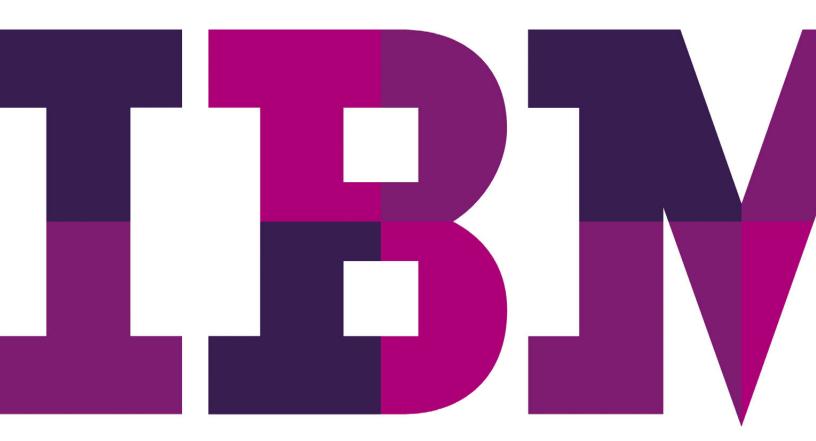# Using Business Process Management and Business Analytics together for smarter work

IBM

Executive summary

In today's dynamic market environment, agility separates the most successful businesses from those that simply get by. The networks that make up these agile businesses—networks of employees, partners, functions, customers and suppliers—must constantly adjust to rapidly accelerating change, both out in the marketplace and within the business itself. The business ecosystem is filled with examples of accelerating change and growing complexity. Advances in technology lower the barriers to entry, resulting in increased competition. Global labor pools are becoming increasingly available, at changing costs. Capital markets are constantly restructuring. And new economic powers—such as Brazil, Russia, India and China—are emerging.

According to a 2010 Gartner survey,[1] process improvement is the CIO's single most important priority, for five years in a row. In order to stay ahead of the market, and still respond to customers' ever-changing needs, businesses must foster a dynamic business network, including integrated processes, service orientation and collaboration. With a dynamic network in place, business becomes truly agile, capable of responding to change with unprecedented success.

Traditional business models have changed. Today's business isn't a single entity—it's a network of relationships between employees, functions, customers, suppliers and partners.

These external connections are just as important as the ones inside the business and, in fact, are becoming more important. In a recent survey of business executives, 79 percent said that they expect the number of collaborative relationships they have with third parties to increase, and 87 percent of CIOs think their organization will be more collaborative in the next five years. As more functions move outside the walls of businesses, the distinction between external and internal members of the business network is disappearing, and companies must look to maximize the value of interactions throughout their networks. Even more challenging is the fact that this broad business network is anything but static.

Furthermore, the need for deep Business Intelligence (BI) is imperative: people within the dynamic network must be able to access relevant information and data, and act on it. An IBM CIO Study shows that organizations which make the relevant data available to the right users are 61 percent more likely to be successful high growth companies. Yet CIOs struggle with this business imperative. Nearly one in three business leaders still make decisions without access to relevant and trusted data, and users spend close to 20 hours per week searching for data.

So how do organizations become agile enough to proactively respond to all this change? They require processes, analytics and structures that give them real-time situational awareness into occurrences both inside and outside the organization— and they must possess the ability to quickly act and respond to these occurrences efficiently to drive the best business outcome.

IBM helps organizations confront these challenges with a combination of industry leading Business Process Management and Business Analytics technologies. The combination of these technologies can help CIOs raise the ROI of IT investments, make innovation real by leveraging the latest technology and position their companies for growth in this flat world.

Business analytics

The need for insightful, targeted Business Analytics (BA) has never been greater. In a recent poll, an overwhelming 83 percent of CIOs cited business analytics and business intelligence (BI) as the primary paths to competitiveness. Simply put, data must be transformed into actionable information. By leveraging analytics, businesses improve decision-making, and thereby gain competitive advantage.

BA and optimization capabilities are a powerful ally in the new economic environment. Leading edge algorithms, and advanced mathematic assets, methods and capabilities help you leverage BA to create new solutions for unique challenges. Predictive insights are turned into operational realities that help close the gap between strategy and execution.

Business Intelligence (BI) connects people with information in an easy-to-use way so they can make better decisions. BI software enables the organization to set targets, see results and understand what drives the numbers. It also allows you to identify trends (whether beneficial or threatening), and take action with a common context for decision-making across every department. In the end, the best BI delivers trusted information for a single version of the truth, and lets you work with that information the way you want—reports, dashboards, scorecards or a combination.

The value of Business Process Management

"I need to ensure my processes run consistently every time." "I need the ability to scale my processes when needed without adding more hardware." "I must contain and reduce costs by leveraging and reusing existing technology and people assets." "I need to comply with industry regulations, controls and audit requirements."

