Better Business Outcomes with Business Analytics

Why analytics-driven organizations outperform their peers

The need for better business outcomes

The responsibility of managers and knowledge workers is to deliver better business outcomes: higher revenue, lower costs, reduced risk and accurate predictions.

On the surface, the desired outcomes aren't new; they've been core concerns since money first changed hands.

But if these outcomes have stayed the same, nearly everything else has changed. Organizations must now achieve them within a fierce and unforgiving economic environment unlike anything anyone has ever seen.

The "new normal"

The current environment is substantially more volatile, less certain and more complex than in years past. Events, threats and opportunities don't just emerge more quickly or with less predictability; they are converging and influencing each other to create entirely unique situations. The stability of former "normal" periods seems to have vanished. The "new normal" is characterized by dramatic, disruptive and swift change. No industry, company or individual worker has been unaffected.

"Nearly eight out of ten CEOs anticipate significant complexity ahead, but fewer than half feel prepared to handle it."

— IBM 2010 Global CEO Study

The pressure is on

Because of these disruptions, executives have discovered that the assumptions and methods they relied on are no longer sustainable or competitive. For individual knowledge workers, never has the pressure to optimize business outcomes been greater; never has their need for business insights been more acute.

For organizations to optimize outcomes in this new environment, they must become smarter. Executives must make smarter decisions about strategy. Managers must make smarter decisions about resources and tactics. Individual employees must make smarter decisions about where to focus their energy and time. Further, decisions of all types must be made, carried out, evaluated and optimized more quickly than ever before.

The way to better decisions is through better business insights. And the way to better business insights is through business analytics.

Why business analytics?

In recent years, business leaders have identified business analytics as a strategic priority. The reason is simple: business analytics drives better business outcomes.

For example, when IBM asked more than 3,000 CIOs from 71 countries, 18 industries and organizations of all sizes participating in its 2011 Global CIO Survey to identify one or more of their visionary plans for enhancing their competitiveness, 83 percent answered "business intelligence and analytics."[1]

Business analytics delivers actionable insights about every aspect of business performance, whether this means current results, new trends in customer behavior, or emerging competitive threats and market opportunities.

Business analytics can also increase the efficiency and effectiveness of core business processes and contribute to the creation of high-performing "analytics-driven" organizations. Consider these findings:

• Business analytics improves business strategy and decision-making. "Standout" CEOs – those who perform well in both good and bad economic conditions – are 16 percent more likely than other CEOs to use iterative strategic planning processes than formal annual reviews. They are also 54 percent more likely to favor quick decisions, despite pervasive economic ambiguity.[2]

- Business analytics drives consistently better financial results. High-performing CFOs reported growth in revenues of 36 percent or more, a 15 percent greater return on invested capital and twice the rate of growth in EBITDA (earnings before interest, taxes, depreciation and amortization).[3] These "Value Integrators" apply more forward-looking insights across the enterprise, from strategic planning to operational optimization, and use them to manage risk, reduce costs and spot new opportunities.

Business analytics addresses three key questions: *How are we doing? Why? What should we be doing?*

By supporting decision-makers as they seek those answers, business analytics software and solutions enable organizations to:

- Spot and analyze trends and anomalies
- Assemble and interact with relevant information
- Compare "what-if" scenarios
- Measure and monitor business performance
- Predict potential threats and opportunities
- Plan, budget and forecast resources
- Assess and manage risk
- Automate decisions where appropriate
- Align strategic and operational decisions
- Engage in social conversations with customers
- …and more

What's your AQ?

Many organizations have been steadily increasing their ability to use analytics to enable employees at every level to make better decisions and drive better outcomes. Put another way, these organizations have been growing in analytics maturity.

Analytics maturity is not achieved in a single step. However, as organizations increase their commitment to using analytics, they become more mature – raising their Analytics Quotient (or AQ).

AQ measures your organization's readiness, ability and capacity to locate and apply insight and re-orient your business to make better decisions – decisions that will deliver better outcomes.

