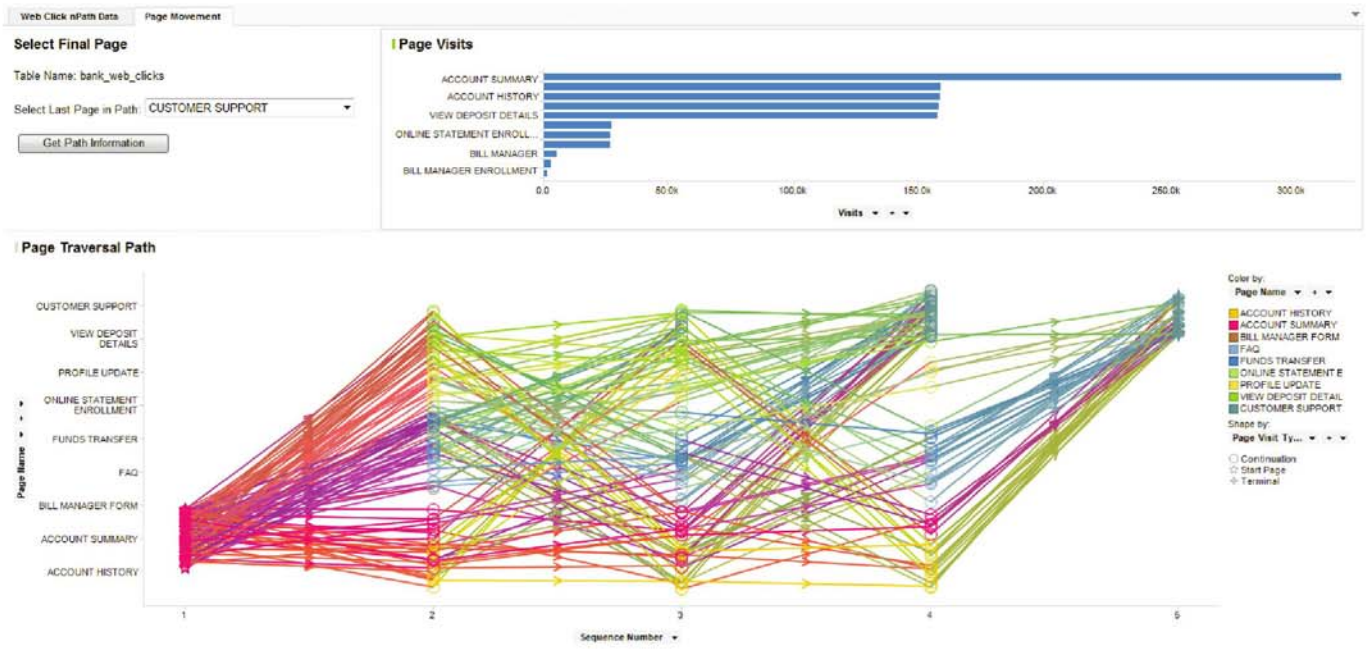
Leveraging BIG DATA



By Cassandra Balentine

Organizations look to business intelligence tools to make sense of their data collections.

Data is the key to success within many aspects of business. Advanced business intelligence (BI) tools allow organizations to collect, analyze, and react to data in real time. This happens from marketing to operations, providing a generation of truly efficient and knowledgeable organizations. BI solutions represent a maturing area of software development that enables business users to manage and exploit large volumes of data.

One challenge that BI helps address is the rise and management of big data. Syed Mahmood, senior product marketing manager, TIBCO Spotfire, points out that huge volumes of data are difficult to deal with. Insights already identified within smaller, more manageable data sets masked with extremely large data volumes require massive resources to extrapolate.

Other trends, such as the dependence on mobile and cloud computing, result in evolving BI. "The world is becoming a place driven by not just technology, but also our expectations of how technology works," says Anthony Deighton, CTO, QlikTech.

Analytics are increasingly important in the modern business world. In this piece, we discuss the use of BI for predictive modeling, as well as the movements toward ease of use, social integration, and mobility.