All of these thoughts are well known to anyone trying to improve business processes for competitive advantage. Business Process Management (BPM) has succeeded in enabling continuous process improvement to flexibly automate a wide range of business processes—from the manually

intensive and creative to the more formal and structured. BPM improves process integrity and governance to ensure processes are executed as designed. BPM enables organizations to seamlessly scale their processes to meet increased demand. BPM's underlying system capabilities allows the distribution of process workloads across your existing infrastructure. And BPM's high availability ensures your critical business processes are accessible, and able to be reliably leveraged to meet new workloads.

With global integration, the world is now officially flat. And with that flatness comes a rate of change that is constantly increasing, putting new and increased demands on business. Customers of today and tomorrow are not like those in the past: expectations for instantaneous gratification and delivery of services have never been higher, while erratic economic circumstances and the rapid ascension of new global powers only increase opportunities for global competitors.

What do these new realities mean? Businesses must evolve and adapt—faster and more effectively. Simply put, it requires business agility.

Barriers to true business agility—why use BI and BPM together?

Nearly all business processes involve complex value-based decision points, such as loan approvals or up-sell opportunities. Automation and optimization of these processes becomes a substantial challenge, as employees involved in the decision-making chain can slow workflows, and even create bottlenecks. Furthermore, certain processes may occur in isolation, and applicable data may not be included in a process improvement cycle.

Complex decision-making requires additional information. Too often that needed information is not delivered within the workflow, and decision makers must take the time to gather the information required to support the decision. Surveys show that users, on an average, spend 20 hours per week gathering and analyzing information. This ad-hoc gathering can be both informal and formal, ranging from accessing and querying a BI system or database, to soliciting advice from co-workers. Whatever the approach, this information-gathering step adds additional processing time to these decisions, leading to bottlenecks, and taking workers away from more important uses of their time and talent. This leads to inefficient and ineffective processes.

Customers invested in BI are looking to spread the culture of analytics in an organization. They want to make sure that the right information is available to the user. However, they struggle with this because users have to spend time searching for these reports reducing adoption. Similarly, organizations struggle in choosing which types of reports to create and may end up with data not relevant to the questions the users are

trying to answer, making it less likely that users will refer to these reports. Organizations also want to ensure that they can act on any insights they uncover rapidly and in a repeatable fashion. This enables organizations to take advantage of trends in the marketplace and keep pace with changing business conditions.

CIOs today are investing in BI and BPM technologies. Tying these two initiatives together or augmenting one with the other can help organizations become more agile, smarter and ultimately high growth and successful companies.

Effective decisions by integrating BI into business processes

The problems outlined in the section above can be mitigated by incorporating the right analytic reports from a BI system into a process workflow. When the workflow gets routed to a decision maker, it can be accompanied by relevant and timely information to support the decision maker. This helps reduce the time spent by decision makers in gathering the relevant information so that decision makers can quickly act on items and render faster decisions. This also helps to improve the quality and consistency of decisions. By ensuring that uniform, up-to-date information is used for decision support, organizations can limit variability in human decisions—regardless of who is making the decisions. By directly integrating the information into the workflow, organizations can also ensure that information is always consulted prior to decision making.

Integrating a BI report into a process workflow also helps to extend the reach of analytics from a few select analysts to vast numbers of marketing, finance and product teams that make up an organization. This ensures that the right decision makers are armed with the right information needed to make better decisions, which helps spread the culture of analytics in the organization, and helps organizations identify the type of reports that need to be created.

For example, a combination of BI and BPM can help healthcare payers reduce the cost of processing claims while reducing fraud at the same time. Automating the claims management process helps improve the efficiency and reduces costs for handling claims. Incorporating analytics based on the history of the medical provider can help claims specialists identify fraudulent claims. The analytic report can include information on the past history of the provider, the common procedures performed, and so on. This is "pushed" to the decision maker in the process so that a smarter decision can be taken.

BI and BPM together can also allow organizations to respond more quickly and effectively to changing market conditions. In addition, BPM can be extended to BI users, providing analysts with end-to-end business visibility and allowing them to quickly turn insights into action.

Improving organizational responsiveness

BI augments and improves BPM efforts and business processes in many ways. Organizations can readily leverage these benefits; however, there are a number of ways that BPM and business processes can be extended to BI interfaces, and ultimately to BI users to drive organizational responsiveness.

Initiating processes from BI interfaces and reports

Transactional and historical data can be a valuable source of business insight, and BI can provide the capability to dive into and analyze this data. Often, analysts are able to uncover valuable details that will shape organizational priorities and policies moving forward. Businesses typically need to take immediate action to capitalize on these insights, yet they generally do not have the necessary direct links between operations and analysis. Analysts communicating findings through ad-hoc channels lead to a common and unfortunate result: managers must make decisions and implement action based on incomplete information.

