CIO 2 CIO PERSPECTIVES

Today's IT Leaders on Market Trends

Critical Business

Best practices in building an integrated information management strategy

Success today depends on enterprises being information-driven to support business goals and gain competitive advantage. CIOs and business executives are under incredible pressure to increase efficiencies while innovating for top-line results. Developing sales channels, driving new demand, reducing production cycle times—for all of this, instant insights into business performance and opportunities, based on information from across and beyond the enterprise, are pivotal.

To support this information-driven business imperative, CIOs must provide timely, accurate and consistent enterprise-wide information. With data typically residing in multiple disparate systems and applications, that can be a challenging task. Enterprises require a sound and comprehensive information management strategy.

Increasingly, CIOs are looking to standardize on one integrated platform for information management that encompasses multiple technologies, such as business intelligence (BI) and master data management (MDM). By integrating these technologies, organizations gain a comprehensive view of business data and processes, enabling real-time visibility into operations and improved decision-making. Inventories can be reduced, sales and billing processes can be streamlined to better respond to customer demand and costs can be controlled more effectively.

Research and in-depth discussions with CIOs, conducted by IDG Research Services, have pinpointed a set of best practices for architecting and implementing a comprehensive information management strategy, encompassing transactional systems, data warehouses, BI and MDM systems and content management solutions.

Information Management: A Corporate Mandate

Business executives often must quickly make decisions, but to do so, they require trusted information to best guide those decisions. Thus, accurate, reliable and timely information has become a corporate mandate, placing pressure on CIOs to have a strategy that provides consistent information across the enterprise.

This information management challenge is made more complex as businesses increasingly function as collaborative networks—including multiple internal stakeholders, partners, suppliers and customers—to drive competitive innovation for growth and efficiency. Information sources and demands across these business networks often change rapidly, due to factors such as close customer collaboration in product development; mergers and acquisitions; partially outsourced business processes, (such as supply chains); or compliance in manufacturing.

This is clearly understood by business executives who see the need for an agile infrastructure for information management. According to the survey conducted by IDG Research, 76 percent of global respondents say the ability to manage data as an enterprise asset—to be shared and reused across multiple applications, systems, business processes and users—is a critical or high priority.

"Information management

About CIO2CIO Perspectives: This peer-based thought leadership program analyzes quantitative research and tests it via qualitative interviews with actual CIOs. To obtain a free download of the complete 28-page research brief cited in this paper, go to **www.cio.com/whitepapers/research**. To learn more about CIO2CIO Perspectives, please contact mavery@cxo.com.

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A Solid Platform for Information Management

Information management is a business discipline as much as an IT discipline. Sales operations need real-time visibility into inventory. Production requires unique identification and tracking of products across supply networks. Finance demands compliance with business record management policies. A successful information management strategy is planned, implemented and governed with a business perspective. SAP understands what (and how) information is leveraged in the specific business processes of 26 industries, building solutions supporting almost 40,000 customers worldwide for the past 30 years.

With SAP NetWeaver, SAP provides the standards-based platform to manage this information across the enterprise. Integrating structured and unstructured information from heterogeneous sources, it provides one single version of the truth, across master and transactional records, as well as business documents. Information is managed and governed with the business in mind, incorporating requirements for data latency, business rules, retrieval speed, security, and cost. SAP enables enterprises to rapidly bridge the gap between business and IT, delivering faster returns and increased business agility.

For more information about building an information management strategy, please visit www.sap.com/netweaver.

is critical to our operations," says John Gowers, IT director for Blue Mountain Resorts in Canada. "It drives our daily decisions. One thing that's unique about our operations is that we make daily changes to operations. We budget and do analysis daily because of the type of environment that we're in."

Other IT leaders cite business benefits to well-managed information such as improved operational efficiency, cost control and improved top- and bottom-line results—all in a sustainable cost structure.

