

The company can now reduce the resolution of its wind data grids by nearly 90 percent, down to a 3 x 3 kilometer area (about 1.8 x 1.8 miles). This capability enables Vestas to forecast optimal turbine placement in 15 minutes instead of three weeks, saving a month of development time for a turbine site and enabling Vestas customers to achieve a return on investment much more quickly.

Companies are also using big data solutions to analyze consumer sentiment. For example, car-rental giant Hertz gathers data from Web surveys, e-mails, text messages, Web site traffic patterns, and data generated at all of Hertz's 8,300 locations in 146 countries. The company now stores all of that data centrally instead of within each branch, reducing time spent processing data and improving company response time to customer feedback and changes in sentiment. For example, by analyzing data generated from multiple sources, Hertz was able to determine that delays were occurring for returns in Philadelphia during specific times of the day. After

investigating this anomaly, the company was able to quickly adjust staffing levels at its Philadelphia office during those peak times, ensuring a manager was present to resolve any issues. This enhanced Hertz's performance and increased customer satisfaction.

There are limits to using big data. Swimming in numbers doesn't necessarily mean that the right information is being collected or that people will make smarter decisions. Last year, a McKinsey Global Institute report cautioned there is a shortage of specialists who can make sense of all the information being generated. Nevertheless, the trend towards big data shows no sign of slowing down; in fact, it's much more likely that big data is only going to get bigger.

Sources: Samuel Greengard, "Big Data Unlocks Business Value," *Baseline*, January 2012; Paul S. Barth, "Managing Big Data: What Every CIO Needs to Know," *CIO Insight*, January 12, 2012; IBM Corporation, "Vestas: Turning Climate into Capital with Big Data," 2011; IBM Corporation, "Extending and enhancing law enforcement capabilities," "How Big Data Is Giving Hertz a Big Advantage," and "British Library and J Start Team Up to Archive the Web," 2010.

CASE STUDY QUESTIONS

1. Describe the kinds of big data collected by the organizations described in this case.
2. List and describe the business intelligence technologies described in this case.
3. Why did the companies described in this case need to maintain and analyze big data? What business benefits did they obtain?
4. Identify three decisions that were improved by using big data.
5. What kinds of organizations are most likely to need big data management and analytical tools? Why?