By extending process triggers to BI interfaces, analysts can immediately trigger action in response to their insights. Links to deployed business processes can be embedded within the BI content and the processes can be launched directly. This is especially significant for situations requiring time-sensitive corrective actions. For example, consider an analyst investigating the demand and supply for a particular item with a long lead time. The analyst may discover that based on the projected demand, the retailer would run out of a high margin item one month from now. To prevent a stock-out and potential loss of revenue, the analyst can launch a process from the BI interface rather than sending an email to the relevant manager. This enables the analyst to react very quickly to an important insight, as well as to keep track of the order and ensure that it has all the relevant information needed for speedy delivery.

This extension of process triggers can also be leveraged in response to alerts in the BI system. When data hits a predefined parameter or threshold, BI systems will typically generate a report and burst it to users. Notified users will then invoke corrective processes. However, by integrating process triggers, the BI system can automatically invoke corrective processes without the intermediate notification step.

Improved tracking of decision efficacy

The combination of BI and BPM also helps to ensure the consistency and efficacy of decisions made within the business process. However, organizations struggle with relating the performance of a business process to business performance and vice versa. Data captured by process monitoring technologies show how much processing time was required, but not necessarily the ultimate business outcome from the process— did the customer churn even though the complaint was

handled speedily? BI systems, on the other hand, can capture the outcome of the decisions, but not necessarily the processing time required—did customers churn because it took too long to handle their complaints or is there some other underlying cause? Utilizing a combination of BI and BPM can help organizations assess the impact of key business processes on the business performance.

Enhancing Business Activity Monitoring (BAM) with BI

BI can augment BPM projects by linking Business Activity Monitoring (BAM) technologies with BI. BAM is a critical component of BPM deployments. It provides visibility into in-flight processes and enterprise applications. Without monitoring, automating business processes is risky and optimizing processes is impossible. The real-time view into process performance is essential for a smooth operation, yet this view can be enhanced with additional information and insight provided by BI. BI can provide extended visibility for BAM technologies, allowing users to thoroughly investigate process issues and link key performance indicators (KPIs) to enterprise outcomes.

By linking BAM with BI, users can quickly investigate process metrics and analyze the broader implications of process performance. This analysis is extremely helpful when determining corrective actions. For example, a KPI displayed on a business dashboard may show that insurance claims processing volume is below service-level goals. To determine corrective action, an analyst can drill down in the process data to see processing time and processing volume by claim type. At the same time, additional enterprise data delivered through BI can show the impact of processing volume on customer satisfaction and ultimately churn, predicting how process performance may impact financial results. This additional context allows business analysts to accurately weigh the costs and benefits of any response to the KPI alert.

BI can also be useful to determine which KPIs are relevant to monitor. By linking process performance with enterprise outcomes, business analysts can see which KPIs have the most significant impact on results.

Process and enterprise data: end-to-end visibility

BPM can immediately provide value to BI users by simply extending process data to the BI system. Enterprise and transactional data that are traditionally analyzed using BI systems are essentially the result of business processes, and process data can provide important context to analysis of this data. For example, an analysis of enterprise data for a wholesaler may show that the metric of "days outstanding" has been increasing. This financial metric is the direct result of the wholesaler's order-to-cash processes. By tying the process data to the financial results, an analyst can drill into the process elements to see how they are affecting results.

Leveraging insight to improve performance: that is the ultimate goal of BI. Yet BI systems do not always have access to the key real-time process data that shows how this performance is driven. By extending BPM data to the BI system, organizations can make better strategic decisions supported by a complete, consistent view of the business.

Visibility into business processes and events can empower decision-makers with real-time information, but the business context of the insight is also important to improve decision making. This is where traditional business intelligence and analytics can provide extended insight. For example, a series of business events might foretell an imminent customer defection, but additional insight from BI and analytics systems can help calculate the lifetime value of that particular customer and estimate the impact of that defection towards the bottom line.

Automating decisions with BI

The ultimate way to boost the efficiency of business processes that contain complex decision points is to automate those decisions. Yet given the complexity of many business decisions, automation is not always a viable option. However, by leveraging both process and BI metrics, organizations may be able to automate portions of these decisions.

Both process data and wider enterprise data are important to decision automation, as analysts must incorporate learning from previous decisions as well as the implications for enterprise results. For example, process data may show that loan officers have approved loans 80 percent of the time when an applicant's credit score was higher than 600. Tying these approvals to enterprise results shows that eight percent of these approved loans became delinquent, but that customers with other financial products from the bank were much less likely to default.

Key metrics from the business process and the BI system can be pieced together to drive rules and policies that automate portions of the workflow. Continuing the loan approval example, a business analyst may create a new business rule that automatically approves a loan application if the applicant's credit score is higher than 600 and they currently use one or more other services from the bank. Other applications would still be routed to loan officers for a decision.

