



## **Using Big Data to Support Managing Marketing Performance**

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Essentially, through numerous vehicles consumers (consciously or unconsciously) are providing near continuous streams of data about themselves, and thanks to the 'network effect', the total data generated is expanding at rapid logarithmic rates.

Every day, consumers are creating quintillion bytes of data. Some sources suggest that 90% of the world's customer data has been created and stored since 2010. The vast majority of real-time data created today is unstructured data. This flood of data resulting from a growing number of customer contact channels requires marketers to take responsibility for understanding how to leverage and analyze this data to optimize marketing results.

Smart marketers are incorporating this data into their customer models in order to predict what customers will want, and then adapting their marketing strategies to give customers the right products when, where, and at the price they want. Study after study shows that the majority of marketers struggle with mining this data and analyzing data in order to derive valuable insights and actionable intelligence. A recent report by EMC found that only 38% of business intelligence analysts and data scientists strongly agree that their company uses data to learn more about customers.

Many marketing questions require being able to perform robust analytics on this data. For example understanding what mix of channels are driving sales for a particular product or in a particular customer set or what sequence of channels is most effective. These types of questions often require large sets of data, or what is being referred to as Big Data.

Big Data isn't new; it's just gone main stream. A recent study found that almost half (49%) of US data aggregation leaders defined Big Data as an aggregate of all external and internal web-based data, others defined it as the mass amounts of internal information stored and managed by an enterprise (16%) or web-based data and content businesses used for their own operations (7%). Twenty-one percent of respondents were unsure how to best define Big Data. IDC defines big data as: "a new generation of technologies and architectures, designed to economically extract value from very large volumes of a wide variety of data, by enabling high-velocity capture,

discovery, and/or analysis."

For many data-conscious companies, the use of "Big Data" has become increasingly important. Big Data incorporates multiple data sets-customer data, competitive data, online data, offline data, and so forth-enabling a more holistic approach to business intelligence. Big data can include transactional data, warehoused data, metadata, and other data residing in extremely massive files. Mobile devices and social media solutions such as Facebook, Foursquare, and Twitter are the newest new data sources. Most companies use Big Data to monitor their own brand and that of their competitors. Big Data is a valuable tool for marketing when it comes to strategy, product, and pricing decisions

Big Data entails analyzing all the data surrounding content creation and consumption. Which is injecting high-velocity requirements into data capture, analytics and reporting. It's easy to see the challenges associated with Big Data. There are many difficulties associated with amassing, analyzing and using these large and disparate data sets. As a result, many companies aren't able to maximize their use of Big Data.

A recent study by Connotate found the top challenge with Big Data was the time and manpower required to collect and analyze it. In addition, 44% found the sheer amount of data too overwhelming for businesses to properly leverage.

The effort associated with managing Big Data is more than worth it. The promise of Big Data is more precise information and insights, improved fidelity of information and the ability to respond more accurately and quickly to dynamic situations.

So while Big Data might seem a bit daunting, these steps will help you navigate using Big Data:

**1. Clarify the question.** Before you start undertaking any data collection, be sure you have a clear understanding of the question you are trying to answer. Using Big Data starts with knowing what you want to analyze. By knowing what you want to focus on, you will be able to better determine what data you need. Some common questions asked are "which customers are the most loyal" and "which customers are most likely to buy X"? Big Data is about looking beyond transactional information, such as a click-through data or website activity.

**2. Clarify how you want to use the data.** Will you be using the data for your dashboard, to define a customer target set for a specific offer or to make program element decisions (creative, channel, frequency, etc.).

**3. Think beyond the initial question.** Invariably the answer to one question leads to more

questions. Hold a brainstorming session to explore all the ways the data could be used and potential questions the answers might prompt. Structure your data in a dynamic way to allow for quick manipulation or sharing. Aggregate data structures and data cubes aid with this step. You will want to construct your data cubes so they contain elements and dimension relevant to your questions.

**4. Identify data sources that need to be linked.** It's important to consolidate and link data if you want to run analysis against it. Once you identify the question and how you want to use that data you will have insight into what data you need. More than likely you will need to collect the data from disparate data sources in order to create a clear, concise, and actionable format. It may be necessary to invest in some new tools so you can pull and analyze data from disparate locations, centers, and channels. These tools include massively parallel processing databases, data mining grids, distributed file systems, distributed databases, and scalable storage systems.

**5. Organize your data.** Create a data inventory so you have a good understanding of all your data points.

**6. Create a mock version of your data output.** This is a key step to help you determine the data sets. It will also help you think about how you will convert the results into a business story. A good analyst is able to use the data to tell a story that will illuminate trends and issues, forecast potential outcomes, and identify opportunities for improvement or course adjustments.

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