



TECHNOLOGY SPOTLIGHT

Extending Business Analytics Solutions from Information Access to Performance and Insight Optimization

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Financial Market Adopts BI to Lower Risk, Improve Resource Allocation, and Grow Customers

By Karen Massey, Senior Research Analyst, Consumer Banking at IDC Financial Insights

To say that financial institutions (FIs) have a lot of data is a gross understatement. FIs, being trusted financial partners and advisors to their customers, have access to myriad data on transactions, payments and inquiries. Additionally, and with growing importance, FIs are well positioned to capitalize on data captured that indicates customer behavior and preferences.

Throughout their history, banks have grown more and more diverse. The numbers of products and services have increased, as well as the number of access channels. With this growth, the degree of specialization among bank staff has increased, too. As a result, the amount and circulation of data is enormous, and banks struggle particularly with how to successfully use available customer data. While the industry is progressing in that regard, financial institutions are a long way from leveraging the wealth of data at their disposal in a cohesive, enterprise-wide manner to provide insight on customer needs, address ever-changing regulatory demands, and improve the bottom line. Against this backdrop, FI executives are increasingly relying on business analytics solutions in order to improve performance and optimize insight.

The data challenges facing banks can be categorized two ways. The first regards transactional data and includes financial controls, compliance, and risk. The second is behavioral data, the next generation of CRM, which leverages data to determine the needs and patterns of customers and prospects.

FIs are faced with an evolving regulatory climate that requires a greater reliance on advanced analytics. Additionally, FIs are struggling with loan and deposit product portfolios and are eager to be able to use their data to better manage the risks of today's continually changing economic environment while also optimizing portfolio composition and profitability. Furthermore, the largest of institutions globally are still unable to behave as a unified organization despite customer and regulator expectations. Customers expect these FIs to have a seamless 360-degree view of their relationships across all business lines, and regulators are pressing for more transparency. Business analytics tools are thus growing in popularity as banks strive to manage these issues from a less defensive and more proactive posture.

IDC Financial Insights research shows that consumers interact with their FI more than ever before. This means that customers and prospects are demonstrating their behaviors to FIs while doing such common activities as searching for products and banking online. Capturing and analyzing this behavior, in essence taking CRM to the next level, places an FI in an enviable competitive position as the globalization of banks continues. Business analytics provides the opportunity to see the full picture of a customer or prospect and begins the conversation of selling and pricing to a market of one to increase share of wallet and customer profitability. The adage that 80% of your revenues come from 20% of your customers is still applicable. Now with advancement in business analytics solutions, FIs have the tools to identify and foster profitable customer relationships across the institution.

Most simply put, to be successful in the most competitive environment in modern times, banks must attract new customers, retain and grow relationships with existing customers, reduce costs, and improve allocation of resources -- all while delivering results to shareholders and offering risk transparency to authorities. In mature nations this is quite a tall order, and leading FIs are turning to world-class business analytics solutions as a means of achieving results.