Determine your own AQ right now with our online AQ self-assessment. Find it at www.**ibm.com**/analytics/aq.

The AQ concept has two core components. The first is a numerical score. Similar to the familiar IQ metric, the higher you are on the scale, the better you're likely to perform. Unlike IQ however, there is no maximum AQ score: even the most mature organizations continue to find ways to improve outcomes.

The second component is an AQ Maturity Model that maps these scores to one of four stages of increasing analytics maturity.

It should be noted that there are a number of different models of analytics maturity. For the purposes of this paper, we define four stages of analytics maturity: novice, builder, leader and master. More details can be found in the chart below and in the white paper, "Novice to Master: Understanding the Analytics Quotient Maturity Model."

Organizations with a high AQ can act based on an understanding of history and context from the past, guided by predictive analytics that allows them to develop insightful forecasts, optimize recommendations and judiciously automate specific types of decisions.

Your organization's AQ quantifies how far you've come in embracing business analytics. The more you infuse analytics into your business, the higher your AQ – and the more your business will have the ability to outperform.

Four stages in the journey to analytics maturity

- **Novice.** At this level, organizations have only a limited to historical view of data, often through spreadsheets. Aware that they can do better.

- **Builder.** Organizations at this level show broader collaboration across teams, typically within one department, with both a historical and current view, as well as trending over past and future time periods.

- **Leader.** These organizations employ defined operational and financial metrics across more than one department. Use integrated, driver-based planning aligns resources and predictive models to understand "what if" performance and risk scenarios.

- **Master.** At this level, organizations set top-down goals, allocating resources based on priorities and shifting dynamics. Everyone knows the objectives and how they can collaborate across the organization to achieve them.

Benefits of becoming analytics-driven

Organizations strengthen their ability to improve outcomes and achieve their goals with every step they take toward greater analytics maturity.

As they move to integrate analytics with their decision-making processes, organizations find they can act less on "gut feel" or fear and more on insights drawn from a rigorous and ongoing analysis of what works and what doesn't. Individual performance, decision effectiveness and core business processes can be quantified, analyzed and optimized, with outcomes provided in a feedback loop for continuous improvement.

Further, analytics-driven companies excel at sharing these insights more broadly across teams and functions to create a rich and ever-growing body of knowledge. In doing so, they are building a commonly shared store of information and insights that they can apply to achieve competitive advantage.

Achieving competitive advantage

Business analytics can be used to strengthen competitive advantage by addressing the unique needs of different departments. For example:

- **Customer Relationship Management.** Identify factors contributing to customer defection or churn, then plan and implement strategies to retain valuable customers.
- **Sales.** Compare sales performance by product, region or representative, and predict where additional effort and resources are most likely to bring in more revenue.
- **Marketing.** Micro-segment audiences for cross-sell and up-sell, based not simply on demographics but also on behavior and buying propensity, for higher return on marketing spend.
- **Operations.** Spot opportunities to control costs and find efficiencies in supply chain, logistics, maintenance and other key processes.
- **Human Resources.** Analyze talent and requirements and anticipate needs, proactively optimizing staffing mix.

In a recent study of more than 3,000 executives, managers and analysts, those that agreed that *the use of business information and analytics differentiates them within their industry* were twice as likely to be top performers.[5]

Today's business environment puts immense pressure on Finance and IT teams to support the business with the resources and technologies needed to compete successfully. Finance must govern access to sensitive financial data and foster more dynamic performance management processes to ensure compliance, minimize risk and control costs. IT departments are under pressure to drive cost-effective on-time deployments that are reliable and scale to meet growing needs. To summarize these challenges:

- **Finance.** Manage essential processes such as consolidation, close the books and budgeting more efficiently, allowing more time for high-value activities such as developing predictive scenarios and making strategy recommendations.
- **IT.** Deliver timely, efficient information and applications that meet the changing demands of the business.

It is clear that, to optimize business outcomes, organizations must meet the growing demands of the business leaders while balancing this with the organization's need for a lower total cost of ownership, enterprise governance and control.

