

IQ Matters:

Senior Finance and IT Executives
Seek to Boost Information Quality



A report prepared by CFO Research Services
in collaboration with Deloitte Consulting LLP

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Deloitte Consulting LLP and CFO Research Services developed the hypotheses for this research jointly, and senior professionals from both firms collaborated on defining the research program, analyzing the results, and preparing this report. Deloitte Consulting funded the research and the publication of our findings, and we would like to acknowledge several Deloitte Consulting professionals—Ann Senn, Sam Silvers, Lee Dittmar, Steve Poniatowski, Karen Arsenault, and Randi Caplan—for their contributions and support.

At CFO Research Services, Randy Myers conducted the interviews and wrote the report. Sam Knox edited the report and directed the project.

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In Memoriam

“Few executives know how to ask: What information do I need to do my job? When do I need it? In what form? And from whom should I be getting it? Fewer still ask: What new tasks can I tackle now that I get all these data? Which old tasks should I abandon? Which tasks should I do differently? Practically no one asks: What information do I owe? To whom? When? In what form?”

Peter M. Drucker,
“Be Data Literate—Know What to Know,”
in *The Wall Street Journal*, December 1, 1992.

For more than 50 years, Peter Drucker wrote crisply and convincingly on a broad array of management topics. This team would like to acknowledge his contribution and mark his death in November 2005.

About this Report

In the summer of 2005, CFO Research Services (a unit of CFO Publishing Corp.) launched a research program to explore the quality of management information and its proficiency in meeting information needs at large companies around the world. Through a survey and interview program among senior finance executives in North America, Europe, and China, we sought to understand how companies rate their information quality (IQ)—its accuracy, timeliness, reliability, and transparency—and their capabilities in providing information relevant to achieving governance and performance objectives. We also sought to document how the chief financial officer and the chief information officer are working together in new ways in an effort to boost information quality. This report contains our findings and was prepared in collaboration with Deloitte Consulting LLP.

All told, we gathered 385 responses to the survey, two-thirds of which were from executives at companies with more than \$1 billion in annual revenue. Seventy percent of respondents are from North American companies, 22 percent are from European companies, and 8 percent are from Chinese companies. We sought to include both finance and information technology executives in this study. Executives with top finance titles such as CFO, controller, and vice president of finance make up 64 percent of respondents, while IT executives—including CIOs, VPs of IT, and directors of IT—comprise 18 percent of respondents.

To supplement the survey findings, we conducted in-depth interviews with executives from the following companies:

- Aluminum Corporation of China Limited
- Arrow Electronics, Inc.
- AstraZeneca China
- Bristol-Myers Squibb Company
- Campbell Soup Co.
- CNPC Service & Engineering Ltd.
- Coty Inc.
- Desay Group
- GenLyte Group
- Goodyear Tire & Rubber Co.
- HCA, Inc.
- Hydro One Inc.
- ING Direct
- Jones Lang LaSalle, Inc.
- Lubrizol Additives
- MedImmune, Inc.
- Midea Group
- NV Roche SA
- PetroChina Company Limited
- Respironics, Inc.
- Rogers Communications Inc.
- Rohm & Haas Co.
- Siemens Energy & Automation
- SPX Air Filtration
- St. Vincent Health
- The PMI Group

Executive Summary

A majority of business decision makers don't have ready access to high-quality, reliable, useful information on operating and financial performance at their companies—so say senior finance and IT executives in this global study of information quality (IQ). As a result of this IQ shortcoming, decision makers are forced to spend time building special reports and analyses and reconciling the “multiple versions of the truth” provided by their disparate, non-integrated business processes and IT systems.

But finance and IT executives see real value and investment return in improving the quality of their management information—in boosting its timeliness, accuracy, and transparency. They foresee broad benefits, including the ability to make better operating decisions more quickly, better annual planning, and greater confidence in business process controls.

To remedy their uneven quality of information, companies are investing in process simplification and tighter integration of their IT systems. Doing so, say survey respondents and executives interviewed for this study, requires not just time, money, and attention, but also a new and much closer collaborative relationship between the CFO, the CIO, and their teams. This new relationship calls on finance to take greater responsibility for information quality and for companies to instill accountability for IQ throughout their organizations.

Collaboration, responsibility, and accountability may not be enough, however, to solve the IQ problem effectively. Companies' IQ and the collaborative relationship between finance and IT will benefit from the CFO and the CIO building their real knowledge of the other's discipline. When finance comes to understand IT—its capabilities, limits, and role within modern enterprise—and when IT comes to see robust financial thinking as a source of business value, and not just of cost control, companies will be on a path toward higher IQ and sustained operating and financial improvement.

Chapter 1:

A Surprising Indictment—Companies Still Have Trouble Delivering Basic Information

If information is the lifeblood of business, the corporate vascular system appears to be blocked.

It has been more than 50 years since the introduction of the first electronic computer, a generation since the debut of resource management applications for manufacturing, and a decade since the advent of performance management software. Over the past five decades, companies have poured tens of billions of dollars into information technology aimed at automating business processes, improving data management, enhancing customer interactions, digitizing records, and enabling E-business.