It's about using information consistently to build a better business, says one IT executive. "With visibility into our data, we can optimize inventory management and reduce labor. We have better-informed executives who make informed decisions—that drives competitive advantage."

The Need for Strategy

To meet the information challenge, CIOs are building comprehensive information management strategies that reflect both business requirements and IT strategies.

Forward-thinking CIOs are combining their BI and MDM efforts to leverage the synergies gained by using cleansed master data directly in business intelligence applications. "They have to be linked—we can't do one without considering the other," says Steve Bughaski, CIO at Unison Health Plan, a healthcare provider in Pittsburgh. Although running BI and MDM separately meets tactical IT and business goals, repeatedly consolidating the data on an as-needed basis is labor-intensive and doesn't meet the requirements for IT agility. "We would continue to need experts who know where the data is and how to get to it, but what we really want is more businesspeople actually using the information by themselves," Bughaski adds.

A converged approach is so important that an IT executive for a plumbing supply company has united his BI, MDM, enterprise search and data quality programs under one global initiative. "It is quite a closed management approach where you have interdependencies between these things," he says. "None of these can be run independently; they need to run with an orchestrated effort."

But no one is saying a comprehensive strategy is easy. Aligning IT with business requirements is difficult, and globally, respondents point to several key obstacles:

- Unclear business requirements
- Difficulty in mapping business to IT
- Keeping abreast of changing business conditions

Most tellingly, IT leaders think these challenges may affect their businesses' ability to remain agile and may contribute to a higher cost of IT. They also reveal that dealing with a host of different tools and interfaces is a key inhibitor to agility, quality and cost control. This is even though many technologies are considered important—including BI tools, MDM, content management and data quality software.

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"One of the main issues is our constant effort to keep up with the daily user requests and changes," says David Mingee, principle system administrator, Liberty Mutual. "The other big factor is our aggressive growth through mergers and acquisitions. With M&A, we have to deal with different systems, different hardware, different software and different business rules. We have all these ponds and rivers, but we never seem to be able to get them to flow into one big lake."

These challenges point to the need for CIOs to consider a comprehensive strategy that leverages synergies across various information silos—including business intelligence and data warehousing, master data management, content management systems and transactional systems.

Effective Information Management: Best Practices

As enterprises wrestle with the challenges of building a consistent information management strategy, some hard-won insights are emerging. CIOs' lessons learned, as put forth in the IDG survey, help describe a five-step best practices program that addresses the integration and standardization issues that often hinder a successful convergence of an information management platform.

1. Standardize. CIOs realize the need to standardize on tools or, even better, a single platform.

"We've been able to do some hardware and server consolidations and actually data consolidations because of a standard platform," says Cindy Hughes, CIO, Maryland Auto Insurance Fund. "From a corporate performance standpoint, it gives us the advantage of more-reliable access to data. Therefore, since data drives decisions and decisions drive the corporation, the corporation performs better because of all the technology in place."

2. Business executives and IT must collaborate—but CIOs should expect to lead the effort. A vital step for effectively managing information is to define the business metrics and key performance indicators that will drive the strategy in a manner that fits business goals and requirements. For that to happen, business and IT must collaborate. "We distribute responsibilities between IT and the business users in the divisions," says Al Arboleda, information security officer, California State Polytechnic University, Pomona. "Every division has a lead technical person and a divisional person responsible for pushing through the information management strategy, including training, and supporting their division. We hope that by pushing the expertise out into the divisions, we will get committed ownership and more stakeholders involved in the overall process."

Hughes, at Maryland Auto Insurance Fund, offers additional advice: "I think that the secret to that, very frankly, is in co-opting people. We do some technology demonstrations in a training room facility that we have. We form teams made up of both business people and IT people who work together to implement either a new product or approach or application."

3. Tie MDM into all information management efforts, especially business intelligence. CIOs must ensure that the master data governing the consistency and integrity of the data enterprise is integrated into an information management platform, particularly in the area of business intelligence.

