Business Analytics: The Path from Novice to Master

Survey reveals BA goals to be better forecasting, efficiency.

Organizations today are facing mountains of data. The sources of this information range from social networking sites to “smart” electronics devices, to video, to online transactions and more. Effective mining of this data—often known as “big data”—can yield invaluable insights, but many organizations are challenged to make sense of information coming from multiple sources and in multiple, often unstructured formats.

The use of business analytics solutions can help organizations access, transform, store, analyze, model and report on big data. But business analytics isn’t just a product you buy. It’s collaboration among stakeholders to apply a variety of technologies, tools and processes to data, with the goal of deriving insight that can help develop understanding and drive future business planning. And business analytics isn’t something organizations become expert in overnight. There is a definite maturity curve, with history, experience, stakeholder buy-in and the right technology tools being the drivers that can move organizations from business analytics novice to business analytics master.

A recent survey of Computerworld’s Inner Circle Research Panel “Quick Pulse: Business Analytics Maturity,” reveals the top objectives for business analytics and the primary areas of the business that organizations are looking to improve with business analytics.

This report analyzes the results from that survey and provides expert insight into the ways companies can derive the most business value from business analytics. It also explains best practices for moving from business analytics novice to master.

**Business Analytics Objectives**

The survey shows that organizations want to achieve a variety of outcomes from the use of business analytics, with improving predictability and cost-cutting being the most important. Interestingly, of the seven choices provided to the respondents, all were considered by 36 percent or more to be “very important.”

More than half of the respondents, 57 percent, said improving the ability to forecast trends was very important to their organization’s use of business analytics. Half, 50 percent, also deemed decreasing business costs and improving operational efficiency very important. Close to half (47 percent) identified aligning with corporate strategy and objectives and 45 percent saw help with identifying risk as very important to their organizations. Faster and more timely reporting, increasing the speed of business decisions and identifying new market opportunities each were seen as very important by about 40 percent of the respondents.

“People are understanding the value business analytics can bring, especially the value of using analytics across the enterprise and not just as a point solution in specific areas,” says Tracy Harris, senior manager of business analytics at IBM. “As organizations reach higher maturity levels, they begin to better collaborate and understand that all departments of an organization hold key information that can collectively produce insight and visibility for competitive advantage. Take customer analytics, for example: This isn’t just one data set and department; you need to bring together data that may be captured by sales systems, marketing systems, operational systems or call centers as well as unstructured data of many types. We are seeing people quickly expand their use of business analytics to include business intelligence, financial performance management solutions, social media analytics and predictive analytics to ensure that they have visibility not just across all relevant data but also across all time horizons—past, present or future.”
Among the respondents, 47 percent said improving analytics was very important to the operations of the company. 46 percent, said improving the use of analytics for CRM (customer relationship management) was very important and 42 percent said it was very important to evolve the use of business analytics for sales.

**Business Analytics Obstacles**

Business analytics is a combination of products, processes and company mind-set implemented and managed over time. The return on effective use of business analytics solutions is significant, but there is no denying that there will be challenges along the way. When asked to name the top three challenges their organizations were facing, more than half of the respondents, 53 percent, said poor data quality was slowing their progress toward business analytics maturity. The ability to effectively make sense of large volumes and varieties of data takes training, and 50 percent of the respondents said a skills shortage was hampering their company’s business analytics progress.

To effectively derive meaning from it, organizations must be looking at all the data they generate, including data in legacy business applications. This data and the applications themselves are often siloed in organizations, a problem cited by 50 percent of the respondents.

IBM’s Harris, coauthor of Business Intelligence Strategy: A Practical Guide for Achieving BI Excellence and chair of IBM’s BI Excellence Advisory Board, says there are many challenges to the implementation and use of business analytics but that most of the issues are symptoms of bigger problems:

**There’s no strategy in place.** “If stakeholders don’t understand the vision or what the expected outcomes are it creates a challenge,” says Harris. With a road map that demonstrates a long-term vision and short-term goals that generate a series of wins in an agile fashion, success and business alignment are much more achievable.

**Organizations don’t have an understanding of value and haven’t created a business case.** “Often the business case will just measure areas such as a technology’s total cost of ownership,” says Harris. “That’s important, but you also have to look at what business efficiencies and improvements in business effectiveness you are trying to achieve.” By understanding the business outcomes of the analytics project—such as how it maps to corporate objectives—you will be more likely to get buy-in and support.

**Politics and company culture come into play.** “People don’t want to change the way they do things,” says Harris. “Often it is a result of not understanding the value the change will bring, so they feel you’re asking them to change for change’s sake. People don’t just want to be told, ‘Here is a tool you can use’; they also want to be involved in understanding why.” She adds that executive support comes into play here as well. “If you don’t have the right executive support to champion the message and reinforce what’s happening, you are less likely to achieve success.”

**There is a dearth of organizational design and resources on the project.** Harris notes that a key to business analytics success is to have the right people and teams in place to support the initiative. Some people call it a competency center or a center of excellence. In many cases, it may be a “business analytics community of practice.” This cannot be just a virtual team—the most-successful teams have a dedicated center as well as cross-functional team.
members. Resources are required to manage the program and priorities, analytic skills are required to work with the information and technical skills are required to manage the infrastructure. It takes a strong, focused team, but often companies do not initially invest the resources and/or the in-house expertise to put such a team together.