Information Access Versus Decision Management

By Dan Vesset, Program Vice President of Business Analytics at IDC

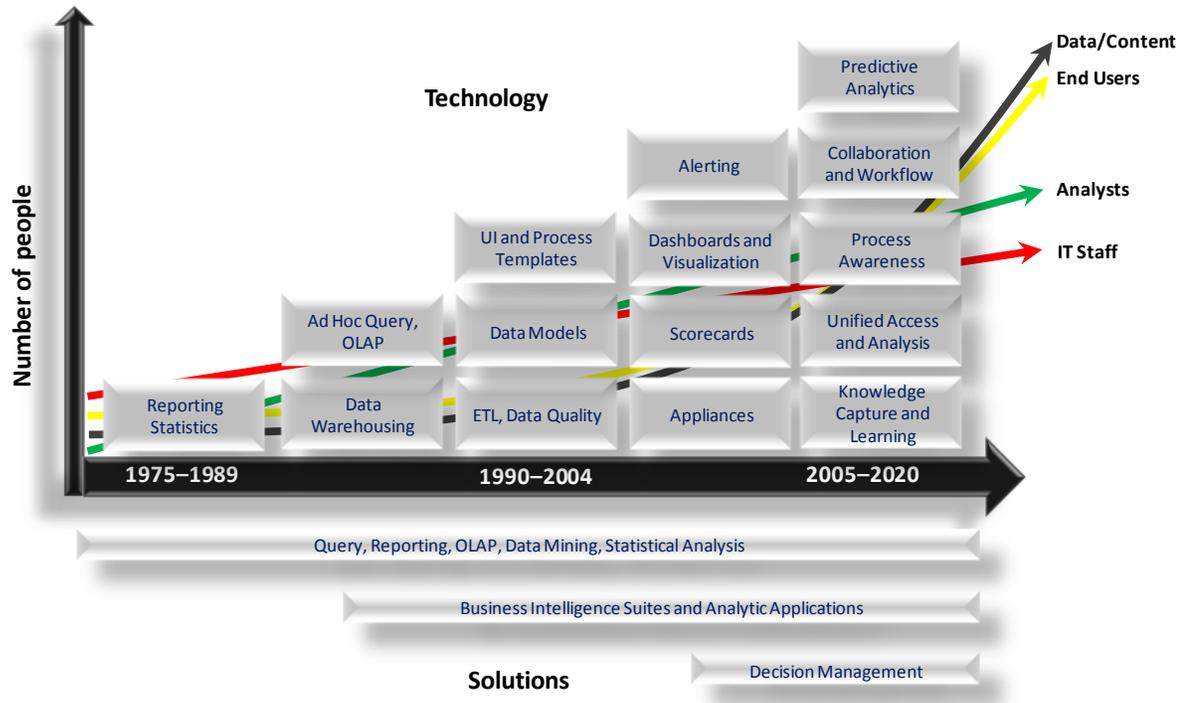
Much of the focus of business intelligence (BI) software and projects over the past three decades has been on enabling access to information by individuals. Although individual access is a necessity in many cases, the biggest shortcoming of this approach is that once an individual receives or accesses the information, he or she is left without support for evaluating decision alternatives — a key capability for optimizing decisions. Support for "what-if" analysis, predictive analytics, and decision optimization is missing from most BI solutions. Yet, market trends, as shown in Figure 1, point to a growing need for just these types of capabilities provided both as services and within software. Figure 1 depicts both the demand and corresponding solution supply trends affecting people, processes, and technology in the market for BI, analytics, and decision management solutions.

The demand trends highlight the exponential growth in the number of end users (also known as decision makers) with access to various components of business analytics solutions. These decision makers range from executives to managers and from operational to customer-facing employees. They all make decisions at some level of the organization, and they can all benefit from greater insight into and optimization of their respective business processes.

At the same time, the amount of structured data and unstructured content is also growing exponentially. Organizations are collecting and storing data for longer periods of time; they are collecting and storing more granular-level data, including clickstream data in online retail, call detail records in communications, meter readings in utilities, and trades in financial services. In addition to greater data granularity, new sources of content from social media applications, emails, and other forms of interactions form a body of information ripe for integration and analysis with operational data.

FIGURE 1

Business Analytics Solutions Market Demand and Supply Trends



Source: IDC, 2010

The supply side of this equation includes technology and services needed to address end-user requirements for greater insight into and optimization of performance. The BI, analytics, and decision management technology evolution is shown as starting with the introduction of query and reporting and standalone statistical tools, continuing to business intelligence suites and prepackaged analytic applications, and finally moving to decision management solutions that extend the previously available capabilities to predictive analytics, process optimization, and other related decision support capabilities. In each phase, corresponding analytics and technology services have been and will be needed to ensure effective use of the technology.

The services component of the supply side is depicted as the slower-growing trend lines for internal analysts and IT personnel tasked with supporting BI, data warehousing, and analytics requirements. As the demand for greater insight and optimization increases, internal analysts and IT groups are increasingly under pressure to deliver results within shorter time frames and often with insufficient resources. At a time when more organizations are finally recognizing the value of business analytics, the growth in the number of employees with the necessary analytics skills and experience is not keeping pace with the demand from end users. The result of this demand and supply mismatch is a widening gap between end-user expectations and satisfaction with business analytics solutions to support greater insight into and optimization of business processes and the available decision support and decision automation solutions.

The only viable option to close this gap is to rely on a mix of technology-based automation and external business analytics service providers that enable a rapid increase in the availability of resources with appropriate analytics and related decision support skills.