Proven to outperform
Independent ROI studies by analyst firms including Nucleus Research confirm the business benefits that high-AQ companies achieve. For example:

- Using improved forecasting and reporting, Blue Mountain Resorts was able to reduce labor costs and excess inventory for an ROI of more than 1,800 percent – in just one month's time.
- Using predictive analytics and increased visibility into real-time crime information, the Memphis Police Department was able to reduce crime rates without increasing its staff for a three-month ROI of 863 percent and average annual benefit of $7.2 million.
- By standardizing its financial close process, Huntsman Corporation was able to reduce audit fees and increase productivity for a five-week ROI of more than 1,000 percent.
- By increasing employee access to sales, inventory and accounts receivable (AR) data, U.S. Lumber improved productivity, reduced inventory levels, accelerated AR turnover and reduced capital costs for an 11-day ROI of more than 3,600 percent.

Raising your AQ

Your organization may have been on a journey toward analytics maturity stretching over decades, or you may be just starting out. Either way, you are facing certain realities:

- **The data explosion.** In addition to a massive growth in traditional enterprise data, there is an equal or greater growth in user-generated data, real-time sensory data and Internet-based data. Tapping into all of this could unlock exciting new insights – including how customers truly feel about specific brands and services – but it is not data that has been traditionally managed or analyzed.
- **The need for flexible deployment options.** You may have a variety of legacy information systems, or your suppliers or business partners do. You need to be able to access and interact with each other's data securely and cost effectively. You need to be able to manage individual, team, departmental, enterprise-wide, extranet and Internet-scale deployments.
- **High user expectations.** Today, under pressure to make faster, smarter decisions, knowledge workers want faster, easier access to analytics anywhere, anytime. They are also demanding instant, fun and frictionless software that is similar to the personal productivity tools they use.
- **Greater comfort with collaboration.** Thanks to the growth in popularity of social networking tools, knowledge workers now much more comfortable relying on the collective intelligence of the organization to be better informed and make decisions.
- **A skills shortage in business analytics.** For a sustainable deployment, organizations need to be able to tackle the areas of technical expertise as well as the disciplines and business approaches necessary to successfully support the business.

In the face of all this, how can you raise your AQ, and your effective use of business analytics?

Clearly, you want to consider your needs long-term and look at solutions that address all the types of data that have, and the needs of everyone who will need to access, analyze and act on that data.

The capabilities you need

The IBM Business Analytics organization can be a valued partner as you raise your AQ and achieve better business outcomes.

Through acquisitions and organic growth, IBM has created a powerful, innovative and effective business analytics solution. The core components of IBM business analytics software include:

- **Business Intelligence.** Query and reporting tools, analysis, scorecards and dashboards enable decision-makers across the organization to easily find, analyze and share the information they need to improve decision-making.
- **Predictive and Advanced Analytics.** Data mining, predictive modeling, "what if" simulation, statistics and text analytics enable organizations to identify meaningful patterns and correlations in data – including text data – to predict future events and assess the attractiveness of various courses of action.
- **Financial Performance and Strategy Management.** Budgeting and planning, financial consolidation, scorecarding and strategy management, financial analytics and related reporting capabilities support risk management and help simplify, structure and automate dynamic and sustainable financial performance and strategy management practices.
- **Governance, Risk and Compliance.** Financial controls management, operational risk management, IT risk and compliance, vendor risk management and internal audit management provide an aggregated, enterprise-wide picture of all exposures that helps CFOs and CIOs understand how these risks can impact the organization's future performance.
- **Analytic Applications.** Applications with ready-made reporting and analysis measure performance for a specific business domain such as customer, workforce, supply chain or financial performance management.

Unique IBM advantages

Underpinning this software is a set of core attributes that only IBM can offer.

Empowering people in all locations and roles

Unlike vendors of stand-alone software that focus only on the short-term needs of the business user, or big ERP providers that focus solely on centralized IT deployment as their added value, IBM delivers a single, integrated business analytics solution that meets the demands of business users while providing IT with scalable solutions, a low total cost of ownership and secure enterprise governance and control.

