Increasing the speed and accuracy of decision making with SOA
The issue: Information is inaccessible, intelligence is stale

Every day, everywhere, organizations are striving to find new ways to offset common business challenges that can affect competitiveness. These challenges often include collaborating with partners and customers, reducing administrative time and improving the understanding of customers across internal business units or groups. Yet, for many businesses, increasing the speed and accuracy of decision making often ranks among their highest priorities.

Traditionally, businesses have looked to business intelligence (BI) to supply the information needed to support decision making through trend analysis, behavioral patterns or online analytical processing (OLAP). BI output would often take hours or even days before it could be delivered to business users. The model is no longer optimal.
Real-time, accurate information delivers competitive advantage

To deliver business value, information must be accurate, timely and easily accessed by those who need it within the context of the business activities they are performing—now. Increased speed and accuracy of decision making comes from personnel empowered with insight. Insight comes from their ability to interpret information that is accurate, complete, trusted and then presented in a meaningful business context. To optimize efficiency and service, businesses also need an information-integration platform that enables them to leverage this insight across company processes.

Operational business intelligence requires a platform that allows users to formulate their own questions and rapidly get answers to changing scenarios. For this reason, the information exchanged between systems and users must be both demand-driven (where users ask for information) and event-driven (when the information has changed and is pushed out to users). As events unfold, their effects must be handled and recommendations must be made. In addition, employees must also be able to pull any information from anywhere based on their own choices and needs, enabling them to make decisions and take actions quickly and proactively. Companies that can meet this requirement to have near-real-time, accurate insights—delivered in context and integrated into everyday business activities—will sustain real competitive advantage.

Overcome the complexity of information silos, volume and variety

More often than not, information is distributed across the enterprise in a complex web of repositories and silos, making accessibility difficult. For example, data from transactional databases, data warehouses, document libraries and e-mail folders is stored in unique repositories and formats, and tied (or tightly coupled) to specific applications or processes. As a result, the flexibility of the infrastructure is limited, and the costs and complexity of ongoing maintenance become exorbitant. This situation is exacerbated by an ever-increasing volume and variety of information, which drives ever more complexity. Today, in addition to structured data from applications, companies must manage different types of unstructured data, such as electronic documents used in business processes, audio files and call logs.
Information as a service unlocks information value

By applying the principles of a service oriented architecture (SOA) to information, you can achieve much greater value from your information assets, making information more available, consistent and trustworthy. Companies that apply these principles can become more agile by allowing information to be easily used in new ways, shortening the cycle between business requirements and implementations.

SOA can help improve the availability and consistency of information, while simultaneously removing traditional barriers to information sharing. It enables access to complex, heterogeneous data (operational, transactional, analytical and unstructured information) within your company and deployment of that information as reusable services.

Information services can be reused easily across processes and maintained centrally to enable more business flexibility and increase the productivity of IT resources. Information as an SOA service can help:

- **Collect and cleanse your data, and make it accessible**
  - Develop a unified view of the business with inline access to analytical data for improved transparency and business insight.
  - Generate and govern authoritative master-data records with shared metadata and data-quality services for an accurate, single view of enterprise data.

- **Reduce cost and risk**
  - Reduce costs associated with infrastructure rationalization and migration by decoupling information from siloed information sources.
  - Reduce risk exposure through inline analytics and auditable data quality for risk and compliance initiatives.

- **Increase your organization’s agility**
  - Increase the agility for business transformation through reusable information services, spanning structured and unstructured information that can be plugged into applications, business processes and portals.
  - Speed development cycles through reuse and lower development costs associated with accessing and transforming data.

Your employees need the right information, right now … in the right context. Information as a service, coupled with portals, can deliver information for better, faster decision-making.
Dynamic business insights through dynamic warehousing

By combining information as a service with dynamic warehousing, you can further increase the value of your information. Dynamic warehousing is an approach to delivering more-dynamic business insights by integrating, transforming, harvesting and analyzing insights from structured and unstructured information. The result is a framework for delivering right-time, contextual information for both strategic-planning and operational purposes.

