

Big Data, Big Blunders

Five mistakes companies make—and how they can avoid them

BY SHIRA OVIDE

COMPANIES ARE finding that big data doesn't necessarily translate into easy success.

Experts who specialize in computer-driven analysis of large streams of information say too many companies throw themselves into big-data projects, only to fall into common traps and end up with nothing to show for their efforts. Some 44% of information-technology professionals surveyed by business-software firm Infochimps Inc., for example, said they had worked on big-data initiatives that got scrapped.

Here are five mistakes companies commonly make with big data and tips from experts on how to avoid them.

1. Data for Data's Sake

Experts say too many companies have been seduced by the promise of big data, and start a project without first asking themselves this basic question: What is our goal with this information? Technology isn't a substitute for leadership when it comes to deciding business objectives.

Steve Sommer, chief marketing officer of big-data company Splunk Inc., says a large investment-management firm came to him about a year ago because it had 100 engineers in Bangalore, India, who had been working for a year on a big-data project that produced nothing of value. It isn't uncommon to see firms gathering up gobs of data "with no clear objective," he says.

Darian Shirazi, founder of Radius In-

telligence Inc., calls this a problem of "haystacks without needles." Companies too often "don't know what they're looking for, because they think big data will solve the problem," he says.

Companies should have an objective in mind before starting a project. What do they want to learn? What questions are they trying to answer? But companies need to be flexible enough to tweak goals if the data take them to unexpected places, experts say.

2. Talent Gap

The McKinsey Global Institute has estimated U.S. demand for employees skilled in data analysis could outstrip supply by 50% to 60% by 2018.

"It's an acute skill shortage out there," says Jesse Harriott, chief analytics officer of Constant Contact Inc., a small-business marketing company.

Annika Jimenez, of EMC Corp.'s Greenplum data-analytics business, recommends companies start prepping their internal talent pools now, while big data is still in its infancy. "Now is the time to find those people and start elevating them," says Ms. Jimenez, senior director of analytics solutions. One option, she says, is to give existing analytics specialists new training in big-data skills such as the programming language Python.

Educational institutions are setting up certification programs and new degrees under names like data science, decision sciences and machine learning, which may help ease the shortage.

Experts also anticipate that technology eventually will make it easier for

Big Hurdles

Surveyed IT professionals currently involved in big-data projects cited the following as significant challenges they face when working with big data:



IT professionals were asked the question: If you could make sure "the boss" understood one thing that they don't understand today about big data, what would it be? Here are some of their responses:

"The need for a business plan, so we can define the technical challenges/options to meet the business needs."

Source: Infochimps Inc.

"We need to work on it continuously, not get excited briefly, burn a couple of weeks, and give up because there are not yet any clear results."

"Noise reduction is key. Getting lots of data also means throwing out a lot of data, inevitably."

The Wall Street Journal

nonexperts to crunch sophisticated statistics—much like services such as WordPress and Tumblr made it easy for novices to create websites.

3. Data, Data Everywhere

Too many companies collect reams of data but fail to keep it organized.

A pharmacy chain, for example, may have a consumer's phone number in a database of loyalty-card customers, and the same consumer's email address in a database of website shoppers, says Roman Stanek, chief executive of business-intelligence firm GoodData Corp.

Big-data software may be able to link the data fragments together, but that takes time, money and resources away from the project's main goal, he says.

To avoid this, companies should do a "data audit" before starting a project to ensure the information they want to mine is in a single database and format, says Michael Gluck, owner of VGMarket, a market-research firm specializing in videogames.

4. Infighting

Big-data initiatives can be waylaid by organizational friction, including

territorial spats between departments over who owns a project. Ms. Jimenez says she saw this happen at a previous employer.

To avoid infighting, more companies are hiring "chief analytics officers" or putting someone in a similar role to set the tone from the top about the importance of big data, she says.

Companies seeking to weave data-driven decision making into their organizations "must place the transformation front and center at the C-level table, or risk significant erosion of comparative advantage to the first movers who are getting it right," she wrote in a recent blog post.

5. Aiming Too High

Too many companies start out with expensive and high-risk big-data initiatives, says Michael Chui, a principal at McKinsey Global Institute. Big-bang implementations are "rarely a path to success," he says.

There are times when a complex problem requires a complex approach—say, building software from scratch or adding data centers—but often companies can get more bang for their buck by embracing smaller projects with narrower goals.

Racking up tangible results quickly with smaller projects builds confidence within the organization and gets skeptics on board, experts say.

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