ranked in that week's top three e-mailed articles as tracked by the *New York Times*. The article cites an example of a Google employee who "uses statistical analysis of mounds of data to come up with ways to improve (Google's) search engine." It describes the employee as "an Internet-age statistician, one of many who are changing the image of the profession as a place for dronish number nerds. They are finding themselves increasingly in demand – and even cool."

Analytics – just a skill, or a profession?

The use of analytics that include statistics is a skill that is gaining mainstream value due to the increasingly thinner margin for decision error. There's a requirement to gain insights and inferences from the treasure chest of raw transactional data that so many organizations have now stored (and are continuing to store) in a digital format. Organizations are drowning in data but starving for information. The article states:

"In field after field, computing and the Web are creating new realms of data to explore – sensor signals, surveillance tapes, social network chatter, public records and more. And the digital data surge only promises to accelerate, rising fivefold by 2012, according to a projection by IDC, an IT research firm. … Yet data is merely the raw material of knowledge. We're rapidly entering a world where everything can be monitored and measured, but the big problem is going to be the ability of humans to use, analyze and make sense of the data. … (Analysts) use powerful computers and sophisticated mathematical models to hunt for meaningful patterns and insights in vast troves of data. The applications are as diverse as improving Internet search and online advertising, culling gene sequencing information for cancer research and analyzing sensor and location data to optimize the handling of food shipments."

The application of analytics is becoming mainstream, but will senior executives realize it?

Business analytics are the next wave

Today many businesspeople don't really know what predictive modeling, forecasting, design of experiments or mathematical optimization mean or do, but over the next 10 years, use of these powerful techniques will have to become mainstream, just as financial analysis and computers have, if businesses want to thrive in a highly competitive and regulated marketplace. Executives, managers and employee teams who do not understand, interpret and leverage these assets will be challenged to survive.

When we look at what kids are learning in school, that is certainly true. We were all taught mean, mode, range, and probability theory in our first-year university statistical analytics course. Today children have already learned these in the third grade! They are taught these methods in a very practical way. If you had x dimes, y quarters and z nickels in your pocket, what is the chance of you pulling a dime from your pocket? Learning about

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range, mode, median, interpolation and extrapolation follow in short succession. We are already seeing the impact of this with Gen Y/Echo boomers who are getting ready to enter the work force – they are used to having easy access to information and are highly self-sufficient in understanding its utility. The next generation after that will not have any fear of analytics or look toward an "expert" to do the math.

There is always risk when decisions are made based on intuition, gut feel, flawed and misleading data or politics. In Babson College Professor Tom Davenport's popular book, *Competing on Analytics: The New Science of Winning*, he makes the case that increasingly, the primary source of attaining a competitive advantage will be an organization's competence in mastering all flavors of analytics. If your management team is analytics-impaired, then your organization is at risk. Analytics is arguably the next wave for organizations to successfully compete and optimize the use of their resources, assets and trading partners.

Substantial benefits are realized from applying a systematic exploration of quantitative relationships among performance management factors. When the primary factors that drive an organization's success are measured, closely monitored and predicted, that organization is in a much better situation to adjust in advance and mitigate risks. That is, if a company is able to know – not just guess – which nonfinancial performance variables directly influence financial results, then it has a leg up on its competitors.

GARY COKINS

Gary Cokins (Cornell BS IE/OR, 1971; Northwestern Kellogg MBA 1974) is an internationally recognized expert, speaker, and author in advanced cost management and enterprise performance and risk management systems. He is a Principal of global business advisory services involved with analytics-based performance management solutions with SAS. Contact Gary at gary.cokins@sas.com or read his blog at blogs.sas.com/content/cokins.

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Big Data and Rise of Predictive Enterprise Solutions

By Harish Kotadia, Ph.D.

Just mention the words "Big Data" to any technology entrepreneur or investor and observe how his/her face lights up with excitement. Given the perceived opportunity in Big Data, tech entrepreneurs and investors want to capitalize on it by starting /investing in a Big Data Management, Mining and Analytics business. Is this perceived opportunity in Big Data for real or is it a bubble that will burst soon?

The New Gold Rush

I think the perceived opportunity in Big Data is real and is here to stay as Big Data Mining/Analytics will fundamentally change the way business is done not only online but also offline. Here's why: Big Data is a key enabler for Social Business and without Big Data Mining/Analytics, a large or medium sized company can neither make sense of all the user generated content online nor can collaborate with customers, suppliers and partners effectively on Social Media channels. And both of these activities, namely gaining insights from user generated content online and collaborating with customers and partners on Social Media channels are critical for success in the age of Social Media.

Can you imagine any large or medium sized business without e-Business in the internet age? Similarly, it is impossible to run a large or medium sized business in the age of Social Media without leveraging user generated content or without collaborating with customers and partners. And for this to happen, Big Data Management, Mining and Analytics are critical/key enablers.

Being a key enabler and catalyst in Social Age, Big Data Management, Mining and Analytics companies are going to command a premium valuation and hence Big Data Mining and Analytics has triggered a new 'Gold Rush', not to mine gold this time but something even more valuable – knowledge and insights.

Unlocking the Potential

Given the three Vs of Big Data, namely Volume, Variety and Velocity (READ *this for more*), challenge before large and medium sized companies is how to unlock the potential of Big Data and productively leverage its value in running the business.

In "traditional" Data Analytics or Business Intelligence, focus is more on analysis and reporting of "historic" or past data stored in the database. Take for example how most organizations use data from their CRM or ERP applications. Almost all the reports that are generated pertain to past or "historic" information. Running a business based on "historic" or past data is like driving a car looking in the rear view mirror and is not going to work.

Instead, companies must analyze all the available information in real time, apply statistical modeling techniques to available information in order to predict future outcomes and take action/run the business based on predicted outcome rather than analysis of historic data as is being done currently.

Since Big Data is characterized by not only Volume, but also Velocity and Variety, it is very important that Big Data is used for analysis in real-time to predict the future and take corrective action based on that analysis. How about using Causal Path analysis on Social Media data (like Twitter and Facebook) to predict Churn or Customer Attrition in Telecom industry and taking corrective action to prevent Churn/Attrition rather than analyzing "historic" attrition rate, call volumes or average response time as being done currently. The real value is in using

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predictive analytics and taking corrective action before it is too late, rather than just reporting historical information.

Techniques like Multiple-regression analysis coupled with Factor analysis, Cluster analysis and Causal Path analysis can be used very effectively with Big data – now that we have many variables and multiple observation for each variable at a customer level to generate statistically significant difference in analysis.

In future, no ERP or CRM system will be complete without Predictive Analytics functionality that will enable companies take preventive steps (rather than reactive) in real time. For example, rather than analyzing "historic" attrition rates, Predictive CRM application will make it possible for companies to identify critical incidents leading to customer attrition so that steps can be taken to retain the customer before he/she defects.

