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About the Author

William Tanenbaum is chair of the Intellectual Property, Technology & Outsourcing group at Kaye Scholer LLP. He was named as "Lawyer of the Year 2013" in Information Technology Law in New York by Best Lawyers in America and ranked in Band One in Technology and Outsourcing in New York by Chambers. The group was ranked in the First Tier in New York by U.S. News & World Report. He is a past president of the International Technology Law Association and is currently a Vice President in the New York Metro Chapter of the Society for Information Management, an association of senior IT executives. He is a graduate of Brown University and Cornell Law School. He can be reached at **william.tanenbaum@kayescholer.com**

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Election 2012 Lessons for the Business Use of Big Data

The presidential election offers practical lessons to companies planning to profit from Big Data. The data-driven get-out-the-vote operations illustrate the four steps in Big Data: (i) data collection; (ii) analytics based on the data collected; (iii) business decisions based on the analytics; and (iv) converting the decisions into business outcomes. Analyzing data and making decisions without translating them into specific outcomes — such as getting the right voters (customers) to vote (purchase products) — short-circuits the business use of Big Data.

Recent developments give companies access to tremendous amounts of data. Data comes from customers, business partners, external public sources, private sector data suppliers, internet usage analysis, social media, and other sources. In computer terms, this means combining structured and unstructured data. The data collected from voters, or about them from external sources, illustrates this. It also demonstrates that data has a life cycle. Data from 2008 may be outdated in 2012. For businesses, the legal issues include obtaining customer permission to collect and use data. This, in turn, requires careful drafting of website Terms of Use provisions and online agreements. Potential liability can arise when regulated data is commingled with unregulated data. The legal department must supervise marketing departments when they plan to build the databases with disparate sources of data. Wrongful use of restricted data can be like a virus that infects the entire database and exposes the company to liability. Legal issues can arise when a company's use of data from external sources exceeds the scope of the data licenses.

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Conducting meaningful predictive analytics is difficult. A distinction can be drawn between simple data mining, such as adding up regional sales from records organized by state, and business intelligence, which involves discerning patterns to learn things hiding in the data but not identified earlier. The legal issues in this phase involve protecting the data sets, algorithms, and the information resulting from or used to generate the analytics.

Executives making data-based business decisions require staffs or third-party advisors who can translate data into meaningful company-specific analyses. From an executive's perspective, the ability to analyze the analytics is as important as the underlying analysis of the data. Given the advantages of drilling down into data and viewing it from different perspectives in real-time, visual displays of Big Data analytics will evolve from static pie charts and PowerPoint presentations to dynamic, interactive data displays. The legal issues that arise at this stage are trade secret and other intellectual property protection for business plans based on analytics, and confidential agreements with outside data scientists and consultants. Further IP issues arise when academic institutions are involved.

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Big Data is where analytics, cloud computing, and mobile computing converge. Mobile computing provides a way for employees — and customers — to access and act on data from remote locations. It enhances the goal of providing data anytime, anywhere regardless of the device and employee location. Building the IT infrastructure to conduct Big Data is expensive, and requires continuous updating to take advantage of improved hardware and increasingly powerful software tools that enable better analytics. While a select number of companies can afford this infrastructure on their own, for many companies it makes more economic sense to use industrial-strength cloud computing service providers. These providers operate in a competitive environment where constant improvement is a business requirement. This benefits customers because they are buying ever-improving services rather than equipment. Critical legal issues in both mobile and cloud computing are privacy, data protection, and cybersecurity.

The business value of Big Data is converting data collection, predictive analysis, and business decisions into business outcomes such as cost reductions, efficiencies, new products, better customer and business partner relationships, increased profitability, and achieving a competitive advantage in the market.