

Turning Big Data into Big Revenues

With the right analytics approach, business leaders can unlock insights from big data that lead to profitable business decisions.

By Joe Mullich

For many CEOs today, big data is at the top of the strategic agenda. At the same time, many business leaders are wondering how to turn the vast stores of data in their existing systems—in addition to the fast-growing volumes of data generated by the social Web and elsewhere—into top- and bottom-line benefits.

According to a 2012 study by global management consulting firm McKinsey & Co., 65 percent of executives say big data and analytics is a priority for their organizations (see Figure 1, “Big Data High on Strategic Agenda,” at right). About half of business leaders say they expect to build competitive advantage with the initiative, and nearly a third intend to build a new business or tap into new profit pools.

And little wonder. McKinsey also found that businesses making smart use of big data collected significantly more revenues than others in their industry (see Figure 2, “Big Data Leads to Competitive Advantage,” on page 2).

Realizing Big Data Potential

Big data refers to immense and fast-growing volumes of different types of data that can be quickly collected and analyzed. Beyond traditional transactional systems, the profusion of sensors in industrial machines and other connected devices is providing a tsunami of information, as are social media commentary, customer service inquiries and other Web 2.0 sources such as video, chat and online forums. But what is driving interest in the big data movement is the combination of this data and the new analytic tools that enable incremental revenue gains.

Just ask Nilan Peiris, chief marketing officer at Holiday Extras, a U.K.-based online company that provides pre-booked airport hotels and parking. By judiciously selecting and applying the right types of information from the company’s big data stores, Peiris is deriving insights that drive a significant amount of revenues for the fast-growing £200 million company.

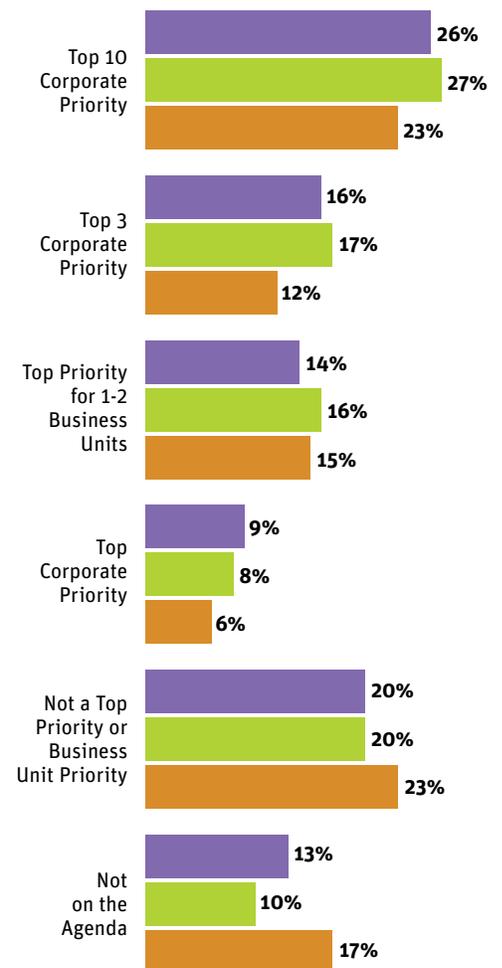
Case in point: When customers come to Holiday Extras, the company immediately analyzes the great wealth of information it possesses about them, such as the model of customers’ cars, the specific type of hotel room customers booked in the past, and customers’ opinions based on reviews they wrote about past hotel stays. This information can lead Holiday Extras to recommend a family hotel with specific characteristics that is a certain distance from an airport—giving customers exactly what they want, based on knowing what they have experienced before.

“In a world where every click can be tracked and recorded, we shouldn’t be managing customers by putting them into groups of similar people,” Peiris says. “We shouldn’t be guessing. We should be able to read the signals the customers are giving us to figure out what they want.” Personalizing recommendations has boosted Holiday Extras’ sales by 10 percent. “Businesses win online when

Figure 1

Big Data High on Strategic Agenda

Key: ■ Big Data and Analytics
■ Digital Marketing and Social Tools
■ Flexible Delivery Platforms



Note: Respondents who answered ‘don’t know’ are not shown; figures do not total 100%.

Base: 1,469 C-level executives

Source: McKinsey & Co.

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they use hard-to-copy technology to deliver a superior customer experience through mining larger and larger datasets,” he says.