Consider the situation when a Fortune 500 company conducts its annual financial briefing at the release of its annual financial statements. Within hours, analysts are publishing commentary on the performance and their buy ratings. SOA information-analytics services for unstructured content can analyze these actual reports, perform linguistic analysis on them, and deliver the summarized results for reporting and further action.

Three key technologies are deployed in a successful dynamic warehouse:

- **Information integration**
- **Master data management**
- **Unstructured analytics**

**Information integration**

Information-integration services help to connect, enhance and deliver information across diverse operating systems, applications and established systems. For example, using an SOA, companies can embed analytical information from the data warehouse into business processes, allowing those processes to have access to the best, most-complete and accurate information to optimize automated decision-making.

The road to SOA: Harley-Davidson benefits from information integration

Harley-Davidson is known for its production of heavyweight motorcycles and complete line of motorcycle parts. When the company applied information integration to its dealer-inventory management process, it gained a 360-degree view of its inventory. Using systems the company already had, Harley-Davidson was able to gain detailed information about parts, sales history, external market data and a number of suitable bikes in a selling region. As a result, dealers can make better decisions about what inventory to stock.
Master data management
Master data management provides a single enterprise-wide view of data—that is, a common view of customers, partners and product information across different applications. Master-data analytic services can generate deep insight into key master-data domains that cross business silos (customers, products and accounts) and make that insight operational in real time through SOA integration with existing applications. Analytics on demand are critical for use in risk analysis for credit scoring and other processes that require immediate insight.

Dynamic warehousing
Dynamic warehousing helps users to integrate, transform, harvest and analyze insights from structured and unstructured data across your business ecosystem. It uses embedded search and text capabilities to enable usable knowledge to be extracted from unstructured information and deliver the analysis as an SOA service. For example, agents can analyze call-center logs for insights into the triggers for customer buying behaviors, leading to new business and higher customer satisfaction.

Enhanced decision-making through portals and dashboards
The amount of information that a company handles can be overwhelming. To provide information to users in meaningful ways, dashboards and scorecards deliver the information in a personalized context. Regularly updated with trusted data from SOA information services and enriched with situational information from relevant Web-services feeds, these visual guides enable users to see real-time status of their performance metrics at a glance.

Let's look at an example. Customer service representatives handle large volumes of information, usually across multiple applications and data sources. These representatives must rapidly view data and formulate insights to respond to customer issues in real time. To quickly serve customers, they need to see a wide range of information, such as billing details, past bills, billing addresses and account summaries. They must then drill down to where the problem is, review the data and make the right decisions about how to fix the problem. Finally, they must record the action and make notes about the customer interaction. Without an easy way to construct a consolidated, accurate view of all this information, the process can take a lot of time—time the representative does not have when a customer is on the phone. Often, lack of the right insight leads to dissatisfied customers and unproductive employees.

In this scenario, customer service managers need to look at specific customer transactions and calls as well as roll-ups of the day’s performance. They need to be able to analyze and find patterns across structured and unstructured data to get a full picture of problem areas, and develop actions that customer service representatives will take to fix the problems.

Dashboards are valuable because they deliver tailored access to relevant information and alerts. Information is presented in a way that is easy to comprehend. Dashboards are dynamic, portal-based applications that can assemble data and processes from a number of different enterprise systems, SOA information services and Web-services feeds. With portal and dashboard solutions, you can dynamically swap out the data service that feeds the dashboard, without having to change the user interface or the information server.
Getting started
It’s time to increase the speed at which you can make decisions involving customer information. Give everyone, not just analysts, access to intelligence in context.

Because big decisions can come at you fast, you need to have employees with insight. Provide your decision makers with the insights they need. IBM WebSphere® Portal, IBM WebSphere Customer Center and IBM Information Server enable organizations to have better information in a more consumable form for faster and more accurate decision-making with SOA-enabled services.

For more information
To learn more about portals, dashboards and information as a service, contact your IBM representative or visit:

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