And thanks to Predictive Analytics, ERP or CRM applications will no longer be just a repository of "historical" information but will be transformed into a Predictive Knowledge base or Engine driving business decisions looking forward and not backwards/in the rear view mirror of "historic" information.

What do you think? Do you agree that Big Data will result in rise of Predictive Enterprise Solutions? Please do share your thoughts.

HARISH KOTADIA, PH.D.

Dr. Harish Kotadia has more than twelve years' work experience as a hands-on CRM Program/Project Manager implementing CRM and Analytics solutions for Fortune 500 clients in the US. He also has about five years' work experience as a Research Executive in Marketing Research and Consulting industry working for leading MR organizations. Dr. Harish currently lives in Dallas, Texas, USA and works as Social CRM/CRM and Analytics Consulting Lead for Infosys Technologies.

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Why Big Data and Analytics Will NOT Make You the Next Apple

By Maz Iqbal

Are 'big data' and 'analytics' the latest fads?

In my view there is a little too much hype around 'big data' and the power of analytics to drive business growth and profitability. Can 'big data' and 'analytics' help you improve operations? Yes – they can help you better staff and manage your call centre or improve your supply chain or target your marketing better. Will 'big data' and analytics make you the next Apple? Highly unlikely. Why does that matter? Because whilst you are busy optimising operations someone else is inventing a future in which your optimised operations become redundant: think music, think publishing, think mobile phones. Let's explore this further.

What are the root causes?

Years ago when I worked in the business planning & analysis team of a brand name drinks company I noticed something interesting. Managers could drill down and find out which particular markets had failed to make their numbers. Great – we know which business unit is underperforming. But why is this unit doing better or worse than expected? This is where the fun started. First, there were almost as many opinions as the people we asked. Second, there was no easy to work out whether the answers given by local management held any resemblance to the 'truth'. When I dug further I found out that local management did not know why they had failed to make their numbers (revenues). When they were asked, the local managers simply came up with the most plausible story. So month end because a ritual where HQ asked questions and the local managers invented plausible stories.

> *Lesson 1: For any complex event there are a multitude of plausible answers and working out the 'real reason' is notoriously difficult.*
>
> *Lesson 2: Without a sound grasp of the root causes it is difficult to formulate a sensible course of action to address the situation.*

What do we do about it?

Let's assume that you have all the data and analysis has been done. You know there is a problem. What do you do about it? Is it easy to get all the actors – who have to play ball – to agree on the course of action to take? In my experience the answer is no: the more 'strategic' the issue at hand the more difficult it is to come to an agreement on a sensible course of action. Let's take a look at the recent banking crisis. Did all the main actors (the western economies) come to a consensus on what course of action to take? No. Just take a look at the Euro crisis: why is it that the leaders of the EU cannot agree on the right course of action? First, different people have different ideas about what constitutes the right course of action. Second, the right course of action from an objective perspective may simply not be viable from a political perspective.

> *Lesson 3: The more that is at stake the harder it is to get all the actors to agree to a single course of action and then act to play their part and execute that course of action*
>
> *Lesson 4: If you are unable to act decisively and as a single unit then all the data, analysis and insight is worthless*

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Does it really tell you what you need to know to thrive in the future?

Larry Freed has written an article that resonates with me. He points out that you need to be clear on what you know and what you do not know. I'd say that you need to be clear about what data and analytics is telling you and what it is not telling you. Larry, talking about a website, asks do you know:

- *"**Why visitors come to your site** (to research, to buy, to complete a transaction, to get product support, to learn more about your company before interacting with you through another touch point, etc.)?*
- ***What influences visits to your site** (a referral, a social media interaction, a failure to resolve an issue with a call centre, an advertisement, a news story, a previous affinity with your brand, etc.) and which customer acquisition sources result in traffic that is the mostly likely to convert?*
- ***What visitors need from your website?** How needs differ by population segment or other segmentation that is useful to your business—perhaps first-time vs. repeat visitors, heavy users vs. light users, etc.?*
- ***What visitors expect from your website?** Do men and women have the same expectations? Old and young? Do people who arrived as a result of a Google ad have the same expectations as those who arrived because of a TV ad?*
- ***What channel your visitors prefer,** and are there ways you can influence that preference so they frequent less costly, more profitable channels?*
- ***How customers view your business**, compared to the way non-customers view your business, relative to your competition?*
- ***How your customer profiles and expectations change in response to market and broader economic conditions?** And what, if anything, you need to change as a result?"*

Colin Shaw in a recent post makes the same point in a different way. Here are some relevant extracts from his post:

> "Google and Facebook, as Eli Pariser discusses as a part of TED, are engaged in the process of quantifying preferences from the timing and frequency of online clicks, and using this information to alter web content. The stated goal of this practice is to 'personalize' the web experience.
>
> A lesson gleaned from Dell's 1990s laptop boom illustrates the point that preference and value are two different things. Dell let its customers customize all aspects of their computer's hardware – from screen size to keyboards to RAM – everything but color. **Nobody thought to customize color, because a laptop was supposed to be black or gray. However, when color laptops were introduced, sales skyrocketed and we all learned that color was indeed an important factor.**
>
> Imagine if Google and Facebook had monitored 'clicks.' They would infer that because customers did not indicate a laptop color preference, it doesn't drive value and is therefore irrelevant."

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Lesson 5: there is an assumption behind all predictive analytics and that is "all things being equal" – that is to say that predictive analytics assumes that the future will be a replay of the past.

Lesson 6: human behaviour is shaped by the 'structures' in which human beings are embedded, change the structure and you are likely to see human beings change their behaviour. Think about how the recession (e.g. job losses) have changed the shopping habits of consumers in the western economies.

Why won't big data and analytics make you into the next Apple?

Apple was busy creating a new future (a break from the past) rather than exploiting the past. If you take a look at the US automotive industry the big US automakers were busy building and selling gas guzzlers because the analytics showed that these were the cars that Americans were buying. At the same time Toyota was busy living into a very different vision of the future: hybrid cars and electric cars. Who was right? According to the data and the analytics it was the US automakers. What would you say now? Toyota?

If you are not inventing the future you can still prosper by picking up the weak signals that point towards a new trend. I once asked Bob Greenberg (R/GA) the secret of his success and he told me it was his ability to see these trends and act upon them before others. You might imagine that analytics might help you to spot trends. My experience of traditional analytics is that the modelers do all they can to strip out the outliers and create a normal distribution so that the math works – in doing that they filter out the 'weak signals' that point towards these trends.

Perhaps it is best to end by remembering what Colin Shaw points out: how would analytics have disclosed that customers wanted to customise the colour of their laptops and that once this option was made available then Dell's laptop sales would surge.

What do you think? If I have it wrong then please do educate me.

MAZ IQBAL

I define myself as a 'customer based strategist'. My focus is on helping organisations to generate-define-design-execute customer based strategies that create superior value for customers and competitive advantage for the enterprise. You can access my thinking at The Customer Blog (http://www.thecustomerblog.co.uk).