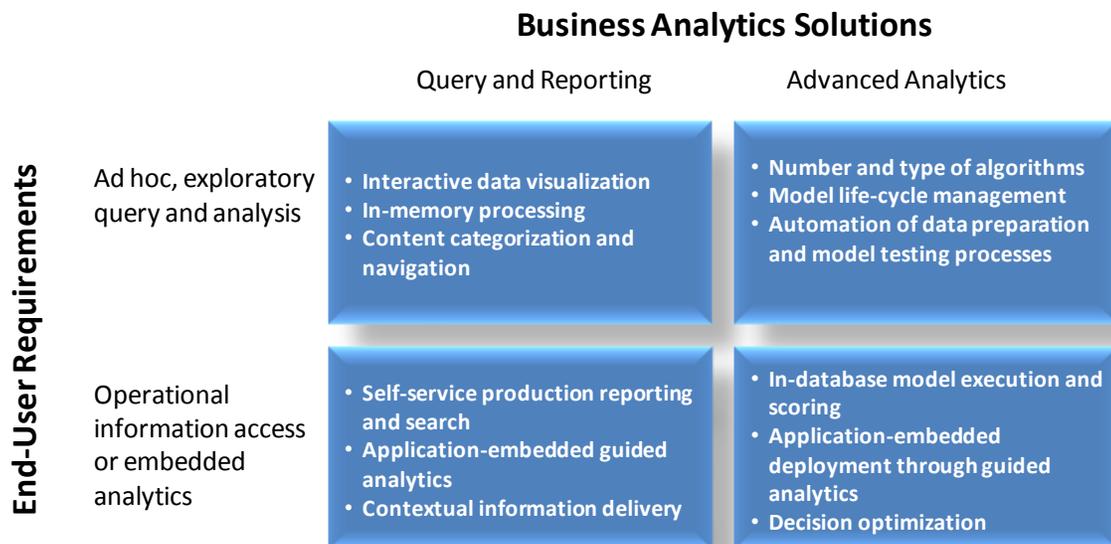
Requirements for Greater Insight and Optimization

A wide spectrum of end-user requirements fall between the categories of ad hoc, exploratory query and analysis and operational information access or embedded analytics. Each type of user has distinct requirements, as described below, but market research suggests that competitive differentiation can be achieved by moving beyond the information access functionality of query and reporting tools and technical skills to develop reports, multidimensional data cubes, and dashboards. In addition to these skills, organizations require expertise in predictive analytics, data and text mining, and optimization techniques as well as knowledge of industry-specific business processes and organizational behavior, including best practices in collaborative decision making and knowledge management.

The trends depicted in Figure 1 indicate that for the next decade, the demand will be skewed toward more predictive analytics and business process-aware optimization supplemented by query and reporting, rather than the other way around. Figure 2 segments these requirements based on end-user needs and business analytics capabilities.

FIGURE 2

Business Analytics Solutions End-User Requirements



Source: IDC, 2010

- The upper left corner of Figure 2 represents the needs of and solutions for business analysts and power users who support other decision makers in an organization. They are experts in data analysis and the data itself, having a strong understanding of business metrics and data definitions. Yet, these software users are neither developers nor statisticians. The query and reporting solutions provided to these users should be highly intuitive, with the right mix of graphical and tabular interfaces; they should be interactive and flexible, enabling a highly visual method for deriving data selections and enabling aggregations, sorting, filtering, drilldown, and automation of information sharing with line-of-business decision makers.
- The upper right corner of Figure 2 represents the needs of and solutions for quantitative analysts. They are experts in statistical modeling and data mining. The advanced analytics solutions provided to these users must streamline and automate, as much as possible, the most manual and therefore expensive tasks, such as data integration and cleansing and deployment of tested models into production applications. The highest value-add of quantitative analysts comes from model

development and testing as well as descriptive and predictive analysis that serves as the basis for optimizing various business processes.

- The lower right corner of Figure 2 represents the needs of and technology for operational employees who can benefit from using the output of statistical models in their ongoing or project-based decision making. These individuals could be marketers, actuaries, quality control engineers, fraud prevention officers, or other operational employees with highly analytics-dependent tasks. They use various applications that can benefit from having embedded advanced analytics functionality to support scenario planning, forecasting, and decision optimization.
- The lower left corner of Figure 2 represents the needs of and solutions for operational employees. Use cases can involve simply finding information, searching for previously developed reports or for specific information within a report, producing operational or statutory reports with strictly defined formatting requirements, or monitoring performance through dashboards. The solutions needed to address these use cases should be able to support pixel-perfect reporting, search and/or natural language query, alerting, and dashboards. The software to support this functionality should be deployable anywhere, including portals, mobile devices, within operational applications, as gadgets on the desktop screen, and other available points of access.