Piecemeal and narrow technologies create confusion and strain resources. Organizations have to understand that there is no one-size-fits-all solution but rather various required capabilities, depending on what people's roles or functions are. And these technologies need to be brought together on a trusted information platform so that consistency and reuse can save time and create efficiencies. In addition, the data has to be understood, trusted and easily accessible, or user adoption will dwindle. Keep in mind that innovation is happening at a rapid pace, so keeping abreast of new technologies and ensuring that they can be easily integrated into your analytics platform are important. A lot of different technology components have to come together, Harris notes— from the business analytics layer through the information management layer.

Smoothing the Business Analytics Path

For companies to overcome these challenges, it’s important for them to consider business analytics a journey and not a destination. Further, they must realize that the journey will take some time as they move through different stages toward mastery. Experience shows four stages of business analytics maturity:

Novice. Organizations have only a limited historical view of data, often through spreadsheets. They are aware that they can do better.

Builder. Organizations collaborate across teams, typically within one department, with both a historical and a current view as well as views trending over past and future time periods.

Leader. These organizations employ defined operational and financial metrics across more than one department. They use integrated, data-driven planning and align resources and predictive models to understand what-if performance and risk scenarios.

Master. Organizations set top-down goals, allocating resources based on priorities that can shift in response to real-time data. Everyone knows the objectives and how they can collaborate across the organization to achieve them.

IBM has recently been studying analytic maturity in organizations around the globe and has discovered that most of the studied organizations—68 percent—are in the second stage of maturity, the builder stage. Fortunately, very few—only 4 percent—are still in the first stage, novice. There is a healthy number (17 percent) of leaders, in stage 3, and even fewer masters, at 10 percent.

IBM calls the level of BA maturity an organization’s “analytics quotient,” IBM’s Harris explains. Just like IQ or EQ, AQ can be given a score—one that can help you assess where your organization is in terms of business analytics maturity. To get from novice to master: “How you manage your overall program—which includes strategy, value, people, process and technology—is going to determine how rapidly you can move through those stages,” she says.

The Computerworld “Quick Pulse: Business Analytics Maturity” survey shows clearly that the purposeful and steady evolution of business analytics use is a key initiative for organizations today. However, companies must have the right technology and teams in place to derive significant understanding from the flood of data collected each day in our always-on, always-connected world.
How to Gain Business Analytics Maturity

_IDC Analyst Sidebar sponsored by IBM/Cognos, How to Gain Business Analytics Maturity, Dec 2011_

IDC’s study, “Analytical Orientation and Competitiveness: The Difference between Fact Finders and Fumblers,” showed that managers at the most competitive organizations are twice as reliant on analytics (as opposed to intuition) as managers at their least competitive counterparts. “Fact finders,” or organizations that are more mature in terms of business analytics, are more competitive than their peers. They also indicate twice as frequently that output of business analytics solutions has a great influence on actions taken by their employees.

The question is how to gain business analytics maturity. Although IDC is expecting worldwide spend on business analytics software to be $30 billion in 2011, technology is only part of the story. Greater business analytics maturity results when organizational culture, business processes, and technologies are designed and implemented with the goal of improving or automating all strategic, operational, and tactical decision-making capabilities of all stakeholders. That is a lofty goal that leading organizations are striving to achieve. Lessons learned from such organizations include the following:

■ **Develop a business analytics strategy.** A recent IDC study of more than 4,000 organizations revealed that only 25% have a business analytics strategy. The lack of a strategy leads to execution challenges.

■ **Identify and define strategic, operational, and tactical decision-making processes.** This exercise will reveal where decisions are being made and how — and who makes them.

■ **Identify the various groups of decision-makers and their requirements.** Executives may require dashboards with a few aggregated KPIs. Managers may require interactive reports focused on their line of business. Business analysts may require ad hoc query tools for identifying root causes of problems and opportunities for improvement. Quantitative analysts may require statistical modeling and data mining tools. Finally, operational and customer-facing staff may require the output of the business analytics activities of others, notably analysts, to be “embedded” in operational applications.

■ **Follow the above steps to gain a better understanding of the data and technology requirements that can vary across the organization.** Whereas an enterprise business analytics strategy is a key to success, so is incremental execution of specific business analytics projects. In other words, identify a project with a high potential for quick ROI, execute it, and then move on to the next project.

■ **Identify the types of business analytics skills required.** For example, 30% of the organizations surveyed in the IDC study reported not having a sufficient number of staff with specialized analytical skills, and the same percentage feel the same about staff with specialized business analytics IT skills.

Today, given its overabundance, information itself doesn’t create competitive advantage. It is not how much data you accumulate, but rather how well you can analyze and act upon that data, which creates competitive advantage in commercial transactions; enables sustainable management of communities; and promotes appropriate distribution of social, healthcare, and educational services. The emerging data management and analytics challenges are likely to overwhelm less-mature organizations unprepared for the coming changes.