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From Mentions to Meaning: An Analytics Journey

By Seth Grimes

Maslow's hierarchy of needs is an invaluable tool in the study of human motivations, with higher "self-actualization" needs rising above lower level "physiological" requirements such as food, water, sex, and sleep. These needs are expressed in our everyday lives, in our words, actions, and interactions, forms of expression relayed online, on-social, and enterprise-feedback sources such as customer surveys.

Whether you work in customer experience, market research, product management, or financial markets, you need a guide to making sense of the attitudes, emotions, and opinions—and associated transactions, behaviors, and networks—that make up so much of today's Big Data. So why not fashion a hierarchy, in homage to Maslow's, of functions involved in mining and exploiting human sentiment?

From Mentions to Meaning

The first step is to listen, but don't stop there. The analysis journey will take you from mentions to meaning, from simple monitoring to engagement to optimization. Your technical goal is to tap the spectrum of sentiment sources and link sentiment to customer transactions, behaviors, and profiles. Your motivation? To (re-) personalize business and consumer decision-making. We're aiming for machines that understand humans.

The analysis journey will take you from mentions to meaning, from simple monitoring to engagement to optimization. So I'll take a shot, now, at organizing the variety of approaches into a sentiment analysis/tools hierarchy, 7 levels, 24 elements: Digital measurement, optimization, and beyond.

Let's start with basic capabilities and build up from there. Consider this a How-To guide that you can apply to evaluate your own organization's needs, strategy, and progress.

Level 1: Listen

- **Relevance**: Monitor likely sources, but ask, Is a given status update, message, or post useful? Effective filters are your best tool in combating "information overload." Typical approaches start with keyword search; more advanced ones add topic- and concept-based selection and filtering. Taxonomies are an asset here.
- **Subjectivity**: We're interested in subjective customer (and patient, voter, and market) voices. Is sentiment expressed, any form of opinion, attitude, mood, or emotion? It's often actually more important to know about the presence or absence of feeling than what that feeling actually is. Stronger tools will limit hits to updates and messages where the sentiment is expressed about the entity or topic of interest.
- **Sentiment**: Are views positive, negative, or neutral in tone? Weak tools look at messages; stronger tools associate sentiment with entities and topics; and the most advanced tools go beyond tonality to classify sentiment according to emotional and mood categories that are better aligned with your business needs.

Level 2: Measure

- **Intensity**: How intense is the expressed sentiment, based on word choice and pattern, based on capitalizations, emoticons, and other clues? Weak tools, operating at message level, record mixed positive and negative sentiment as cancelling out. Strong tools help you measure variation.
- **Extent**: What's the aggregate view, for multiple opinion holders, across channels, over time?
- **Trend**: How do views change over time?
- **Share**: What's the distribution and share-of-voice for each topic of interest and each view?
- **Influence**: Which voices are influential, on which topics, and how does influence relate to message diffusion?

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Level 3: Analyze

- **Root Cause**: What are the sentiment root causes? Here, you definitely need to get beyond dashboards and summary stats to the underlying messages that are the sources of the numbers. Ability to extract and summarize opinions can help.
- **Impact**: What's the business impact? To assess impact, you need to match sentiment to performance statistics or transactional records. This is not an easy task, and it's at precisely this step that many, many commercially available tools break down.
- **Action**: What decisions and actions are indicated? Measurement will tell you What and root-cause analysis will suggest Why. It's the unusual tool or model, in today's market, that will tell you What to do about it.

Level 4: Engage

- **Identity**: Who are the opinion holders, individually? If all you can get is a social handle, use it. You're aiming for conversations, not disjointed one-off messages.
- **Interaction**: How do interaction threads track across time, across channels? (You are managing your customer relationships, including on social channels, right?)
- **Profile**: Whom are you talking to? If you can pull profile information and understand the demographic categories a person fit in, so much the better: This understanding will, or should, inform your response. And who are they, the people you're interacting with, talking to? Understand cross-platform social networks to understand message impact.
- **Effectiveness**: How do you tell if a response was effective? How do you systematize, response-effectiveness measurement?

Level 5: Predict

- **Correlation**: Let's take measurement, engagement, and analysis to a new level: How does sentiment correlate with profile characteristics—demographic categories such as age, sex, and cultural background, and location—and with measureable behaviors?
- **Genre**: What's the genre of a message? In practical terms: Is someone posting to complain (expecting a response), to inform others (no response expected), seeking information, or for some other purpose?
- **Intent**: What intent can you read from a message, or in more-technical terms, how do genre, object, and sentiment mesh-up? Do topic and choice of words suggest that someone is shopping for a new car, plans to switch mobile phone providers over frustrating customer service, or is simply making noise?
- **Signal**: What signal can you glean from a series of messages? Is Microsoft share price going to take a hit, based on social opinions? What volume of sales is likely for a new product, based on social chatter?

Level 6: Align and Optimize

- **Conditions**: A level-4 point addressed response-effectiveness measurement. Take it up a notch. Now look at response-effectiveness given the set of different individual and market signals and given business impact (a level-3 point).
- **ROI**: How should you measure online and social sentiment Return On Investment? What are your goals and how are you doing reaching them?
- **Scenarios**: You have signals, effectiveness, ROI: Use them to improve… everything: Your information collection (and the material you ignore), your measurement methods and analyses (including the information you factor in to customer engagement techniques and how you categorize it), your predictive models and their applications. You have a model: Use it. Evaluate different scenarios and approaches.

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Level 7: Integrate and Extend

- **Multi-source**: The underlying assumption is that you'll be working (first) with text, pulled from social and online media, surveys, e-mail, and the like. Yet there's immense sentiment content in other forms of "unstructured data" including audio, images, and video. In a call-center, recorded speech may even be the primary sentiment source. Whatever source you start with, extend your analyses across the set of linked data sources. You'll gain insights beyond what you can learn from any single source.
- **Synthesis**: Most analyses remain siloed; the biggest Big Data challenge I see isn't Volume, Velocity, or Variety (the "3 Vs"), it's integration and synthesis that aim to deliver insights possible only when you link across Big Data sources.

The Meaning of It All

What have I left out? A lot.

I've provided a road map with a lot of questions but no tool pointers. Let me just suggest that you look into tools with deep statistical capabilities, able to handle disparate information with the flexibility to integrate closely into key business processes.

And by the way, my 24 steps aren't a linear sequence. Skip a few; undertake the ones that seem most important, doable, and highest return.

I haven't written about analysis methods, although anyone who's read anything I've written knows that I'm a huge fan of semantic-analysis methods, of text and content analytics and related techniques. These technologies uncover meaning in data, meaning that (per the last of my points) is found not only in 'unstructured' content but also in behaviors and profiles.

I wrote about that our technical goal is to tap the spectrum of sentiment sources and link sentiment to customer transactions, behaviors, and profiles. Our business goal goes beyond, to automate sense-making from the spectrum of sources available in the Big Data era. Sense-making finds the meaning of it all.