Organizations focused more on the advanced analytics column tend to have greater analytical orientation. IDC describes organizations with greater analytical orientation as fact finders as opposed to fumlbers. Our analysis shows that 80% of the most competitive organizations in their industries are fact finders, while only 58% of the least competitive organizations are fact finders. In other words, organizations that are more competitive within their industries have higher levels of analytical orientation.

The results don't mean that fumlbers never make decisions that lead to positive outcomes, but they do so without sufficient factual backing. It is difficult in this environment to have consistency in decision making, to share best methods for decision making, to ensure that the organization as a whole benefits from the experience of a few individuals, and to ensure compliance with regulations or internal policies should there be a need to address requests for reasoning behind certain decisions.

Decision making based on analytics is not a panacea. However, as John Maynard Keynes said, "I would rather be vaguely right than precisely wrong." In an enterprise environment, the lack of a systematic approach to having greater insight for decision making and optimization of business processes based on analytics shouldn't be left to somebody's "gut feel."

Considering SAP's Performance and Insight Optimization Services

One of the providers of business analytics services is SAP's Performance and Insight Optimization (PIO) group. SAP's PIO group of data management and analysis specialists provides services that range from one-time expert advisory engagements to ongoing services that include solution deployment. Focused on improving performance management through predictive analytics and optimization, SAP's PIO group is staffed with experts with industry, technology, and analytics skills. These experienced professionals assist clients with considerations such as scalability, accuracy, robustness, and business-specific interpretation of the results of advanced analytics, which a software tool on its own cannot do.

For those organizations that have already deployed other SAP solutions, such as SAP BusinessObjects performance management and BI software, SAP's PIO services help extend these investments in information access to industry-specific decision management solutions incorporating modeling, forecasting, optimization, and other advanced analytics techniques.

While the focus of SAP BusinessObjects software is to enable data access, visualization, and interactivity, the PIO group is focused on the process of deriving meaning from the data, which is then delivered to appropriate decision makers with the BI software or to other applications in CRM, SCM, Finance, or other business functions that support execution of decisions. This process requires a significant level of trust between analysts and line-of-business decision makers. The former group needs to demonstrate requisite expertise and experience in combining technology capabilities with business and industry understanding to ensure that the results of analysis fit business needs, objectives, and strategies.

Opportunities and Challenges

SAP's PIO services address an important and current need in the market for more specialized decision management and advanced analytics services. Many organizations have come to understand the potential value of business analytics, but they lack either the staff or the time needed to take full advantage of such solutions. These organizations are likely to look to external service providers for assistance in addressing ad hoc projects as well as ongoing needs.

At the same time, SAP is not alone in providing such services. Competition comes from SAP's traditional peers as well as many smaller consulting firms with specialties in certain industries and specific decision management processes within those industries. Even with SAP's size and leadership position in the BI and performance management applications market, the company can't expect to be an expert in all industries and all business processes. In fact, SAP's PIO group is currently focused on the financial services, retail, and utilities industries and on decision processes such as markdown optimization, size optimization, market basket analysis, energy efficiency and demand response optimization, sustainability optimization, customer churn analysis, and portfolio analysis, among others.

Given SAP's coverage of the market with various software applications and tools, the PIO group has an opportunity to expand to several other industry and decision process segments of the market. Like many other organizations, SAP may find it difficult to find appropriate staffing talent to address market needs. However, the company does have a large number of functional consultants whose expertise can be extended to include analytic and performance management skills.

Conclusion and Recommendations

Most of the biggest retailers, communications companies, financial services institutions, media and entertainment firms, and transportation companies wouldn't be able to exist in today's economy if it weren't for business analytics solutions that enable these organizations to provide their decision makers with the necessary insight to optimize their decisions. Although all organizations have some room for improvement, most competitive companies ensure that they have the right information, processes, and people to support:

- Consistency and repeatability in the way decisions are made
- Tracking of decision outcomes and subsequent adjustment of analytic models to reflect new facts
- Optimization of decisions based on known constraints
- Prediction of potential outcomes based on models that take into account historical trends and the latest information

To improve the chances of utilizing business analytics for competitive advantage, organizations should:

- Understand the limitations of exclusively relying on information access technology to deliver raw information to decision makers without further enabling support for decision making based on that information
- Recognize the value of advanced analytics technology and services as part of broader decision management solutions
- Evaluate and document different decision-making processes within the organization and opportunities for performance and insight optimization
- Identify any current internal limitations and shortcomings in industry-specific advanced analytics skills and evaluate options for such skills augmentation for specific projects or ongoing needs

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