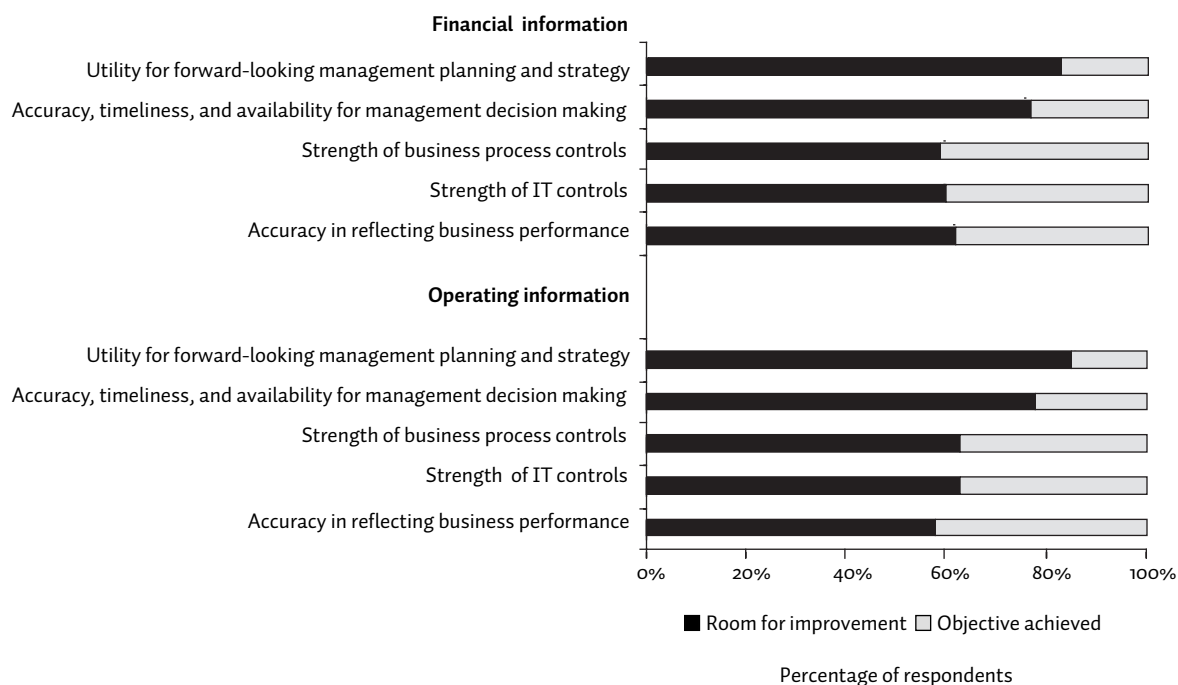
But what about information for making decisions, monitoring performance, reporting financial performance, and governing the enterprise? Despite massive IT investments, today when executives reach for the accurate, timely information that they need to make well-informed decisions and to report performance, they often come up empty-handed. In what might surprise many observers and confirm the views

of their more skeptical peers, this study finds that fewer than half of finance and IT executives surveyed believe they have achieved their IQ objectives. Indeed, in a recent survey of senior finance and IT executives around the world, 61 percent of respondents say they could still do a better job of just making sure the financial information they generate accurately reflects the performance of their businesses. The business impact of this poor IQ, say respondents, includes widespread decision-making problems that are often tied to inaccurate, untimely, and irrelevant information.

Queried on ten categories of information quality—combinations of the utility, timeliness, and accuracy of financial and operating information—a majority of the senior financial executives responding to this survey report room for improvement in every category. The most common problem area, cited by more than 80 percent of respondents, is the utility of operating and financial information as a foundation for forward-looking planning and strategy (see Figure 1). This analytical ability to gain insight from experience—to learn what has and what hasn't worked well—should drive better modeling, planning, and forecasting.

Figure 1. Finance and IT executives see room for improvement in the quality of their information in all categories.

In your opinion, is there room for improvement in the following categories of information at your company? Or have you fully achieved your objectives?



Daniel Ladenberger, president of SPX Air Filtration, a German-based air filtration distributor—and until recently CFO of its parent company, SPX Corp.—is among the CFOs who recognize that many companies still have an information problem. “We want to provide a greater breadth of information to the business, not just data,” Ladenberger says. “And, we want to provide it in a timely manner so we’re not reactive but proactive when trends are impacting the business.” For Jan Timmermans, too, the challenge revolves not just around the quality of information, but also its timeliness. “Yes, we are trying to reduce the gap between forecasts and actual figures,” says the finance director for NV Roche SA, a Belgium-based subsidiary of Switzerland’s \$27.6 billion Roche Holding Ltd. “But we also want to reduce the time required to produce financial reports.” Similarly, Larry Michieli, vice president, financial systems, for Toronto-based Rogers Communications, Inc., says the company’s goals in installing an enterprise resource planning system in 2005 were equally weighted on improved data accuracy and more timely access to data.