Above: TIBCO Spotfire is a data discovery and analytics platform.

Predictive Modeling

Organizations constantly analyze their data to understand and predict profits and costs, enabling informed decisions at the top level. "To accomplish this, the first step is making sure that the relevant data is accessible—and that data must be the single version of the truth," explains Matthew Smith, president/CEO, 3C Software.

Leaner organizations and a movement toward the streamlining of business processes to improve organizational efficiencies and profitability while increasing revenues fuel demand for BI, suggests Michael Cassettari, VP of marketing, Dimensional Insight.

Simply collecting the data is not enough. The ability to perform meaningful analysis and reporting on data to facilitate and deliver pertinent information throughout the organization is a core focus of BI today.

"Historically, companies cobbled together spreadsheets and reports to help a select few within the organizations—analysts and IT staff—better manage their customer data, but as required data has become more detailed and complex, the weaknesses of these custom-designed solutions became increasingly apparent," suggests Patricia M. Hennel, director of global marketing services, Silvon Software.

In addition, she points out that the use of operational-level visibility to better manage supply and demand requirements is immature because most companies don't have best practice experience in this area. This raises the need for software applications that leverage best practice planning and performance analysis to help line-of-business managers drive strategic decisions.

Businesses recognize the competitive advantage provided by advanced use of BI. "There is a realization by corporations across industries that analytics and BI can be used to add value to their core business, and this competency will be increasingly used by leaders in each industry as a source of advantage over their competition," says TIBCO Spotfire's Mahmood.

There is no doubt the social era affects business operations. With the proliferation of social and collaborative BI technologies, organizations capitalize on the power of the people—their customers.

Information Builders provides its customers with BI and analytics, information integrity, and integrated solutions.

"Social and collaborative BI promises to transform decision-making, leveraging the power of the collective intelligence of a group, organization, or department to accelerate better decisions with greater alignment and transparency," says QlikTech's Deighton.

He explains that by leveraging new technology, users are no longer limited to predefined paths. "Users ask what they need to ask and explore up, down, and sideways rather than only drilling down. It gives them the same intuitive experience they are accustomed to in applications they frequent, like Google, Facebook, or Apple iTunes," he adds.

This enables everyone in an organization to create insight from information and analysis. Businesses extend insight to the edges of their organizations, enabling every person to work more effectively.

George Mathew, president/COO of Alteryx, notes that traditional BI platforms and data warehouses, which typically require immense time to conform massive amounts of data into predefined schema, will give way to nimble analytics platforms. This in turn enables business leaders to integrate all sources of data—including internal, external, and social media—rapidly making sense of relevant information to make strategic decisions.

Expanded Accessibility

BI solutions are not new. However, the advancements of technology highlight the weaknesses of traditional solutions. Additionally, trends such as mobile, cloud, and social networking affect how people—both businesses and customers alike—consume, access, collect, and react to data.

BI tools continually evolve to meet new business demands. "Historically, BI has been used to make sense of enterprise data reports on recent activities—a look back at what happened in the last quarter, or last year, for example. As BI systems became more sophisticated, they began showing a real-time or near real-time snapshot of the business so organizations could make faster and more informed decisions," shares Sergey Shestakov, head of product marketing, Prognoz.

Rado Kotorov, CIO, Information Builders, points out that monitoring and archiving information is no longer enough. "To be successful in today's economy, organizations need to treat their enterprise data as an investment, much the same way they would financial or human capital. And to realize the maximum return on their information capital, BI and data analysis capabilities must be extended to operational employees and external partners, customers, and suppliers. This need to share information beyond the firewall is a key driver of innovation in the

Silvon Software provides BI solutions for mid-market manufacturers and distribution businesses.

BI software market," he explains. "Solutions must be easy to use provide for customization and flexibility, facilitate ad hoc queries, and work across multiple platforms and operating systems in order for operational users to drive value from the technologies."

An important trend in BI is the need for non-IT professionals to understand and leverage business data.