I haven't addressed particular applications, because the approach I've describe should apply broadly, whether your task is market research, customer service, media analysis, counter-terrorism, or financial-markets trading. I have a lot to learn about applications myself, which is why I've organized the Sentiment Analysis Symposium. Join us to learn about customer sentiment in a multi-channel world; integrating survey and social data; and emotional vs. rational consumer decision-making.

SETH GRIMES

Seth Grimes is a strategy consultant and industry analyst with Washington DC based Alta Plana Corporation, founding chair of the Sentiment Analysis Symposium and the Text Analytics Summit, and InformationWeek contributing editor. Seth consults, writes, and speaks on business intelligence, text mining, data visualization, and their application to meet current-day business challenges. Follow him on Twitter at @sethgrimes.

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Big Data has Big Implications for Customer Experience Management

By Bob Hayes

Unless you have been living under a rock, you know that Big Data is the latest buzz word in the world of business. The concept of Big Data a is broad one and I consider it an amalgamation of different areas that help us try to get a handle on, insight from and use out of data. Pat Gelsinger, President and COO of EMC, in an article by the The Wall Street Journal said that Big Data refers to the idea that companies can extract value from collecting, processing and analyzing vast quantities of data. Businesses that can get a better handle on these data will be more likely to outperform their competitors who do not.

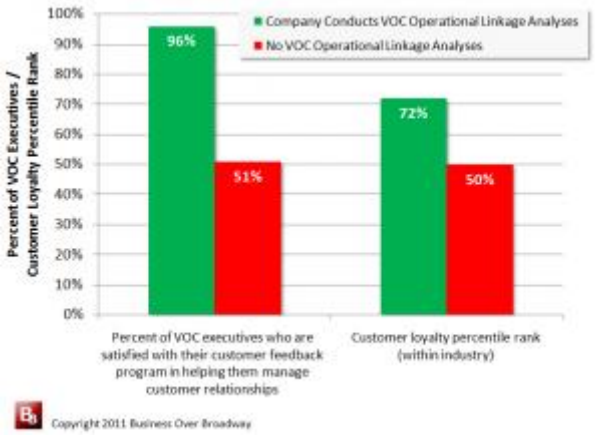
When describing Big Data, people typically refer to three characteristics of the data: 1) **Volume**: the amount of data being collected is massive; 2) **Velocity**: the speed at which data are being generated/collected is very fast (consider the streams of tweets); and **Variety**: the different types of data like structured and unstructured data. Another characteristic of the data that, I think, warrants attention is the source of the data. Businesses data can come from different sources. These are:

1. **Operational:** Operational data contain objective metrics that measure the quality of the business processes and can come from a variety of sources. Hardware providers use sensors to monitor the quality of their implementations. Customer Relationship Management (CRM) systems track the quality of call center interactions (e.g., call length, response time)
2. **Financial:** Financial data contain objective metrics that measure the quality of financial health of the company and are typically housed in the company's financial reporting system.
3. **Constituency (includes employees, partners):** Constituency data contain attitudinal metrics as well as more objective metrics about specific constituents. Human Resources department has access to a variety of different types of data, ranging from employees' performance histories and completed training courses to survey results and salaries. Partner programs track partner information, including attitudes, financial investments, and sales growth.
4. **Customer:** Customer data contain attitudinal metrics. Large enterprises rely on their Enterprise Feedback Management systems to capture and analyze data from such sources as surveys, social media and online communities.

One way businesses are making sense of their data is by linking them together.

Business Data Integration

In a study on customer feedback programs, I found that business data integration played a crucial role in the success of the programs. Specifically, loyalty leading companies, compared to their loyalty lagging counterparts, integrated different sources of business data into their customer feedback data. They linked their customer feedback data to operational data, financial data and constituency data. By linking disparate data sources to their customer feedback data, companies gain insight about what is important to the customers.



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But data integration is a difficult problem. Within a given company, data are housed in different systems. HR has their own system for tracking employee resources. The call center tracks data on their CRM system. Finance tracks their data on yet a different system. What approach can companies take to integrate all their data? In a recent interview, Anjul Bhambhri, VP for Big Data for IBM, talked about how business can solve their Big Data integration problem with respect to data silos:

> "My response and suggestion – and we've actually done it with clients – has been that, you leave the data where it is. You're not going to start moving that around. You're not going to break those applications. You're not going to just rewrite those applications… just to solve this problem. Really, data federation and information integration is the way to go. Data is going to reside where it is."
>
> Anjul Bhambhri, VP for Big Data, IBM

The problem of Big Data for businesses is one of applying appropriate data federation and analytic techniques to these disparate data sources to extract usable insight to help them make better business decisions. Companies who can extract the right insights from their business data will have a competitive advantage over others who cannot.

Next, let us turn to the field of Customer Experience Management to see how the application of Big Data principles can help companies gain insight from their business data to help them grow their business.

Customer Loyalty is our Ultimate Criterion

Customers play a critical role in the success of any business; customer loyalty is key to business growth. Businesses that have customers who engage in more loyalty behaviors (e.g., stay longer, recommend, continue buying, increase share-of-wallet, more clicks/views) toward their company experience faster growth compared to businesses that have customers who engage in fewer loyalty behaviors. The key to growing one's business, then, is to understand how to improve customer loyalty.

Customer Experience Management

One way companies are trying to improve customer loyalty is through customer experience management (CEM). CEM is the process of understanding and managing your customers' interactions with and perceptions of your company or brand. A CEM program consists of a set of organized actions that support the goal of CEM. While a CEM program has many moving parts, an easy way to organize those pieces into six components of a CEM program (see figure to the right).

The source of data in most CEM programs, not surprisingly, is customer feedback data. Businesses gain customer insight primarily by collecting and analyzing customer feedback data from different sources, including customer feedback surveys, social media sites, branded online communities and emails. Using customer feedback data, companies identify the customer experiences that are closely linked to customer loyalty and use that information to allocate resources to improve those customer experiences, and, consequently, increase customer loyalty.

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Three Implications for CEM

Customer feedback is just one type of data that need to be analyzed and managed. By integrating different business data silos, businesses can more fully understand how other business metrics could impact or be impacted by customer satisfaction and loyalty. The impact that Big Data integration will have in CEM falls in three related areas: 1) Answering bigger questions about customers; 2) Building companies around the customers; 3) Using objective measures of customer loyalty.

Implication 1: Answer Bigger Questions about Customers

A successful CEM program is designed to deliver a better customer experience which translates into a more loyal customer base. As mentioned earlier, the source of data in most CEM programs is through customer feedback tools (e.g., survey, social media). Businesses gain customer insight primarily by analyzing customer feedback data with little or no regard for other data sources. By linking disparate data sources to their customer feedback data, companies gain insight about their customers that they could not achieve by looking at their customer feedback data alone.

Here are a few important business questions that can be addressed by linking disparate data sources to customer feedback.