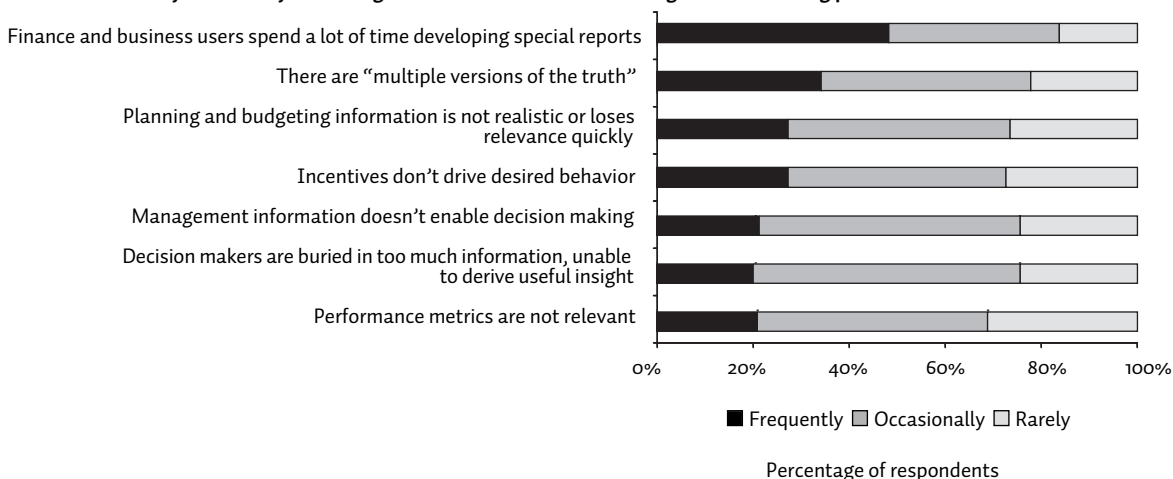
That companies are still struggling with turning data into useful performance information speaks both to the enormity of the task and an ever-shifting goal line. Many companies, especially those that can attribute some of their growth to acquisitions, find themselves wrestling with multiple, disparate information systems and, in some cases, decades of process sprawl and inertia. Can reliable information emerge from such a system? Perhaps. But not with optimal speed or accuracy, particularly when definitions for key metrics might easily vary from one part of the business to the next. “The reason for the difficulties of producing timely, consistent,

transparent information today is that we have lots of legacy systems that have been patched together over the last 30 years,” says Gerry Lord, vice president, finance and strategy, for the North American division of \$7.5 billion Campbell Soup Co. “Understand, people learn to live with the best tools they’ve got; it’s not like the world stops. Ultimately, we are able to get the information we need to make decisions. But when that information is difficult to get or takes too long to get, or when people don’t necessarily trust the source because there are alternate sources of theoretically the same information, they sometimes try to make decisions without it. Clearly, that is suboptimal.”

Asked to identify the drivers of poor IQ, nearly half the survey respondents—45 percent—cite disparate, non-integrated IT systems and the variability of business processes as an acute problem that constrains management’s ability to work effectively and focus on high-value activities. Approximately the same number agree that finance and business units alike spend too much time developing special reports and analysis to supplement system-generated reports. Other disappointing and productivity-sapping by-products of poor information quality include “multiple versions of the truth,” misguided incentive programs, and unrealistic plans and budgets (see Figure 2). These are particularly evident at companies with a “very thin” corporate structure in which business units operate independently with different business models. For example, 46 percent of the survey respondents who operate under a “very thin” corporate model say their planning and budgeting information is unrealistic or loses relevance quickly, versus only 26 percent of all respondents.

Figure 2. Poor information quality forces finance and business users to waste time and rationalize conflicting sources of information.

To what extent do you believe your management suffers from the following decision-making problems?



Meanwhile, even as companies have made progress in refining their information-gathering and reporting processes, the expectations of end users have grown, too, making yesterday's success stories today's shortfalls. "As IT organizations have become more and more mature, the bar has continued to rise for quality of information," says Diana Melick, vice president and chief information officer for Siemens Energy & Automation, the \$2 billion U.S. unit of German manufacturer Siemens AG. Feike Brouwers, chief financial officer for global banking institution ING Direct, agrees. "More and more, when we get questions, people expect an answer within hours, or at least the next business day," Brouwers says. Milton Johnson,

executive vice president and CFO of \$23.5 billion hospital operator HCA, Inc., says the demands being placed on his IT team had become so great five years ago that the company was in danger of losing its ability to effectively manage IT initiatives. To bring the process back under control, it created a formal program-management office which, among other things, now helps the organization set priorities for its IT activities. Global specialty chemicals company Rohm & Haas Co. found it necessary to create an entirely new position—director of finance IT—to help it better align its finance and IT organizations. (See "Rohm & Haas leverages ERP system to dramatically speed access to information.")

Rohm & Haas leverages ERP system to dramatically speed access to information

Philadelphia-based Rohm and Haas Co. has been, by any measure, a successful organization for a long time. Founded in Germany in 1907, it is now one of the world's leading specialty chemical companies and still an engine of growth. Over the past ten years, its sales have nearly doubled to \$7.3 billion from \$3.9 billion.

Talk to top Rohm & Haas executives, though, and you get the impression that, until very recently, it had been competing with one hand tied behind its back. The problem, explains Vice President and Chief Financial Officer Jacques Croisetiere, was that management didn't have ready access to the high-quality business information needed to inform decision making. "Three years ago, the combined cost of IT and finance was about 5 percent to 6 percent of sales," Croisetiere says. "Yet the timeliness of the information we provided to the organization was extremely poor." Rohm & Haas Chief Information Officer Anne Wilms attributed the weakness to diverse and unrelated information systems. "Every business had its own portfolio of applications and its own way of doing things," she says. "There was no consistency—no way one could easily reconcile the numbers at the end of the day, because each number meant something different."

When Croisetiere was named CFO in 2003, he received a clear mandate from Chairman and Chief Executive Officer Rajiv Gupta, a one-time financial analyst for Rohm & Haas who had risen through a series of operational jobs to take over the top job in 1999. "He told me the one thing he wanted was to not be worrying about the actuals of the previous month well into the following month," Croisetiere recalls. "He said, 'I need to know what is going on faster.' The enterprise was asking for better information more quickly, and at a lower cost. It became clear to me and to Anne [Wilms] that we had to drive down the time it takes to close the books."