"Data really needs to be contextualized in the hands of the business user. These are people who don't always have PhDs in data science and statistics, but know the business, know and understand the data that surrounds their business, and are smart about what they need to get done," says Mathew. "They need very agile solutions to make it possible," he adds.

Silvon's Hennel predicts that varying levels of BI tools will surface as business users take on more responsibility for routine BI tasks traditionally handled by IT.

A broader adoption of BI is fueled by a number of factors, but the increased availability of data visualization tools, more user-friendly interfaces, and the development of accessibility on mobile devices are key drivers of growth. "These approachable and intuitive solutions increase adoption among business users who historically relied on IT departments to fulfill their BI requests," says Prognoz's Shestakov.

TIBCO's Mahmood also sees BI managed by professionals outside of IT. "In the very near future, we see advanced and statistical analysis being used not only by statisticians and mathematicians in organizations, but by a large percentage of business users to predict the likely outcome of business events," he says.

COMPANIES MENTIONED SWMAG direct *See page 43 for more information.*

Company	Web Site	INFO#
3C Software	www.3csoftware.com	215
Alteryx, Inc.	www.alteryx.com	216
Dimensional Insight	www.dimins.com	217
Information Builders	www.informationbuilders.com	223
Prognoz	www.prognoz.com	218
QlikTech	www.qliktech.com	219
SAS Global Technology Practice	www.sas.com	220
Silvon Software	www.silvon.com	221
TIBCO Spotfire	www.spotfire.tibco.com	222

Future of BI

As more companies realize the benefits of BI, Silvon's Hennel anticipates an expansion in the adoption and use of dashboards for presenting key performance metrics to employees in a flexible way that allows them to take action if needed.

"Big data will only continue to grow, and organizations naturally will increase their need to analyze that data quickly and efficiently to remain competitive. That means the analytics involved will need to become faster, easier to use, and more affordable," says Mark Torr, director, SAS Global Technology Practice.

"In previous years, big data has dominated the tech scene with businesses highlighting a constant demand for data while creating new opportunities for analytics software vendors in the process," says Alteryx's Mathew.

He expects the next few years to focus on the consumerization and monetization of big data through the adoption of corporate analytics apps, nimble analytics platforms, better data context, a new breed of data specialists, and a new analytics stack.

More BI customers look for an end-to-end solution that allows them to connect disparate systems to create one environment in which they can calculate cost and profitability and predict how these results would change as a result of evolving market or business conditions.

"Even those companies lucky enough to have a fully integrated enterprise resource planning system still have a need to establish a sandbox environment where they can replicate their logic so that they have the ability to analyze what-if scenarios," says 3C's Smith.

"Further down the road, we see analytics being tightly integrated with business processes to operationalize the insights and then to automate business actions in real time, thereby greatly condensing the cycle of data discovery and putting those insights into action," he adds.

Mobility is another critical element to BI. QlikTech's Deighton points out that

PRODUCTION POWER

Many corporations rely on business intelligence (BI) tools to remove transparencies in operations for more effective supply chain management. Michelin designs, manufactures and sells tires for every type of vehicle to motorcycles. The company also publishes travel guides, maps, and atlases covering Africa, Asia, Europe and North America.

Manufacturing is a core function of the tire giant. With the help of The Diver Solution, a BI tool from Dimensional Insight, Michelin is able to track information needed for analysis.

