IBM Software
Thought Leadership White Paper

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# Build an effective data integration strategy to drive innovation

*Five questions business leaders must ask*

## Tap your data for business innovation

As a business leader, you know the challenges you face: The marketplace continues to consolidate. Your operational costs are rising as your business demands increase. You must make strategic decisions every day based on skyrocketing volumes of data. How do you harness this information explosion to establish, maintain and leverage your competitive edge?

Business leaders are turning to powerful solutions such as data warehousing and business analytics to generate insight into their operations and client opportunities. Using these solutions makes a big difference, but the insights you gain are only as valid as the data that goes into them. Can you trust the data you are using?

## Data integration strategy is a critical foundation

Understanding and successfully addressing the issues that exist in delivering high-quality, reliable data to these business solutions is no longer solely the purview of the IT department. If you do not know with confidence how many customers you have or how much they spend with you, for example, then making good business decisions becomes extremely difficult. Ultimately, business leaders have a vested interest and must take an active role in ensuring their organization has trustworthy data it can use to plan and operate.

Core to establishing reliable data is an effective data integration strategy. Sound processes for understanding, cleansing and moving data from where it originates—applications, databases and legacy systems, for example—to target destinations such as data warehouses and business analytics tools is critical to creating trusted information. In fact, business professionals recently queried about business analytics by *Computerworld* identified "Data integration with multiple source systems" and "Data quality" as the top two challenges they have faced or expect to face to achieve successful business analytics initiatives.[1]

The benefits for business leaders who take an active role in defining their data integration strategy can be significant. In the 2010 IBM Global Chief Financial Officer Study, IBM identified a class of CFOs distinguished by their success resulting from their focus on performance optimization, predictive insights, enterprise risk management and business decision making. The achievements of this group (called "value integrators" by IBM) can be linked in part to being 120 percent more effective than their baseline counterparts at driving information integration across the enterprise. As a result, their organizations were better equipped to analyze this data to better manage risk and optimize their business.[2]

Business leaders are increasingly aware of the significance of an effective data integration strategy to accomplish business results. In fact, data integration has been the fastest-growing area of critical focus for CFOs during the last five years. However, it is also the area where CFOs note the largest gap in the effectiveness of their business relative to its importance (34 percent). The awareness of the importance at the CFO level may seem surprising, but when you consider that so much of their effectiveness and ability to comply with regulations is driven by having trusted information, it makes sense.[3]

How do forward-thinking business leaders help ensure that the data empowering their strategic initiatives is comprehensive and trustworthy? How do you ensure that high-quality, reliable data is driving your business decisions? Start by asking yourself these five questions.

## 1. Does everyone in your company define "customer" in the same way?

A customer is a customer—right? Not so fast. IBM clients across a range of industries have identified more than 25 ways their companies define this seemingly obvious term. On the business side alone, it is not uncommon for a CFO, CMO and CIO to define this and other basic business terms differently. How can this happen?

The problem stems from the reality that different parts of the business speak different languages. While the finance side of the house may define "customers," as businesses with active contracts, marketing may lump businesses with closed contracts into that definition as well, or even prospects who have not yet signed a contract. The problem is further complicated when you consider that IT speaks an entirely different language, thinking in terms of "database tables," "column names" and "schemas."

As a result, there is often no consistency or precision in the definition of commonplace business terms. But those terms are at the heart of evaluating opportunities, risks and key performance indicators, and the impact of their inconsistent definition has widespread consequences. When you see "customer" in a report, how do you know this captures all customer data? Too often the reality is that the information in that field is not complete (or may not even reflect the appropriate definition of "customer").

Two elements are required to rectify this situation: a data governance strategy and the tools to enforce its standards throughout the organization. Key to an effective data governance strategy is empowering business data stewards to define a glossary. Once defined, however, it is not enough for the glossary to live on the data steward's desktop or sit isolated in a database run by IT. Instead, all employees in an organization must have easy access to the glossary with a click of a mouse in order to continually verify that they are working with the right terms—and the right information is being produced.

Establishing business terms that can be accessed consistently, universally and directly from the applications and reports on your business user's desktop, as well as within the tools used by IT, is a mandate for business leaders, not simply a task for IT. IBM enables business leaders to accomplish this objective, as well as helping to accelerate the process, by offering prepackaged solutions that provide industry-specific business terms to get you started.

## 2. Do you know the source of a specific piece of data?

Have you ever picked up a report, ready to use it to make a decision, only to find yourself pausing because a number doesn't look quite right? If you are like many of your counterparts, it can take days to get an answer about the data's origins. This creates the potential for missed opportunities or breached regulations, and it means your technology team is spending tens to hundreds of hours backtracking data sources instead of working on projects that add value to your business.

The problem is, most environments are not optimized to let applications share metadata—information about information—with one another in a single repository. As a result, there is no easy way to look quickly at a number in a report and know, with confidence, where it came from and what changes it might have undergone by the time you see it.

This is a serious issue as companies face not only an increasing amount of data but also a growing number of systems from which this data is derived. Mergers and acquisitions, along with departmental, siloed projects, contribute significantly to the mushrooming number of data sources that must be integrated to provide a comprehensive view of information. Being able to know the history of a single piece of data as it travels from its original source to the report you hold in your hand can have a massive impact on how you think about your business alternatives.

IBM delivers insight about the source, usage and evolution of a specific piece of data via a unified, common metadata repository that is organic across its data integration platform. Designed to be consumed by business leaders, this information pops up on-demand in your reports to answer your critical questions rapidly and comprehensively.