Given what Croisetiere now recalls as this "difficult mandate," he threw his support behind an undertaking that Wilms had already been championing, the implementation of a new enterprise resource planning system. The company completed the \$300 million undertaking in May 2004. Results were dramatic. Closing the general ledger shrank from a 15-day job to a two-day job. Preparing SEC filings now took just 21 business days, down from nearly two months. Leaders of the company's 12 business units now have instant insight into each of the company's 250 income statements, reviewable by sales, customer, or product. And, the cost of finance and IT shrank nearly in half, to 2.9 percent of sales.

"What we did," Croisetiere says, "was align the information needs of the enterprise with the need for internal and external financial reporting via the

implementation of a single system worldwide, which put us in a one-number environment. Now, when business unit leaders look at sales by region, business, or customer, the information comes from the same source. We've aligned business strategy and our organizational structure to mirror each other. We have been able to leverage better information more quickly and disseminate it widely and appropriately."

To be sure, the ERP implementation was not without challenges, principally in the form of reluctant business unit leaders who said the system wouldn't work for them because their businesses were "different." That roadblock was overcome, Wilms says, by having the company's president and the chief operating officer sign on as program sponsors. "This became a mandated effort, and the business unit directors were responsible for the implementation and its success," she says.

Inevitably, the massive undertaking drew finance and IT closer together. A new position was created—director of finance IT—with that person sitting on the leadership teams of both organizations and helping to align their interests. "Prior to that, finance and IT were not working together effectively," Croisetiere says. "Finance was doing its stuff and not discussing it with IT, and vice versa." Today, he says, both groups are rowing in the same direction—and their efforts to improve the timeliness and utility of the company's financial and organizational information hasn't slowed.

"One of our goals now is to deliver information about performance as fast as we can, so the management team can spend time focusing on the future," Croisetiere says. "We don't want to spend too much time living in the past." As 2005 drew to a close, finance and IT were working together to launch a dashboard scorecard system which will offer Rohm & Haas managers still quicker and more varied views of performance data. "We will be able to go in and see where sales are at any time, view key metrics to see if they are on target or off target, and so on," Wilms says. "We are leveraging the ERP environment to provide different views into that information to help people make decisions."

Clearly, neither Croisetiere nor Wilms has any intention of taking their foot off the throttle. "My vision for the finance organization," says Croisetiere, "is that each of my 12 direct reports has as their mission the generation of additional earnings. They are not finance accountants. They are here to identify ways for each of their businesses to be more profitable. Anne [Wilms], in the IT role, has as her strategy the delivery of information for profitable growth as well."

Multiple Forces Drive Demand for Better IQ

Finance executives are being pushed to improve IQ by CEOs and corporate directors anxious to reach and sustain compliance with new financial reporting legislation such as the Sarbanes-Oxley Act in the United States or Bill 198 in Canada; by business units eager for better decision-making support; by Wall Street analysts demanding better insight into company performance; and, in some cases, by government regulators overseeing heavily monitored industries such as health care. (See “St. Vincent Health: Health-care regulation drives efforts to improve information quality.”)

St. Vincent Health: Health-care regulation drives efforts to improve information quality

Pressure to deliver high-quality financial information doesn't come just from CEOs, business unit managers, or, in the case of the Sarbanes-Oxley Act, Congress. In some industries—like health care—it also comes from government regulators. For makers of pharmaceuticals and medical devices, it's the U.S. Food & Drug Administration that requires voluminous documentation of processes, procedures, and clinical test results. For operators of health-care facilities, it's the Medicare and Medicaid programs—which pay for the treatment of many patients—that generate the greatest paperwork load.

Ian Worden, CFO of St. Vincent Health, an Indianapolis-based health-care system with 16 hospitals in Indiana, says the challenge of producing high-quality data in a timely manner has never been greater for his company. “Just like many industries, the health-care field is moving at a faster pace,” Worden observes. “We have to be able to control our costs to stay in line with the reimbursements we receive from Medicare and Medicaid, just like any other company would with their revenues. We're also being subjected to a higher level of state and federal scrutiny of our costs, and face a higher risk of penalties if we fail one of our biannual audits. As a consequence, we have to be extremely accurate in our financial reporting, just like public companies.”

To cope with its growing information demands, Worden says, St. Vincent's finance and IT teams are installing newer and better applications for financial reporting. “We installed an ERP system in all 16 of our hospitals this past July,” Worden reports. “This was especially important to us now that Medicare and Medicaid are reimbursing service providers at lower rates. When you get paid less, you have to figure out what to do about your expenses.” Later, the company may take a look at paring down the number of software applications it runs. Reflecting the health-care industry's regulatory complexity, Worden says, it uses more than 400 today—and he's not happy about it. “I want system unification and simplification,” he says. “We should cut our applications by perhaps 30 percent or even by half.” Chief Information Officer Greg Jones notes that there's some movement in that direction already. Having completed the ERP installation, he says, the company is preparing to move three of its hospitals to a single application for its patient-admitting and billing system.