The accuracy of analysis and reporting within BI applications is predicated on the accuracy of the master data embedded in transactional data. Historically, the cleansing of master data and the normalization operations within BI applications were an ad hoc approach, offering some interim benefits but not guaranteeing long-term enterprise accuracy. With the advent of enterprise MDM solutions, it is possible to ensure that data warehouse systems—as well as enterprise applications—are downstream systems that can be updated with real-time feeds of master data.

The synergies of tying MDM into information management efforts can be powerful. For example, leveraging master data can ensure that a procurement report takes into account a complete hierarchical view of suppliers, as well as the product/material hierarchy and classification, thereby leading to significantly more-accurate insights.

"Controlling the data, having one place to retrieve it from and one way of defining it, will standardize all of the reporting and the BI," says Tom Stumbaugh, manager of application development, Ohio Rehabilitation Services Commission. "It will be one single view."

An information management plan will fail if it relies on

poor data, and the survey respondents know it: worldwide, 68 percent of respondents say that they either have a plan to reconcile operational and analytical MDM requirements or are considering implementing one. Many are doing so by simplifying platforms, with 68 percent saying that preintegrating BI and MDM solutions onto one platform is either critical or important.

4. The information management blueprint must encompass operational applications, too. Tackling information management on a piecemeal basis is a recipe for disaster. Rather, CIOs must build a holistic strategy encompassing operational systems such as enterprise resource planning (ERP) or customer relationship management (CRM) as well as line-of-business ownership.

"Ultimately, we want to have a very solid architecture, with one central location for our data, which has the quality built into it, and with the business intelligence tools out there so the business users have the availability to run their own reports," says Unison's Bughaski.

Service-oriented architecture (SOA) design principles may be there to help; in the global IDG survey, 64 percent of the respondents say they are working to align their SOA frameworks with enterprise information management initiatives.

5. Search is a critical tool to connect structured and unstructured information. The jury is still out on the importance of integrating structured and unstructured data; globally, 44 percent of the respondents prefer to treat the two as separate disciplines, whereas 34 percent disagree, saying that they programmatically treat them as one discipline.

To help bridge this gap, IT leaders say they are turning to the search function. They are structuring enterprise-wide search to include enterprise application systems, master data systems, data warehouses and analytics alongside intranets and the Internet.

Conclusion

Under pressure to provide consistent, accurate information to all relevant stakeholders within increasingly complex business networks, CIOs are discovering the value to building an integrated information platform and strategy—integrating vital data from disparate sources and particularly using technologies such as BI and MDM together to deliver a trusted information foundation. The best practices presented here are stepping-stones to building that strategy.

To obtain a free download of the complete 28-page research brief cited in this paper go to www.cio.com/whitepapers/research.

IT Leaders in Asia Cite Benefits of Single Platform

Business and IT leaders in the Asia Pacific region support the idea of a single integrated information management platform. In recent in-depth discussions with IDG Research Services, most IT executives said that they had implemented business intelligence (BI) applications and master data management (MDM) and see the benefits of combining the two.

The COO of a large insurance company based in Japan says it helps meet business needs. "By having the information all in one place, [business executives] get the same consistent story about the whole organization."

Other IT executives in the Asia Pacific region point to additional benefits, such as increased operational efficiency, reduced reporting times, controlled IT costs and cost savings.

"We have improved our operational efficiency to the point where we can get the data out that we need. Before that, we had to do a lot of data manipulation," says the IT director of a large electronics company.

One of the challenges along the way to standardization, say respondents, has been data integrity. An IT executive for a major manufacturer based in Japan says he has standardized but has run into trouble when regional data was sent to the central repository. "Our biggest challenge was to make the regions report their data in a format that was consistent with the central instance," he says. "It finally is working, but not until a year ago. Before that, creating the reports took much longer because the data had to be cleansed and reworked before going into the central repository."