An Open Attitude Toward Change

This cuts to the heart of big data’s ability to transform companies and entire industries by giving CEOs actionable intelligence to boost sales in a number of ways, including the following:

- Identifying new customers, either in new or adjacent markets.
- Spotting additional revenue opportunities from existing customers.
- Identifying new product/service opportunities.
- Improving customer service and support.
- Reducing time to market.
- Building better pricing models.

In addition to increasing revenues, big data also can streamline operations by improving productivity and reducing labor costs, thus increasing margins (see Figure 3, “Big Data Benefits,” on page 3). Oliver Halter, a principal at global professional services firm PricewaterhouseCoopers, provides a compelling example of the types of insights big data can reveal that may boost the top line. A mobile phone carrier used its complete dataset of call records—hundreds of billions of rows of data—over a period of time to identify predictors of churn. Complex analytics revealed that one of the biggest predictors of customer defection is a churn event in a subscriber’s close call network. For instance, if John calls Janice frequently and Janice defects to another carrier, there is a heightened probability that John will defect, too.

“This was an unexpected result, which could only have been produced by analyzing a very large dataset over time,” Halter says. By identifying that pattern, the carrier could work on more focused retention strategies.

To collect on the top- and bottom-line benefits of big data, C-level executives need to understand several key points:

- **Look for customer insights.** According to Halter, many C-level executives do not fully appreciate the extent to which big data can provide strategic insights that drive revenues. Suppose a midsize retailer of pet products has traditionally targeted affluent customer segments, he says, and realizes there is a giant middle class who buys similar pet products through mass retail channels.

“The company could mine its sales data to link purchase behaviors to a standard customer segmentation scheme,” he says. “Then it could profile the specific behaviors associated with the middle-class segments. Finally, it could design a sharper growth strategy by linking the deeper understanding of segment-specific behaviors to a new distribution strategy and customer experience.” In so doing, the company could successfully target a new type of customer with whom it had never engaged before.

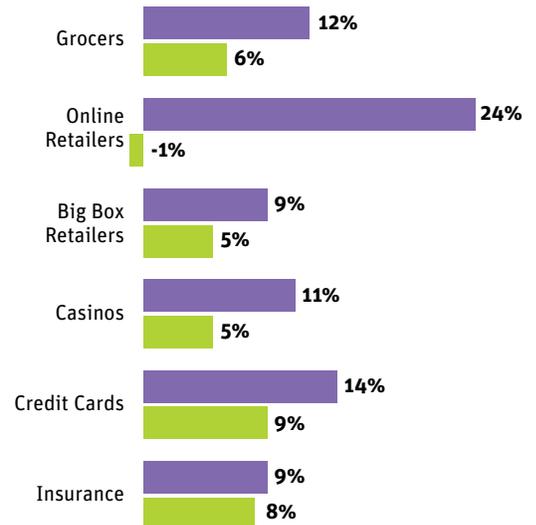
- **Do not focus on how much data you accumulate but on how you slice and dice that data.** “People sometimes think of big data as an overwhelming flood of information,” says Jeff Kaplan, managing director of consulting firm THINKstrategies. But the benefits accrue when it is reduced to smaller bite-size

Figure 2

Big Data Leads to Competitive Advantage

Big data companies have outperformed their respective markets by creating competitive advantage.
Percent increase in revenues, 10-year CAGR (1999-2009)

Key: ■ Big Data Leaders ■ Other Competitors



Sources: Bloomberg and Datastream; annual reports; McKinsey analysis

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pieces. “Big data isn’t the solution. The solution is having the right set of tools to properly slice and dice the data.”

Those tools are appearing at a fast and furious pace. While old analytics systems were infrastructure-heavy and took a long time to gather and analyze mainly transactional data, new systems are much faster, less reliant on IT to collect data and build queries, and better able to apply complex analytics to new types of data. Market research firm IDC says business analytics software will hit \$50.7 billion in revenue by 2016, growing 9.8 percent per year, driven by corporate interest in the types of insights their data can provide, beyond what traditional analytics efforts have yielded.

Additionally, cloud computing provides unlimited storage capabilities to hold the unprecedented amounts of data being produced, in addition to offering the vast processing power big data applications require. “In the past, companies spent an enormous amount of money to build datacenters just to store the vast amounts of data,” Kaplan says. “Now, the third-party infrastructure providers are making the storage and capture of data exponentially less expensive.”

Another advance, he notes, is the improvement of user interfaces that enable non-technical people to both access and manipulate the data easily and quickly. Yet another is the ability to create queries for their own specific requirements.