Beth Summers, chief financial officer for Toronto-based electric utility operator Hydro One Inc., says managers at her company realized just how inefficient their systems were for gathering operational data when about 1,000 of Hydro One's engineers went on strike for 14 weeks in the summer of 2005. “We used to be able to rely on these people to get data for us, and when other people had to find it themselves, they realized it wasn't as accessible as they had thought it was,” Summers says. “It forced us to think about the inefficiencies and helped us realize we needed to streamline certain processes and do things in a different way.”

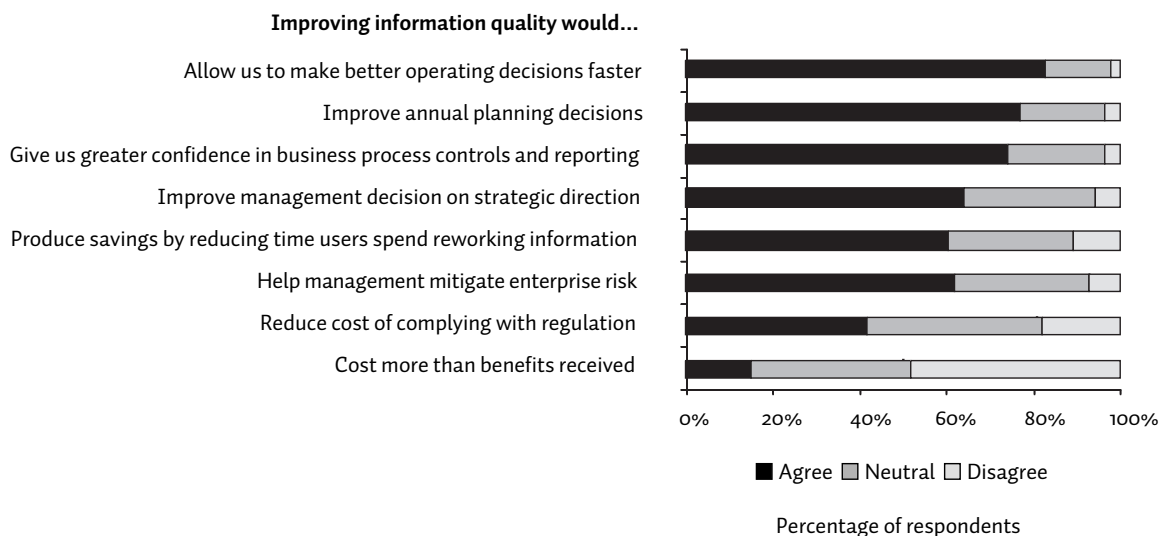
“We're not going back to the way we did work,” seconds Hydro One Chief Information Officer Sandy Struthers, who notes that the company is now in the process of searching for systems that will give its operational managers faster access to data about the company's physical assets—from poles to transformers—and help them develop more efficient and effective maintenance programs for those assets. In many ways, this new effort will do for operational data what the implementation of corporate performance management software did for financial data a few years ago—allow management to spend less time searching for data, and more time acting on it.

Not surprisingly, though, CFOs themselves see real business benefits from improving information quality. Eighty-one percent of survey respondents say timely access to higher quality information would improve profitability, and 82 percent say it would reduce costs. A healthy majority also see a direct link between having access to better information and enjoying better investment returns, improved inventory management, and greater asset productivity. And a majority of respondents say the benefits of improving IQ more than offset the costs (see Figure 3, next page).

At Campbell Soup, where the IT group is in the midst of implementing enterprise resource planning software in North America, Gerry Lord is counting on reaping “almost real-time access to financial information, structured in a way that allows us, with full transparency, to see the information we need to understand how the business is doing.” At present, he concedes, the company's multiple information systems sometimes take days to reveal what actually has been happening. “I think this will be a huge enabler for us to run our operations more efficiently,” he says.

Figure 3. Improving IQ allows better decision making—and it's worth the cost.

To what extent do you agree with these statements about the effect of improving the quality of management information at your company?



Data warehouse delivers for HCA, Inc.

HCA, Inc.—the \$23.5 billion hospital operator based in Nashville, Tennessee—has long prided itself on offering state-of-the-art technology as part of its patient-care philosophy. But it couldn't always boast of being best-in-class when it came to using technology to run its business. To help it catch up, says Milton Johnson, HCA executive vice president and chief financial officer, the company began building a data warehouse several years ago. "We have more information now in this company than we've ever had," he says. "It's better quality data, and more consistent data. And it's enabled us to run our business better in a very competitive environment in terms of managing supply costs and negotiating managed care contracts."

Ten years ago, Johnson says, HCA was at a disadvantage in negotiating with managed care companies, which had far more information about the company's patients than it did. "We actually had the information, but quite frankly, we didn't know how to get to it," he concedes. "Today, I think we've caught up with them. When we go into a negotiation, we know exactly how many patients from a particular plan we've taken care of, we know exactly how much revenue we've generated from them, and we know all the details of delivering their care. It's put us in a much better position to negotiate our rates."

Johnson also says that over the past five years HCA has been able to pare its accounts receivable days outstanding to about 47 or 48 days, down from the mid-50s, "which probably makes us the best in our industry." And, he says, its labor statistics over the past three years—in terms of man-hours per patient—are the best the company's ever enjoyed.

He attributes the improvements to giving hospital managers the informational tools they need to better manage staff.