- Where do we **set operational goals** in our call centers (e.g., number of handoffs, length of wait time) to ensure we maximize customer satisfaction?
- How many hours of training do **employee need** to ensure they can satisfy their customers?
- Which **call center metrics are the key determinants of customer satisfaction** with the call center experience?
- Where do we need to invest in our **employee relationship** (e.g., across the employee experience touch points) to ensure they deliver a great customer experience?
- Do customers who report higher loyalty **spend** more than customers who report lower levels of loyalty?

Companies who integrate their business data to understand the correlates of customer satisfaction and loyalty can better answer these questions and, consequently, have a much better advantage of effectively allocating their resources in areas that they know will help improve the customer experience and maximize customer loyalty and business growth.

The process merging disparate data silos depends on the question you are trying to answer. You will need to apply appropriate data federation and aggregation processes to build specific data models for statistical analyses and interpretation for each question. For example, studying the impact of employee satisfaction on customer satisfaction requires a different data model than when studying the impact of call center metrics on customer satisfaction.

This entire process of data integration is sometimes referred to as Business Linkage Analysis. The interested reader can explore the outcome of this data federation and aggregation process below. I developed three customer-centric data federation processes and data models to help companies use their existing data to address some of those Big Questions presented above.

1. Linking operational and customer metrics: We are interested in calculating the statistical relationships between customer metrics and operational metrics. Data are federated and aggregated at the transaction level. Understanding these relationships allows businesses to build/identify customer-centric business metrics, manage customer relationships using objective operational metrics and reward employee behavior that will drive customer satisfaction.

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2. Linking financial and customer metrics: We are interested in calculating the statistical relationships between customer metrics and financial business outcomes. Data are federated and aggregated at the customer level. Understanding these relationships allows you to strengthen the business case for your CEM program, identify drivers of real customer behaviors and determine ROI for customer experience improvement solutions.
3. Linking constituency and customer metrics: We are interested in calculating the statistical relationship between customer metrics and employee/partner metrics (e.g., satisfaction, loyalty, training metrics). Data are aggregated at the constituency level. Understanding these relationships allows businesses to understand the impact of employee and partner experience on the customer experience, improve the health of the customer relationship by improving the health of the employee and partner relationship and build a customer centric culture.

Implication 2: Build your company around your customer

The success of a CEM program depends on the adoption of certain business practices in each CEM component. While there are several best practice standards, the major success drivers are related to strategy/governance, business process integration, and applied research. Companies who adopt best practices in these areas have higher levels of customer loyalty compared to companies who do not adopt these practices.

Integrating different sources of business data helps build a customer-centric company by building interest across the company in understanding what impacts the customer experience. Because the integration of different business data would necessarily involve key stakeholders from each organization, the mere act of integration would be a catalyst for further cross-organizational discussions about the customer. Applying a customer-centric data federation and aggregation approach to business data integration would help senior leaders understand how their organization (and its metrics) impacts the customer.

The results of customer research become more applicable to other organizations when you are using their data in your research. Different data owners (e.g., senior leaders) can now start asking (and answering) questions about their metrics and how they are related to the customer experience. Expanding the use of customer data to other departments (e.g., HR, Call Center, Marketing) helps the entire company improve processes that are important to the customer. Here are some examples of how companies are using this type of research to build a customer-centric culture:

- Identifying and building customer-centric operational metrics for executive dashboards
- Removing the noise from executive reports by including only customer-centric business metrics (known to be predictive of customer satisfaction)
- Integrating customer feedback into operational systems (CRM) so front-line employees understand the interactions *and* attitudes of their customers
- Conducting in-depth customer research using all business data to continually gain customer insight and gain a competitive advantage

Big Data technologies and processes can go a long way in helping you support your CEM program. By taking a customer-centric approach to your Big Data, you will be able to literally build the company (its data) around the customer.

Implication 3: Use Objective Loyalty Metrics

Despite the existence of objective measures of customer loyalty (e.g., customer renews contract, recommends you, buys more), CEM programs rely on customer surveys as a way to assess customer loyalty. Measures of customer loyalty typically take the form of questions that ask the customer to indicate his or her **likelihood of engaging in specific types of behaviors**, those deemed important to the company/brand.

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CEM professionals (me, too) typically use these self-report measures as our only measure of customer loyalty when analyzing survey data. While these loyalty metrics do provide reliable, valid and useful information, you are always interested in what customers really do. By linking up financial data and customer feedback data, you would be able to understand how the customer experience impacts **real customer loyalty behavior using objective metrics**, like purchase amount, products purchased, products liked, products shared, renewed contract).

End-of-quarter financial reports include customer loyalty metrics (e.g., churn rates, ARPU, repurchase rates) with no information about the factors that might impact those numbers. Traditionally analyzed at the end of the quarter as standalone metrics, these objective loyalty metrics provide no insight about how to improve them. Linking satisfaction with the customer experience to these objective loyalty measures, however, lets you build predictive models to help you understand the reasons behind your financial metrics. This is powerful stuff.

Could we stop using self-reported customer loyalty metrics? It would make the loyalty measurement debate a moot point. I think, though, the use of self-reported customer loyalty metrics will always be used. Survey-based loyalty metrics **allow companies to quickly and easily gauge levels of customer loyalty** and **provide a forward look into the future about customer loyalty.**

Summary

The era of Big Data is upon us and the Big Data problem for business is one of linking up their disparate data silos with customer feedback data in order to identify the correlates of customer satisfaction and loyalty. A major hurdle in solving this problem involves applying appropriate **data federation and aggregation** methods across the different data silos. This data federation process results in usable datasets with the right metrics culled from different data sources to answer specific questions or hypotheses. Once the metrics are pulled from their respective data sources, businesses can apply statistical modeling to answer important questions about the causes of customer satisfaction and loyalty.

Big Data principles have a role in CEM programs. Integrating other sources of business data with your customer feedback data can help you extract much more value from each of your data sources. By linking up these data sources, companies will be able to ask and answer bigger customer experience questions, embed the importance of the customer across different organizations/departments and provide the use of both subjective and objective metrics of customer loyalty.

BOB HAYES

Bob E. Hayes, PhD is the Chief Customer Officer at TCELab and president of Business Over Broadway. He calls himself a scientist, analyst, blogger and author on customer experience management (CEM) and analytics (*Beyond the Ultimate Question* and *Measuring Customer Satisfaction and Loyalty*).

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What Does 'Big Data' Really Mean to Revenue Performance?

By Phil Fernandez

So how big is big data? And why is it important to all of us involved with deploying marketing automation and Revenue Performance Management (RPM) to drive profitable, sustainable growth? On the bigness question, consider this: Cisco has forecast that by 2013, the amount of traffic flowing over the internet annually will reach 667 EXABYTES. Just to put that in perspective, one EXABYTE of data is the equivalent of more than 4,000 times the information stored in the US Library of Congress.