Organizations can greatly improve the efficiency of processes when they automate even a portion of complex decision making. By automating some operational decisions, workers can manage by exception and focus on more critical and strategic activities. This process improvement is not always achievable, but by leveraging decision histories with enterprise information, it may be possible to find metrics that will drive the automation of workflows through decision points.

Why use BPM and BI together in your industry?

Smarter systems including both BI and BPM technologies are being implemented and add value in a variety of industries. Using these together can provide additional value for many industries, including:

- Retail—For instance, trade fund management: automate and improve trade fund management with improved visibility to recover promotion dollars.
- Healthcare—For instance, claims management: reduce fraud and processing costs for claims.
- Banking—For instance, loans processing: reduce loan defaults by intelligently assessing risk very efficiently.

IBM has the business expertise and technology capabilities to get you there

Businesses continue to discover the benefits of BI, and are also increasingly adopting BPM to improve operations. BI and BPM technologies, although highly complementary, do not typically overlap, and cannot serve as substitutes for one another.

BI and BPM initiatives are often separated and siloed within organizations. Organizations that want to leverage joint BI and BPM value may find themselves with systems that do not interoperate, while also lacking the cross-functional IT skills that could help the two solution areas converge. IBM not only provides market-leading BI and BPM technologies, but has also made it easier for customers to bring the technologies together, and bring extensive industry expertise to bear.

Key enhancements to IBM products include:

Cognos® Mashup Service

IBM Cognos Mashup service, released in December 2009, enables developers to expose content from BI as a web service for use in operational applications, BPM processes and mashups. It delivers BI into an essential component of your everyday business processes, integrating entire reports, analysis, and metric—or just the most relevant parts—into your applications for HR, procurement, sales force and more.

Rapid integration of Cognos BI within business processes

IBM has enabled its BPM tooling to help developers more easily incorporate reports in a process flow. Complete integration also includes WebSphere® Integration Developer (WID), an easy-to-use design tool for the assembly of SOA applications. This takes the form of a wizard to help users pick a report and import a web service for it into their workspace. WID enables users to browse the Cognos repository to identify the relevant report. The structure of the Cognos repository is maintained for easier browsing. Once the appropriate report is identified, it is dragged onto the palette and then incorporated in the appropriate step in the process. Analytic data can also be extracted by the wizard from the

right report. This helps organizations maintain a single version of the analytic data as well as reduces the development time through reuse of analytic calculations. This data can be used in the process for other uses, such as ILOG® JRules for automated decision making. Reports are then integrated into the process flow for viewing at the relevant step by the relevant user.

Whether you are just getting started with BI or BPM, or looking for a solution to enhance your business performance, it is important that you work with a trusted partner who understands your needs and can help you to succeed. As a market leader in strategy and change consulting, BPM, and BI, IBM is uniquely suited to help and has the deep industry expertise to understand and respond to your unique challenges. With thousands of engagements worldwide, IBM understands the best practices that drive success and the metrics that allow you to measure it. Working with IBM, you can transform your business to achieve the agility you need to embrace shifts in the business landscape and enact changes that will take advantage of new opportunities today and in the future.

Optimizing business with BPM and BI

By combining BI with BPM, businesses can move more quickly toward successful optimization. The integration of both technologies allows businesses to achieve value greater than what can be achieved leveraging each technology separately. Organizations can create more effective and efficient business processes by using information and insight to enable process improvements. By integrating information directly into business processes, businesses can drive smarter and more consistent decisions.

Getting started quickly with process automation and integration

The benefits of BPM in combination with BI are many, and IBM has numerous offerings to help you more quickly realize faster time to value with process automation. IBM BPM FastPath enables the implementation of your BPM solution within 90 days, optimizing resources through a prescriptive approach for delivering BPM and improving collaboration between business and IT. IBM WebSphere Industry Content Packs for BPM accelerate and enhance the delivery of BPM solutions for healthcare, telecommunications, insurance, banking and industrial product lifecycle management with a rich set of prebuilt, industry-specific process assets and scenarios. Finally, business improvement workshops to help prioritize and scope your BPM project are available.

As the leading provider of BPM solutions, with more than 5000 BPM customers and over 23,000 business analytics customers around the globe, IBM has the expertise, market-leading products and broad ecosystem of technology partners to provide the process automation and integration solution that makes sense for your business.

For more information

To learn more about the process automation and integration with IBM WebSphere BPM, please contact your IBM marketing representative or IBM Business Partner, or visit the following website:

ibm.com/software/info/itsolutions/business-process-management/?cm_re=masthead-_-business-_-bzn-bpm

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[1] Source: Gartner EXP survey, 2010.

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