Johnson says HCA is now rolling out a new payroll/HR system that should be implemented in half of its hospitals by the end of 2005 and, hopefully, in all the rest by the end of 2006. "It will give us much better data and HR reporting than what our current systems have," Johnson says. "We're also bolting a new collections system onto our patient accounting system, which is our accounts receivables system, which again will give us better information. And we recently completed the implementation of what we call EMAR—for Electronic Medical Administration Record—which will lead to a huge reduction in medication errors. It's a bar-coding system that makes sure the right patient receives the right dose of medication at the right time. Finally, we're also centralizing payroll and accounts payable into regional service centers."

While it's an ambitious agenda, Johnson credits a closer working relationship between finance and IT with helping to keep it controllable and productive. The company created an "enterprise program management office" about five years ago, providing a structured environment in which business, finance, and IT leaders could prioritize IT initiatives. "We learned a lot about how to make better decisions by doing that," he says, "and now that collaborative approach is just part of our culture."

At Jones Lang LaSalle, Inc., a \$1.2 billion real-estate and money-management organization, Chief Operating Officer and Chief Financial Officer Lauralee Martin anticipates similar rewards from her company's implementation of a global ERP system. It will, she predicts, provide management with faster access to more robust business information, more consistent management reporting, faster monthly closings, and greater insight into the profitability of each of the company's customers so that it can tailor better service to them.

"In a world where you are managing risk of any kind—financial, operational, quality—the ultimate tool is perfect

information," concludes Dan Pavlick, vice president, information technology services, for \$912 million Respironics, Inc., a maker of respiratory products. "That's an elusive goal; perfect information doesn't exist. But arriving at as much information as you possibly can digest, and having it available in nearly real-time in a simple form that allows you to make decisions, is the goal."

The next chapter presents what some companies are doing to improve information quality, including the ways that finance and IT are working more closely together to get results.

ING Direct: How multiple forces are driving demand for better, faster information

In 1997, Dutch financial services firm ING Groep N.V. launched an online bank, ING Direct, in Canada. Today ING Direct operates in nine countries, has assets of more than 200 billion euros, and is one of the fastest-growing subsidiaries of its parent company. During the first half of 2005, ING Direct accounted for about 6 percent of ING Groep's 2.2 billion euros in pretax operating profits.

For ING Direct CFO Feike Brouwers, the business's fast growth has been matched by growing demand for better information about the business, both from the senior managers at corporate headquarters and from external stakeholders such as Wall Street analysts and the media.

"Because our business has grown so fast, and because we're becoming a bigger and bigger part of ING Groep, we've felt ourselves to be more and more in the limelight, with many more analysts and reporters covering us separately from ING Groep," Brouwers notes. "In order to be able to answer all of their questions, we found that we needed a repository of data about all our business units, including historical data. Suppose, for example, a journalist asked us what interest rate we'd been paying to our savings account holders in the United States for the past 36 months. We had that data available, but someone next to me would have to plow through a lot of reports and maybe put together a spreadsheet to get at it. We decided that we should be able to respond much more quickly to questions like that. That means putting our data in a data warehouse and getting the right reporting tools in place."

Just as ING Direct was coming under increased scrutiny from analysts and journalists, so was it getting a closer look from ING Groep headquarters—including senior management, risk managers, internal auditors, and the company's board of directors. "We're one of the fastest-growing banks in the world, so obviously that drives a little scrutiny and a lot of questions—which we don't mind," Brouwers says. "But you better make sure you can respond quickly with the right data and the right information."

The need to make data available more quickly and reliably was compounded at ING Direct when it began offering mortgages directly to consumers. "One of the key strategic advantages a mortgage bank can have is being quick," Brouwers explains. "If someone sends in an application, you want to be able to make the offer for the mortgage as soon as possible. With some banks, it takes days or even weeks. We want to be the best in the world. We want to do it, sometimes, within hours."

To make sure his finance team can provide internal and external stakeholders with the information they need and want, Brouwers has overseen ING Direct's installation of a management information system built around a data warehouse using Microsoft Corp.'s SQL Server software. The company chose the Microsoft offering over competing systems, Brouwers says, because of attractive pricing and its familiar Microsoft Office-like interface.

In combination with introducing the new management information system, Brouwers says he's also trying to make ING Direct's processes faster and more automated. For example, in a bid to eliminate the time-consuming preparation and sharing of spreadsheets, he's driving all of the company's internal financial reporting to the Web. Now, he says, he can find out on the second business day after the end of the month how many new customers ING Direct landed that month, how many new accounts they opened, and how much money is in those accounts.

Despite the recent gains, Brouwers doesn't expect the push for ever-faster information to end anytime soon. "The second business day is pretty quick," he observes. "But our CEO is already approaching me on Friday of the weekend before the second business day and asking if he can have it sooner."

Chapter 2:

Finance and IT Invest to Boost IQ

Campbell Soup and Jones Lang LaSalle are hardly alone in pursuing IT initiatives aimed at yielding better information. Two-thirds or more of respondents to this survey report investment (over the past two years, currently, or within the next two years) in initiatives focused on the primary problems respondents identify as causing poor-quality information: complexity in business and financial processes, and non-integrated systems. Leading the pack are investments in data warehousing; application integration infrastructure; data cleanup, simplification of architectures, and standardization applications; and reducing ERP instances—all of which are aimed at fixing the problem of poorly integrated systems (see Figure 4). These are closely followed by investments intended to address disparate processes: consolidation and/or transformation of finance, IT, and human resources, as well as large-scale business process simplification.