What really has pushed big data into the business spotlight is the growing accessibility of powerful data analytics that enable marketing and sales departments (i.e., everyone at your company concerned with growing revenue) to really make sense of all of that information. And to use it to develop deep insights and support real-time decision making that improves revenue performance.

Big Data as the 'Next Frontier'

Last year, the McKinsey Global Institute (MGI) conducted a major research study on big data, calling it "the next frontier for innovation, competition and productivity." Noting that big data is becoming even more valuable as our analytical and computing abilities continue to expand, the MGI study stated: "Leaders in every sector will have to grapple with the implications of big data, not just a few data-oriented managers. The increasing volume and detail of information captured by enterprises, the rise of multimedia, social media, and the Internet of Things will fuel exponential growth in data for the foreseeable future." There certainly is a lot there for revenue executives to ponder.

Unquestionably, big data is already having a profound impact on business, and especially marketing. In a blog post last year on the rise of data analytics, I talked about how corporations and brands are now increasingly able to "connect the dots" of those oceans of data and previously unusable information to create actionable insights that drive big time results.

Sophisticated revenue analytics are giving revenue executives the power to "connect the dots" related to prospects' buying intentions and behaviors. Equally important, these new revenue analytics tools also help marketers to report back to senior management in the fact-based language preferred by the C-suite. And that gives the marketing department even more influence and impact within the corporation.

The Promises and Pitfalls of Big Data

As with any rapidly emerging technology, big data poses both great promise as well as some pitfalls to companies looking to ride this new trend to better efficiency, increased results, and higher revenues. Since I have already extolled some of the strong benefits of big data, let me balance that with some notes of caution.

The fact is, big data can be a curse for corporations. Given the growing mountain of big data (especially unstructured data) that is being produced every day by social media, Google, mobile, and the entire digital information revolution, managing that data has become an historic challenge for businesses worldwide. According to the McKinsey Global Institute study, "There will be a shortage of talent necessary for organizations to take advantage of big data."

I concur with McKinsey's finding. The talent shortage is especially acute in the marketing department. The practice of marketing is now becoming more and more data-driven, but there are still not enough marketing

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executives who are truly experienced (or even comfortable) with making sense of the data, and actually putting it to work to drive revenue growth.

This is even true for Chief Marketing Officers. Many CMOs learned the marketing game when it still was more of a "right brain" management function instead of the data-intensive "left brain" process that it has become in recent years. Ad Age recently ran an article that provocatively stated: "When CMOs learn to love data, they'll be VIPs in the C-Suite. And if they don't, they'll be relegated to overseeing promotions." If that is not a shot across the bow of all budding marketing leaders, I don't know what is.

Data Analytics Technology is a Tool, Not a Panacea

The other big data pitfall that looms large for sales and marketing teams is the frequently overly optimistic belief in the power of technology to instantly change everything for the better. I don't need to tell you that technology – including data analytics tools – is not a panacea for business, or any type of organization. It just can't make everything right.

Data analytics are indeed powerful tools that can help corporations to manage effectively the oceans of data that are now washing across the business world. But, to achieve the maximum benefits in terms of driving revenue growth and results, those tools must be used in conjunction with an overall **Revenue Performance Management** strategy and operational plan.

Just as too much data can be a bad thing, technology for the sake of technology can be a waste of money and effort. To be successful, implementing big data analytics technology must be implemented within a well thought out strategic framework, and including cross-departmental coordination and senior management buy-in.

Big data, effectively mined and managed by advanced data analytics tools, can be a huge competitive advantage for companies of all sizes and types. When those deep data insights are leveraged and managed as part of an integrated RPM program, then the true promise of big data can be realized.

So far, has big data turned out to be more of a blessing or a curse for your company, especially for your revenue related activities?

PHIL FERNANDEZ

Phil is a 26-year Silicon Valley veteran and has the scars (and a couple of successful IPOs) to prove it. Prior to Marketo, he was President and COO of Epiphany, a public enterprise software company known for its visionary marketing products.

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Context Matters: Using Big Data to Deliver More Relevant Mobile Experiences

By Lara Albert

Whether it's the presidential election, baseball or Freakonomics, the press, the business world and even Hollywood are honing in on analytics. Player probabilities, debate "gotchas," identifying whether a gun or swimming pool is more dangerous are all outputs of data analysis. Entertaining? Yes. Insightful? Sure. Is this going to change the way you live your life? Most likely not. But what if your favorite brand, mobile operator, or even health care provider could determine what you needed and when and how you needed it as a result of data and analytics? Now that's a different story.

Those of us in the analytics space are excited to see data take the spot light; but even more exciting are the "behind the scenes" advancements that are helping us move beyond interesting outputs to more relevant actions. For years, companies have been leveraging data to help drive decisions about how they engage with customers, but with mobile now we have the ability to take data and the application of sophisticated analytics to the next level.

Big data means relevant contexts

Imagine the scale of data for the more than 3.7 billion mobile phone calls that are made each day in America, the more than 200 trillion text messages sent, the more than 13 million apps downloaded, and the one in five Americans browsing the mobile web every day. Impressive numbers but it's not the data that's the big news, it's how you can use the data. Companies realize that analytics is the magic behind everything from higher response rates to customer loyalty. They understand that analytics can help them, but they're not as clear about how. With a focus on the mobile channel, how do we leverage data to determine the most effective ways to engage customers at the right times and places?

Context is the key. Only with mobile can you deliver truly relevant experiences based on the real-time context of each individual. What makes this possible? Capabilities around modern analytics that take advantage of a breadth of usage data sources to build complex behavioral and demographic profiles of consumers to ensure the right message goes to the right customer at the time it matters most.

What's best for you?

Consider a mobile game developer. By understanding the context for an individual user, they can tailor the in-app experience for a user who spends the majority of gaming time in Level 7, is more likely to accept in app purchases after eighteen minutes of play or reaching a score of 1 million, and accesses the app around 7 pm on week days. In this case, there is value in understanding behavioral data to encourage other behaviors such as purchasing add-ons or accepting third party offers.

Think about a health care provider that wants its patients to enter their blood pressure every day via a mobile app. A reminder for the business professional is best in the morning, right when he wakes up because he complies best at that time of day. For the student, a reminder is most effective in the afternoon when she's home from class but if she's late in reporting after the usual time, an SMS is sent to prompt her compliance.

For mobile advertisers, understanding and applying context brings new thinking to the ever daunting question: "How can I get the people I'm reaching to try, buy, love, or be loyal to my brand or product?" Armed with contextual awareness, brands increase the relevance, value and effectiveness of their advertising. Instead of

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delivering a mass SMS to all of the "bargain hunters" within a 30 mile radius at 9:30 on a Tuesday morning, a retail brand can determine that an individual user is more likely to act on the offer if they deliver it just prior to their evening commute and include a dollar value discount versus a percentage discount offer. They reach the right customers at the right times and places, and consumers engage with, instead of ignore, what they have to say.