## 3. Can you make high-quality data available 24x7?

Perhaps your organization recently migrated to a new instance of SAP software or consolidated multiple applications following a merger or acquisition. That information is integrated, consistent and ready to go, right? Again, not so fast.

Because of multiple entry points and the speed at which data comes into your enterprise, creating high-quality data is never a once-and-done effort. New data continuously enters your applications, data warehouses and business analytics systems. There are myriad possibilities for data confusion that must be overcome to achieve the levels of data quality your business demands. A world-class methodology enabling your data to be consistently monitored and cleansed to your organization's standards is imperative to your success.

Without high-quality, reliable data, you will find incorrect values, duplicate information and insufficient financial information creeping into your organization. This can increase your risk exposure as well as result in missed revenue opportunities with your clients.

IBM supports your demands for data quality by enabling you to establish sophisticated data quality rules, monitor data in nearly any source system and correct data in real time if errors occur. This "always-on" approach to maintaining high-quality data supports high-volume processing and quick delivery from your source systems to your strategic systems, so data remains reliable day in and day out even when enormous transaction volumes are being managed.

## 4. Can you process and gain insight from increasingly massive quantities of data?

Information continues to grow at a staggering pace. So why are most companies constrained when it comes to the amount of data they use? By creating an environment that processes virtually all of your information from the outset, you can harness your data using your warehousing and business analytics applications and have confidence in the information that is helping you run your business. And you can do this without constantly changing your environment to meet the various volumes of data you need to process.

Moving large quantities of data in real time from your source applications to your data warehouse or analytics dashboard is not trivial. If your architecture is not designed to handle these demands, you are forced to consider the option of using smaller quantities of information and extending your time frame. Environments not optimized for large amounts of data expose you to missed information and long delays that can even grind your systems to a halt.

Companies that can identify, cleanse and process expanding volumes of data position themselves to solve high-value business problems faster and more effectively, thereby differentiating themselves from competition and creating unique market opportunities. One IBM client has seen its data volumes expand from 22 million transactions per day and 2,000 messages per second in 2002 to 1 billion transactions per day and 100,000 messages per second in 2008—a 50x increase in processing volume. Is your company able to leverage the insight that comes from this level of growth?

The IBM approach to data integration helps ensure that the information you want in your warehouses and analytics systems is delivered quickly and reliably. Further, your organization can implement a uniform approach that allows you to add capacity to manage increasing amounts of data without modifying your integration infrastructure.

## 5. As your data expands, can your existing IT infrastructure be optimized?

Wise spending is essential in an era where cost-cutting is a top priority. As reliance on technology increases, companies must think about the long-term value proposition of their software investments.

Today, the data you need to run your business resides throughout your organization—in legacy systems, applications, operational systems and third-party data, to name a few. For most companies, the number of these sources increases when departments deploy their own business systems and manage that data within silos, or when an organization acquires other companies. When you consider the number and variety of systems in an average organization, the challenge to deliver this data to your data warehouses and business analytics tools becomes intense.

A data integration approach built on innovative technology delivered on a unified platform via a central metadata repository can remove the concerns of missing data, resource overloads and data timeliness. It can also address cost concerns by using your existing hardware and software investments.

The IBM data integration platform is unique in its ability to help clients create and maintain an optimized integration environment. Capacity can be optimized, allowing you to handle more data using the hardware you already own. Deployments are scalable, resulting in the systems that can accommodate growth in data volumes. Data is regularly monitored, and as changes happen you can confirm that the information remains reliable and current. Your architecture truly is designed once and leveraged across your enterprise, helping to ensure best practices are maintained to deliver a consistent, repeatable approach for more trustworthy information.

## Tapping the information explosion for business insight

IBM continues to deliver the innovations you need to maintain your competitive edge. With the IBM® InfoSphere™ and IBM Cognos® portfolios, IBM Software provides all of the building blocks needed to deliver trusted information across your enterprise, regardless of the complexity of your environment. These portfolios work together seamlessly to address the five questions outlined in this paper, while optimizing the use of IT resources—enabling business requirements to be met on shorter timeframes, at a lower cost and with a much higher degree of consistency and repeatability. The results realized by IBM clients around the globe are testimony to the success of this approach.

Your opportunity to maintain a competitive edge will increasingly be based on the insight you can derive from your data. You are not alone in wrestling with how to make the best use of the massive rise of data on the horizon. Nearly two-thirds (63 percent) of "customer-focused" CEOs recently said the information explosion will have a very large impact on their business over the next five years.[4] IBM can help you make sense of your data and harness the power of the underlying insights to benefit your business.

IBM helps business leaders address the five tough—and mandatory—questions they must ask about how to realize the potential of their data. Data volumes will continue to explode. Opportunities—and risks—will arrive with increasing velocity. Regulations will perpetually evolve and continually demand your attention. You will need to make strategic decisions with greater speed and accuracy. How well you are able to tap one of your most critical assets—your information—for the insights to take on these challenges will determine how your business fares in the years ahead.

## For more information

To learn more about deriving better insights from your data, or for details of the IBM data integration platform, please visit: **ibm.com**/software/data/integration



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[1] "Defining Business Analytics and Its Impact on Organizational Decision-Making." February 2009. Research conducted by *Computerworld*; sponsored by SAS. Page 10.

[2] "The New Value Integrator: Insights from the Global Chief Financial Officer Study." March 2010. IBM. ftp://public.dhe.ibm.com/common/ssi/ecm/en/gbe03282usen/GBE03282USEN.PDF

[3] Ibid.

[4] "Capitalizing on Complexity: Insights from the 2010 IBM Global CEO Study." May 2010. IBM. **ibm.com**/services/us/ceo/ceostudy2010/index.html

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