Siemens Energy & Automation, says VP and CIO Melick, is installing an ERP system right now to replace disparate systems taken on as part of past acquisitions. The goal: more accurate information for business managers making decisions, provided more quickly. “When you have all of your information in one system, you have a higher level of transparency to the numbers from each of the units,”

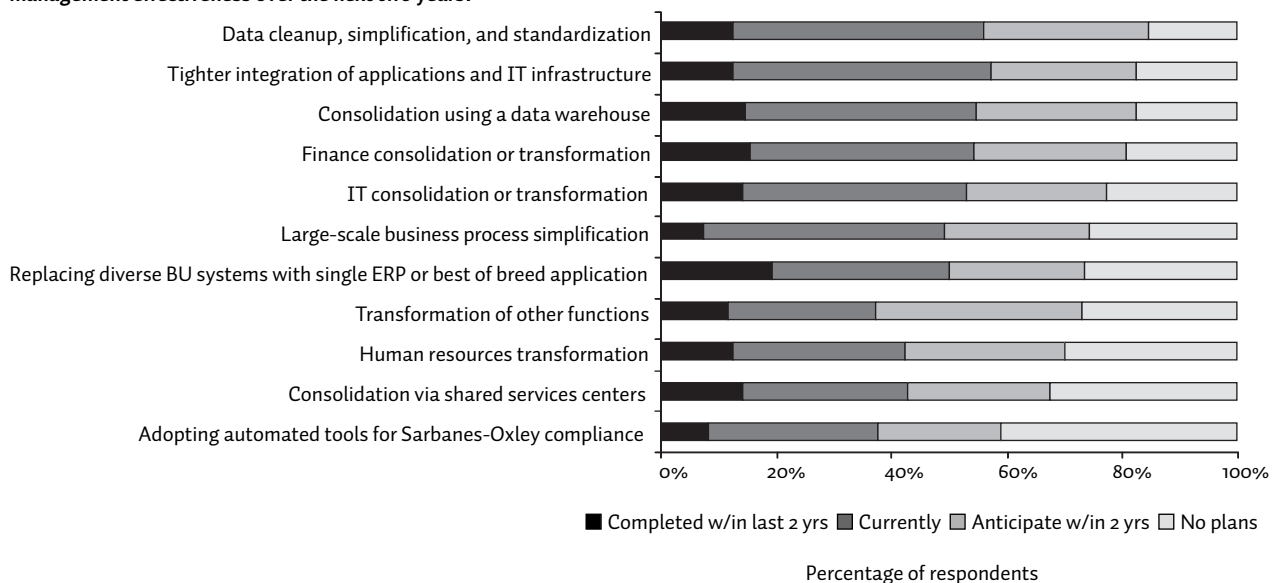
she says. Dave Fitzsimmons, vice president, IT, for \$4.7 billion Rogers Communications, says his company’s ERP implementation also takes aim at providing management with the elusive “single version of the truth” so critical to informed decision making. “We have had many different sources of data in the past, and they didn’t always reconcile,” he says. “One of our main goals is a consistent set of accurate data.”

To be sure, many leading companies have already made significant headway in these areas. “Our company has not renewed its focus on the quality of information so much as how we are using that information,” observes Paul Reilly, senior vice president and CFO of \$10.6 billion Arrow Electronics, Inc. “We have very strong, well-integrated systems that generate a tremendous amount of data for us. The issue is how to take this big basket of data and skinny it down to the point that it gives us the key facts we need to build sustainable growth, looking not only at where we’re coming from but where we’re going. It’s not the quality of the information that we’re focused on, but how we use it efficiently and effectively.”

Andrew Bonfield, chief financial officer of pharmaceutical giant Bristol-Myers Squibb finds his company at a similar crossroads. “We’ve spent a lot of time and effort on [single-vendor ERP] implementations around the world,”

Figure 4. Companies are engaged in a broad array of investments to improve information quality.

To what extent do you anticipate investing in the following initiatives to improve the quality of management information, operating efficiency, and management effectiveness over the next two years?



Bonfield says. “But extracting the information it contains is not always easy. For example, if we wanted information about how much we’re spending on consulting, it would be a major exercise to identify all those expenditures and dig them out of the base systems, as our reporting systems are not flexible enough. If we want currency reports, they have to be done offline. We just don’t have a reporting system that catches ad hoc reporting requests. We also have different requirements for our management and legal entity reporting and need transparency between the two. So now we’re looking at how we can utilize the full benefit of our ERP implementations to improve the quality of our reporting.”