Context leads to better results

Companies are beginning to realize that by leveraging analytics to uncover the contexts that really matter for an individual they can determine the optimal time and place for delivering the right message or offer. They are also realizing that by doing so, they can achieve better results with customer service and marketing campaigns aimed at driving specific behavior or desired actions. Suddenly, the goal extends beyond click through rates and app downloads.

Although companies are often unclear how to get the most out of the mobile channel, the vast amount of behavioral data and the ability to know how to act on it to drive proactive, relevant engagement makes it one of the easiest channels to garner success—*if* you have the right tools in place. The beauty of mobile analytics is that it can help you design, test, tweak, and perfect how you interact with customers. Never before have companies had so much data available to define an individual customer's preferences and needs; and the ability to act in the optimal context to meet those needs. Mobile has set the stage. Now it's up to us to take data to the next level.

LARA ALBERT

Lara Albert is Vice President of Global Marketing for Globys, a provider of customer experience solutions for the worldwide market, leads corporate and product marketing initiatives. Prior to Globys, Albert worked at VeriSign, AOL and Kraft Foods. She holds a bachelor's degree from the University of Georgia and a master's degree in business administration from Vanderbilt University.

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Buyerology Trend: Think BIG Insights vs. BIG Data

By Tony Zambito

This is the second in a series of articles planned on looking at buyer trends that will influence marketing and sales in the near and foreseeable future. This article looks at how understanding today's conventional and social buyers takes BIG Insights versus BIG Data

Trend: Buyer Behavior Changing Rapidly and Buyers Are Saying – Get Me Please!

Evident over the past two years are monumental shifts that are occurring in buyer behavior. We've seen buyers entering the buying stages in unpredictable ways and deferring direct interactions further down the buying process. There have been generational differences noted between the rise of the younger social buyer as well as hybrid behaviors of traditional buyers. Buyers at first seemingly consuming information at a rabid thirst pace while other buyer groups demonstrating content fatigue and rejecting content outright.

Rather than rehash the mountain of information that can be found about what buyers are exhibiting, suffice to say that buyers are adapting, changing, evolving, and developing new processes along the way. We know, to a degree, what buyers are doing. And data-driven marketing and BIG data has become BIG business to tell us what buyers are doing.

In the past two plus years, we are seeing a rise in the analytical push and explosion in the wont for data. This is turning into a Catch-22 dilemma for C-Suite executives. While research can be found that data-driven companies do outperform non-data driven companies, the C-Suites in corporate worlds can be drowning in data and can never hear the still voice of their existing customers and prospective buyers. This dilemma is most certainly compounding the issue of unpredictability about buyers in the future.

What Must CEOs, CMOs, and CSOs Do?

There is no question that the C-Suite and perhaps in particular the CMO is under constant duress to figure out how to find the right mix of products, services, and experiences that make loyal customers and wins over prospective buyers. I suspect that on any given day of the week, a C-Suite member is pouring over the data explosion taking place and attempting to decipher what insight can be useful for predicting how buyers will behave and buy.

Here's a problem we all know business has. When it comes to looking at the future – we just do a plain bad job at it. We've been trained, conditioned, brainwashed, whipped, and had the fear of the devil put in to us to rely on BIG data as a way of planning and predicting the future. And to some degree, analytics and data help us to find out what buyers are most likely to do in the future. But, is BIG data on its' own a reliable measure of outcome? While I am not certain, I am willing to guess that the 80/20 rule applies here with 80% of the C-Suite not being able to give an affirmative yes to that question.

What the C-Suite needs to do is balance the equation on finding out how to predict as well as meet buyer goals. The C-Suite of the future will come to rely on BIG insights and see such interwoven into their strategy planning. By BIG insights I refer to the qualitative nature of research that gets to the most important questions of how and why buyers behave as they do to make purchase decisions. Giving us the BIG insights that can help us to plan for a future in ways buyers have yet to envision even for themselves. The C-Suite today must add BIG insight to the equation of being informed about buyers and making sound decisions that will put them on their existing customer's and prospective buyer's computer or tablet screen consistently.

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The problem that has always plagued BIG data is that it is an analytical view of past results – it is rooted in a past-to-present orientation. And past results are important. I am not saying they are not. What I am saying is that buyer behavior is changing so rapidly that the C-Suite must balance out the equation to attain the deep understanding of buyers that is focused on future orientation. An equation that leads to BIG insights that also shapes the organization's future relationships with existing customers and prospective buyers

The Future

In the present and in the future, C-Suite leaders will be called to lead their organizations in distinguishing between data that is factual in nature and insights which helps to inform decisions. This is where it gets tricky. The existing dialogue about BIG data uses language about insights – and to be sure there is insight to be had quantitatively. However, there are BIG insights to be had qualitatively that propel the organization forward into a future that they co-create with existing customers and prospective buyers. The C-Suite of the future will look at shifting resources to be more balanced between quantitative data and qualitative insights that are achieved through mixed qualitative investigative methods. The quest for deeper insights will grow as it becomes the path to finding ways to differentiate in a constantly changing social world.

What buyers are saying today is pretty simple. They are saying "you are not going to get me just on numbers and facts." Buyers are evolving a new expectation. That is, they want you to "get" them qualitatively and they want you to "get" them in ways that will help them. What I've discovered through qualitatively research is that while today buyers want to self-direct their own buying processes and minimize sales involvement, they are future oriented towards committing to a relationship that will help them grow.

Are you ready to invest in the BIG insights that will guide your organization to exactly what that relationship is supposed to look like?

TONY ZAMBITO

Tony Zambito is Founder and Principal of the buyer research and strategy firm Buyerology℠. He is the originator of the buyer persona research methodology as well as Business Buyergraphics™ that are widely used to make informed decisions from buyer insights. Tony also served in the role of Vice President in Sales and Marketing capacities for TRW, Knight-Ridder, and Compaq (HP). He holds a B.S. in Business and an M.B.A. in Marketing Management. Read Tony's blog Buyerology Now for insightful commentary on changing buyer behavior.

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How To (Not) Get Smart About Big Data

By Wim Rampen

If you are to believe the talk of twitter-town and its suburbs, due to the connectivity of numerous devices worldwide, we (will) also have available so much data, it is just waiting to be mined and will change how we do, well.., just about everything. All this is being referred to as Big Data. The problem with all this data of course is the filtering.

There is a lot of noise, and despite improvements in Social Media monitoring, analytics tools/solutions and what have you, we will need a lot more powerful tools to connect the dots and see patterns. We may need Watson-like technology to automate these processes and then still the outcome is not sure.

Too Big?

And because Big Data is so BIG there's a clear call for BIG companies to join efforts to explore and undoubtedly monetize it through building a 'smarter' planet (pun intended). And whilst, with the right mindset, a lot of good can come from it, I don't think we have too good of a track record that all stakeholders (and yes, that includes you!) will benefit from it sufficiently. (I suggest you also read J.P. Rangaswami post on the theme. He makes some excellent points!)

