Big Data vs Good Data

The information age is in full swing, and for most businesses around the globe, the data stream has overrun its banks and become a flood of big data. From social media accounts to supply chain and spend data, businesses have unprecedented access to almost limitless information.

But with information, as with most things, value doesn’t always increase with volume. Data collection is just the first step. Data management, coupled with big data analytics, will help you extract the useful and relevant data from the vast piles of information on hand—and put it to use building value and productivity for your business.

Is Big Data Good or Bad? The Answer Lies in How You Use It

Since the birth of big data analysis—long before the rise of machine learning, artificial intelligence, or even desktop computers—data scientists and the businesses that rely on them have been mining the information they collect for insights, process improvements, and competitive advantage. In the 1950s, data analysis was coming into its own, and although it relied on small, local sources and slow, manual analysis of varying depths, Analytics 1.0 (as it’s now called) created the foundation for today’s more advanced methodologies.

Today, the Internet not only connects companies directly to consumers via email and social media,
but provides real-world, real-time information from smart devices on The Internet of Things, geotags, and their own data collection devices through accounting, enterprise resource planning (ERP), and customer resource management (CRM) software. Gathering all this data is one thing; sifting through it to separate bad data from good and create data sets that produce useful business intelligence—the information derived from data analytics to improve decision making and strategic planning— is another.

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Good Data Vs. Bad Data

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That said, what goes into your data analysis certainly has a powerful impact on what comes out.

Data quality is affected by a range of factors, including:

- **Validity**: Is the data within the parameters you’re measuring?
- **Accuracy**: Is the data correct and precise?
- **Relevance**: Is the data relevant to the areas you’re investigating? Was the data collected in a timeframe useful to the results of your analysis?
- **Granularity**: How detailed and fully granulated is the data collected? Is the information provided unique enough at the micro level to produce a more accurate picture in the macro?
- **Consistency**: How was the data collected? Is it consistent with all other data sources? If multiple collection systems were used, has the data been compared and confirmed?
- **Accessibility**: Internally or externally sourced, is the data available for review and analysis when needed? Can all stakeholders access the data to perform their duties from a variety of platforms, both mobile and desktop?
- **Security**: Is the data stored securely, and protected against intrusion, tampering, and destruction? Is the data backed up remotely? If third-party data is used, have privacy concerns been addressed to ensure total security for (for example) customers’ personal information?

For many companies, maximum efficiency and efficacy begins with the integration of a cloud-based procurement solution equipped with artificial intelligence-powered data analytics. Using artificial intelligence, a centralized data management and storage server accessible from mobile apps and desktop clients, and customizable, intuitive automation, the right procurement software can make it easier to see, manage, and analyze all of the information generated by your spend, and use it to

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inform decision making across your organization.

**Essential Tools for Big Data Management**

Your optimal software solution for managing your data projects and general big data use may not be the same as someone else’s. But a set of core technologies drives big data management, including:

**Data Management Systems**

To tame the never-ending flow of big data rushing into your system, you need processes and policies in place that ensure high-quality, accurate, and safe data acquisition and storage. Coupling clear and thoroughly-established automated processes with centralized data management with cloud-based storage and access means your whole organization has a more effective, reliable, and immediate way to put your data to use.

**Machine Learning**

When artificial intelligence is applied in order to teach a machine not just how to collect information, but how to analyze and use it, machine learning is in play. Machine learning blasts potential data analysis productivity into the stratosphere, using large data sets to rapidly pinpoint risks and opportunities for innovation and process improvement.

**Hadoop**

It may have an amusing name, but this open-source software framework is the backbone of big data management. It enables clusters of applications to run in tandem across shared hardware, accessing shared databases stored on interconnected hardware. It facilitates fast, scalable data collection, storage, management, and analysis. Plus, it’s free and open-source, so anyone can benefit from its use.

**Data and Text Mining**

Artificial intelligence excels at pattern recognition, and looking for relevant patterns in the data flowing in and out of your business is an essential part of any AI worth its salt. Data mining helps you catch the valuable golden nuggets in your digital sieve and use them for instant analysis, planning, and decision-making. Text mining, a more specific subset of data mining, brings content from your website, social media, emails, articles, surveys, and other text sources into the analytical mix.

**Predictive Analysis**

Using a variety of advanced algorithms, predictive analysis devours historical data to create
predictions about future outcomes. In addition to providing valuable context and insight for marketing, financial, and procurement planning, it also helps slash risk exposure through faulty processes, human error, and fraud.

Benefits of Software-Driven Big Data Analytics

Compared to older iterations of analytics, modern “Analytics 3.0” solutions greatly increase the speed, precision, and accessibility of data from a wide variety of sources. A process that could have taken months of careful data collection, review, and analysis using spreadsheets and physical documents can now produce valuable and actionable insights, accessible to everyone in the system, in minutes.

Consider these benefits of effectively integrated data analysis:

- **Improved strategic planning and decision making.** Both physical technology, like faster analytics using in-memory (i.e., RAM-based) analysis, and improved artificial intelligence (including machine learning) provide real-time access to information for faster, more accurate decisions and more strategic planning for not just spend, but marketing, production, and other initiatives.
- **Enhanced innovation.** Connecting procurement data with sales and marketing data creates rich opportunities to meet customer expectations in exciting ways, both through developing new products and services and improving delivery, quality, and variety for existing ones.
- **Lower Costs and Greater Efficiency.** With your data in one easy-to-access, secure location and paper a thing of the past, you can slash your materials and storage costs. In addition, the analytics themselves can be used to examine your own internal business processes for improvement opportunities, including streamlined workflows and automating basic tasks to free your staff for higher-value ones.

Turn Information into Insights

Everywhere you turn, information is flowing through your business. And like an old-time prospector, dropping your sieve into the torrent can yield valuable results—if you know where, when, and how to look. Gathering those golden opportunities from the stream, and turning big data into good data, is easier with data analytics on your side. Tap into the power of data science and technology, and reap the benefits of faster, more useful insights that drive innovation, customer satisfaction, and a bigger bottom line for your business.

Get Your Data to Work Better for Your Procurement with PurchaseControl

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— About PurchaseControl

PurchaseControl is cloud based procurement software for business spend management. We empower businesses by providing greater transparency and oversight into the purchasing process. With PurchaseControl, you have the flexibility to manage how spend actually happens instead of how you wish it would happen.

The entire PurchaseControl team has experience within a range of businesses, and as such, we bring a practical, holistic approach to purchasing. We understand what it takes to run a business and apply that knowledge to make PurchaseControl as effective as possible for all users.

Learn more at www.purchasecontrol.com

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