Equally important, IBM software enables you to maintain the appropriate level of trust and control over sensitive financial and corporate information.

Supporting all decisions

The ability to make the right decisions – from highly collaborative strategic decisions to fully automated operational decisions – depends a great deal on having the right information in a context that highlights, rather than hides, the most relevant details.

IBM business analytics solutions offer information across all perspectives and all time horizons, and across all business processes so that decision-makers can look at historical data in combination with current trends or anomalies. In addition, they can use predictive models and "what if" scenarios to evaluate a variety of potential risks and opportunities – for optimized decisions.

Automation features unique to IBM solutions "serve up" optimized decisions in the context of particular processes and events, enabling your organization to make the right call at the right time, at the point of impact, such as in interactions with customers in call centers or online.

Providing analytic freedom

Equip everyone with fast, easy access to business analytics anytime, anywhere.

Only IBM offers a broad range of flexible deployment options, ranging from individual, desktop-based products to client/server software, workgroup software, on up to centrally managed enterprise software, workload optimized systems and cloud-based services.

Plus, you can seamlessly leverage IBM's best-in-class information management capabilities to deliver accurate, relevant, trusted information to accelerate an important element of your analytics journey.

Thanks to IBM's single, integrated business analytics system, any and all of these flexible deployment options can happily co-exist, making it easy for you to start your analytics journey anywhere, and deploy solutions as enterprise and user demands change over time.

Now and in the future

IBM offers extensive proven practices, accelerators and fully adaptable analytic applications for critical analytic processes such as finance, risk, fraud, supply chain/operations, customer analytics and human capital management, across key industries. In addition, we enable the creation of "champion" communities within the IBM Innovation Center for Business Analytics, Customer and Partner Advisory Boards, IBM Research, business analytics workshops and more.

In the past five years, IBM has:

- Invested more than $14 billion (including the acquisitions of Cognos and SPSS) in software to build the industry's most robust portfolio, which we continue to enhance
- Created the Business Analytics and Optimization service line of our Global Business Services® division and staffed it with more than 7,000 dedicated consultants
- Opened eight analytics Centers of Excellence around the world to help clients uncover insights hidden in their data

With its combination of software, hardware and consulting expertise, IBM is driving the creation and development of analytics-driven organizations in every industry, around the world.

IBM is the right partner for your journey – whatever your starting point may be – and we would welcome the opportunity to help you explore analytics further.

About IBM Business Analytics

IBM Business Analytics software delivers actionable insights decision-makers need to achieve better business performance. IBM offers a comprehensive, unified portfolio of business intelligence, predictive and advanced analytics, financial performance and strategy management, governance, risk and compliance and analytic applications.

With IBM software, companies can spot trends, patterns and anomalies, compare "what if" scenarios, predict potential threats and opportunities, identify and manage key business risks and plan, budget and forecast resources. With these deep analytic capabilities our customers around the world can better understand, anticipate and shape business outcomes.

For more information

For further information or to reach a representative please visit **ibm.com**/analytics.

Request a call

To request a call or to ask a question, go to **ibm.com**/business-analytics/contactus. An IBM representative will respond to your inquiry within two business days.

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1 *The Essential CIO: Insights from the Global Chief Information Officer Study*, IBM Institute for Business Value, 2011, page 6.

2 *Capitalizing on Complexity: Insights from the Global Chief Executive Officer Study Executive Summary*, IBM Institute for Business Value, page 4.

3 2009 research based on *The New Value Integrator: Insights from the Global Chief Financial Officer Study*, IBM Institute for Business Value, 2010.

4 *Analytics: The New Path to Value*, MIT Sloan Management Review and IBM Institute for Business Value, 2010, pages 4-5.

5 *Analytics: The New Path to Value*, MIT Sloan Management Review and IBM Institute for Business Value, 2010, page 6.