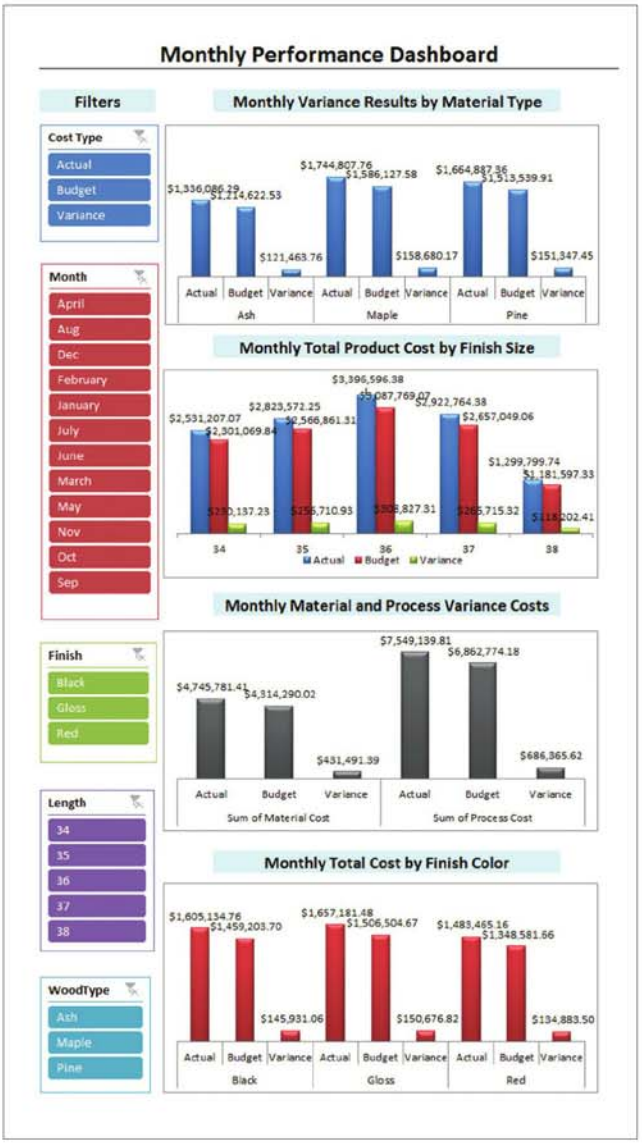
Approximately 140 users—from shop floor employees to plant managers—use Diver to track production, quality, budget, downtime, back route, and work orders. The data is organized by plant and department, and information on each machine and all the data points are easily accessible to users. Previously, the company relied on various systems running different applications without a central repository to collect and analyze the information as a whole. With Diver, Michelin is able to take data from various operations systems and use it to access central models for viable comparisons and analysis.

Michelin utilized the Dimensional Insight's solution to create DiveBooks, which presents preset markers updated along with the data to align with specific reports. They allow users to navigate through the data on their own as a resource. For example, if a manager reviews a percent efficiency report where production is not up to par, he or she can utilize the system to identify the most penalizing component of a machine for the semi-finished products they made while in operation, while importing machine faults to assist in the analysis.

The company is in the process of incorporating budget and cost analysis into models so users can follow contracts and projects better, especially from an engineering perspective, to see where money is spent.

consumers expect to be mobile and have access to data anywhere. "We expect to share our information through social networks. We download apps to help manage our everyday lives—apps that store our grocery lists, let us access our bank accounts, and help us track the weather. These trends are making their way into the BI market as well," he says.

Information Builder's Kotorov agrees, noting that the consumerization of IT and the explosion of mobile in the enterprise contributes to the demand for BI software. "Critical business data originates from a more diverse and complex pool of sources than ever before, due in large part to the introduction of unstructured data sources from outside of the enterprise. BI tools are at the nexus of IT consumerization, making it possible for business users to access and rely on data across both traditional and emerging data sources such as mobile apps, cloud services, and social networks. Both internal and external users rely on this data to make smarter decisions and thus rely on BI tools to gain access to the information."



3C Software gives users the ability to develop sophisticated models that generate cost and profitability answers used for reporting and anaytics.

Dimensional Insight's Cassettari adds that consumers, whether of big data or not, are increasingly unwilling to be tied to desktops—or even laptops—when accessing analytic tools. "The ubiquity of Apple iPads and other tablet devices shows that people want access to their data wherever they are, even if they don't have access to Wi-Fi. Providing rich functionality and efficient data synchronization will be keys to meeting mobile needs in the coming years," he says.

Better BI

As organizations continue to realize the importance of data, BI tools evolve to delve deeper, continuously stepping up to deliver faster, more meaningful information. As these tools improve, they also present user-friendly interfaces that enable business users to extract and analyze data without the need for IT or a mathematician. SW