▪ **Mix “art” with science.** Amid all the hype, it is important to understand what big data cannot do—decide what questions to ask. “The success of big data usage depends on the ability to identify the valuable business questions you hope the data will answer, with the help of technology,” PricewaterhouseCoopers’ Halter says. It requires a lot of thought and discussion to pin down the questions that are important to answer and how those answers ultimately relate back to the P&L and balance sheet.

Holiday Extras’ Peiris cites the need to mix both “quantitative” data and “qualitative” data. For example, the company could track the point at which customers abandoned their purchase—the quantitative aspect. But that did not tell Holiday Extras what needed to be changed to keep those customers from abandoning the site. For the *why*, it needed to talk to customers—the qualitative data.

The company experimented with pop-up surveys on pages with the highest drop-off rates. On one page, the survey revealed that 30 percent of customers left because the image of a hotel was not detailed enough, while 65 percent thought the descriptions were insufficient and 21 percent said the product was not what they wanted. “That provided the business case for improving the images on the site,” Peiris says. “I knew if I improved the images 13 percent, more people should stay and book. But you can only find that insight by mixing the quantitative and the qualitative. And the qualitative is more art than science, because it still requires human beings to interpret what the data means.”

Big data is not the mysterious force that some would depict it to be. It is the process of collecting new and different types of information, and then querying the data to derive insights that can be applied to business situations. Profitable insights are hidden within the vast volumes of data that businesses collect, and using the right approach to analytics can be the key to unlocking the revenues that will push them ahead of competitors. ■

Figure 3

Big Data Benefits

Research and advisory firm Nucleus Research has identified the following big data benefits that have been achieved by end users.

Increased Revenues	Organizations that track clickstreams and data gathered from all customer touchpoints can continuously monitor and fine-tune their online campaigns, resulting in increased revenues.
Increased Margins	A major manufacturer saw an ROI of 942 percent when it analyzed purchasing and cost-related data in its vendors’ databases, leading to vendor consolidation and reduced cost of goods sold.
Increased Productivity	A major metropolitan police department achieved an 863 percent ROI when it combined its criminal records database with a national crime database. Using predictive analytics, it re-allocated its law enforcement assets more effectively and reduced crime rates.
Reduced Labor Costs	A major resort earned an ROI of 1,822 percent when it integrated shift scheduling processes with national weather service data, avoiding unnecessary shift assignments and increasing staff utilization.

Source: Nucleus Research

Joe Mullich has written about analytics, big data and other business-technology topics for The Wall Street Journal, InformationWeek, CIO and many other publications.

How Domo Helps CEOs Tap into Big Data Success

Today's executives have access to an ever-increasing amount of data. In a remarkably short amount of time, their challenge has evolved from "How do I get information?" to "How do I access information quickly and use it to improve my business?"

As CEO of Omniture, Josh James was asking these same questions. He saw how Omniture's Web analytics delivered real-time information to online marketers and retailers that helped them improve their businesses and make more money. But as CEO he was frustrated that he could not get the same sort of access to data about his own business—data that was mostly offline.

After evaluating the market, Josh discovered that whether he invested \$150 in Excel spreadsheets or \$1.5 million in a full-stack ERP solution, he would still experience data troubles. Why? Because even though companies had spent tens of billions of dollars to collect huge volumes of business data, nobody had figured out how to derive value from it. The data needed by executives lived in multiple systems and was delivered in multiple formats. And by the time that data was delivered into their hands, it was either out of date or out of context. So after selling Omniture to Adobe in 2009 and talking with countless other CEOs who shared the same frustrations, James launched Domo to redefine the business intelligence market and fix what is broken in BI.

What is Domo? It is an executive management platform for running your entire business. That platform brings all your important data—finance, HR, sales, marketing, operations—together in one intuitive dashboard. Domo enables you to visualize data from any of your existing systems, without having to involve IT. And because it is software as a service (SaaS), it is quick to deploy and quick to deliver ROI.

The result is a product that offers an unparalleled user experience, a blazingly fast time to value and an unprecedented ability to make intelligent organizations smarter.

Domo is about more than just delivering the data you want, the way you want it. With Domo, it is about transforming the way you manage business.

For More Information

To learn more about how Domo can help you more effectively use your data to grow revenues, visit www.domo.com.

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Domo gives you access to all the information you want, when you want it, through the following:

- Executive Dashboards
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