What can you do?

But what can you do? How can you find your way through the clutter? How can you, not so big company or smaller business unit in a big company, understand if you need to fear or embrace Big Data? Esteban Kolsky says it exactly like it is:

I'd say that organizations get bombarded by Big Noise, not Big Data — data is what is filtered out of that noise. The resulting data is not something you need to fret about how to handle; [..]

Good time to shift strategies from panic, knee-jerking mode to calculated, strategic mode – don't you think?

I could not agree more. It's no time to panic, and it's not the time to go out and buy all the technological solutions you may be led to think you need. What does it mean to go into calculated, strategic mode?

5 Questions to enter strategic mode

A good way to start being calculated and strategic about this is asking yourself 5 important questions.

1. Start with asking (business) questions you need or want answers to. This could be any question, related to your processes, your customer needs, habits, your points of sale.. etcetera etcetera. Because, **if you do not ask the right questions, you will never find the right answers** in any data, let alone Big Data.

2. Re-think what you need the answers to your questions for: what is the proposed value coming out of knowing the answer? **Will knowing the answer eventually result in creating more value for the company and the Customer?** Is it actionable? If not, skip the question and focus on the ones that do provide actionable insights. There's little time and little money, so you need to be effective with both resources.

3. Ask yourself: **how can I obtain the answers to the questions fastest and cheapest?** Can I get closer to the answer(s) by first asking my Customers? Can I get closer by first using data I already own? More data does not always mean better data. Relevancy is not always easy to establish, but 9 out of 10 times, the

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not so sexy, not so far away, not so expensive is good enough. You don't need to be exact all the times. You need to be closer than before.

4. If you still think you need to tap into Big Data, or need surrounding solutions, make sure you start any project with experiments and prototyping. **Evaluate and iterate in short cycles, until you get it right**. And don't waste too much of your time getting it right. People will lose interest, and even if you get it right, chances of success decrease exponentially if people hopped on the next train.

5. Last, but not least, **ask you self the question if you need all this "in (near) real time"** like 'they say'. Or that running your analysis once works just as well, because the patterns do not change that much.

To conclude: I do think though that you need to start answering these questions and jump into strategic mode. There is a lot of noise, but there's a good chance some of the data in there is very useful to you. But you will never find it if you're not looking for it strategically. And it will certainly not find you as fast as someone else can find it before it does.

WIM RAMPEN

I offer fresh perspectives on your Customer related challenges. Perspectives based on 13+ years experience in (leading) Customer facing departments & projects. In solving the challenges you face I trust on analytical and creative methodologies for analysis/research, problem definition, ideation, testing & implementing the solution(s) we create together. For more information visit Wim Rampen's blog.

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Don't Let Analytics Turn Your Business into "The Borg"

By Bob Thompson

At the Marketing Optimization Summit in San Francisco, Akin Arikan of IBM opened up his talk by saying that years ago the web analytics geeks could only hope someday to get a seat at the table with business leaders.

Well folks, that day has arrived. Under the current umbrella buzzword of Big Data there are a plethora of solutions available from mega vendors like IBM and SAS, to lots of startups and smaller firms seeking to optimize one thing or another. If you've got data, you can find a tool to make better decisions using it.

One of my favorite retailers, Nordstrom is an old company that is embracing new technologies. James Steck, part of the Advanced Analytics group there, discussed how Nordstrom used JMP to understand product and brand relationships. The idea is simple: figure how to promote the right products and brands to the right customers, maximizing revenue in the process.

That's not a simple problem when you've got a busy website (www.nordstrom.com) along with 225 stores doing about $10B in sales annually. Using JMP they are able to figure out, for example, which segments of customers are more likely to buy brand Y and first buying brand X. Armed with that info, marketers can make better promotion and merchandising decisions.

Macy's: From "Mad Men" to "Math Men"

At Forrester's Customer Intelligence Forum, the theme was "how to create engagement in the age of the customer." The highlight for me was the presentation by Julie Bernard, Group VP of Customer Centricity at Macy's. Before joining the retailer 5 years ago, Bernard earned her retail chops at Saks Fifth Avenue. At Macy's, her job was to "put the customer at the center of all decisions." That was easier said than done at a 150 year-old brand that was organized around products. Bernard used her analytic skills to attempt to bust myths about what consumers really wanted but was largely ignored.

After banging her head against product silo walls for a year, the turning point came when she asked for help from the CEO Terry Lundgren. Bernard says that he appointed himself Chief Customer Officer and announced it on an analyst call. This sort of executive sponsorship was the first and arguably the most important step in turning marketing from "Mad Men" to "Math Men" at Macy's.

What I enjoyed most about Bernard's talk was how "big data" and analytics was used. Not to automate or depersonalized the experience, which has been the sorry end result of too many CRM and contact center initiatives. Instead, the insights gained from transaction data, loyalty programs, credit card and more were used to "give customers a seat at the table."

For example, one key decision they made was to first focus on improving the products, pricing and experiences that move "loyals"—those consumers already buying regularly. In the future, Bernard thinks analytics can also help the retailer make smarter merchandising decisions. Each year Macy's spend some $40B on inventory, a much larger expenditure than marketing.

Macy's has been doing well lately and so has the CEO, er, Chief Customer Officer. According to this report, it grew profits by nearly 50% to $1.26B in 2011, resulting in a very nice payday for Lundgren.

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LinkedIn serves up personalized experiences

Another interesting example is LinkedIn, which accumulates a massive amount of data as its users interact. Speaking at the Marketing Optimization Summit, Scott Nicholson (Senior Data Scientist) said they can use that data for the benefit of users (e.g. find future job opportunities) or for LinkedIn (e.g. present the right ads for monetization).

What complicates matters is that LinkedIn offers lots of choices—40 different actions according to Nicholson. Using various analytic techniques too geeky to go into here, LinkedIn could serve up experiences that are more personalized to the user, or ads that are more likely to be clicked on. Side note: I wish they would apply more of that analytic wizardry to the user experience, which I still find clunky compared to, say, Facebook.

Don't turn your business into "The Borg"

There's a lot of hype right now about Big Data. Please remember that analytics is just a tool and use it wisely.

In the CRM heyday, there was too much focus on extracting value *from* customers, and not enough on creating value *for* customers. That's why we have CEM as a counter balance. These examples show that analytics can do both: improve the customer/user experience while also maximizing revenue and profit.

Here's hoping business leaders will remember there are real flesh and blood people behind all that data being collected and analyzed. Personally, I don't want to do business with The Borg. Do you?

BOB THOMPSON

Bob Thompson is CEO of CustomerThink Corp., an independent research and publishing firm focused on customer-centric business management, and Founder/Editor-in-Chief of CustomerThink.com, the world's largest community dedicated to customer-centric business. Thompson is a popular keynote speaker, blogger and author of numerous reports, articles and papers, including *CrowdService: Harnessing the Wisdom of Crowds in Customer Service and Support*.

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