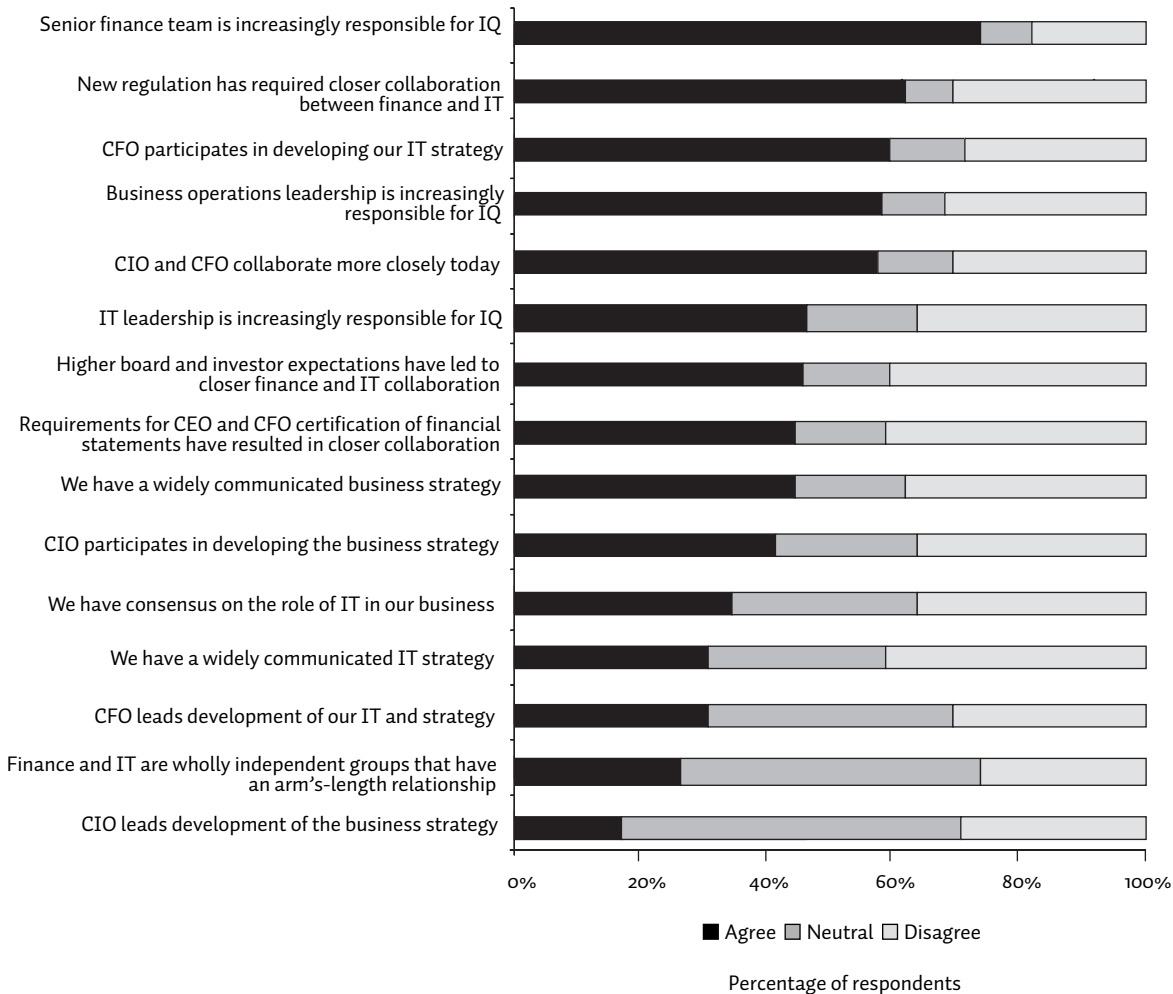
To achieve the desired improvements in IQ, more than half of the survey respondents say their CFOs and CIOs are working more closely together (see Figure 5). In part, this

reflects the growing realization that technology, business processes, management information, decision making, and business performance have become inexorably linked. Indeed, only 26 percent of respondents agree with the statement that “finance and IT are wholly independent groups that have an arm’s-length relationship.” Says NV Roche's Timmermans: “You can’t do any finance project without IT, or vice versa. They just go together.”

This closer relationship between finance and IT may reflect a management hierarchy in which the chief information officer reports to the chief financial officer. But regardless of formal reporting arrangements, the trend toward greater finance-team oversight of information seems clear. Indeed, more than 73 percent of survey respondents say finance is assuming greater responsibility for managing

Figure 5. New regulation and the search for higher quality information drive finance and IT to work more closely together.

To what extent do you agree with these statements about the role of your finance and IT teams?



information quality. Fifty-eight percent say their CFO participates in developing information and technology strategy, and 57 percent add that operations leadership is increasingly responsible, too, for the quality of management information.

Yet some companies have concluded that IT is too important for the CIO to report to anybody but the CEO. Campbell Soup switched to that model in 2001. "I think it's acknowledged to be a best practice amongst leading companies," observes Lord, "and more importantly, perhaps, in the Campbell case, an acknowledgement that we had significant investments we needed to make in the IT infrastructure to bring it up to speed to support our growth agenda." He concedes that in the past, Campbell Soup sometimes exhibited "a certain reluctance" to spending money on IT. "We made a lot of break/fix investments as opposed to strategic investments," he says. "If something broke, we'd fix it so we could run the business." One of the goals of the new management hierarchy, he says, is to create a clear and shared accountability between finance and IT for delivering promised returns from IT investments.

Regardless of the reporting structure at the top, the closer relationship between CFO and CIO is trickling down through the ranks of finance and IT as well. At Campbell Soup, for example, Lord says the two groups are working more closely together on strategic and operating planning processes, with a much greater sharing of agendas than there had been in the past. "That's very important," he says. "It eliminates surprises. People in both functions know what the other is doing and how they impact each other. It also has tied together more closely, in terms of an analytical framework, our judging of IT investments so that we have quite clearly defined parameters around financial return expectations and infrastructure benefit expectations. There's much greater clarity of the expected business benefits from an IT investment than there used to be."

Many CFOs report similarly deepening relationships between finance and IT. "We sit down every quarter with the IT group, not just at my level but throughout the organization," reports Arrow Electronics' Reilly. At these "priority meetings," he says, the two groups assess proposed IT initiatives to determine which are most

Finance and IT collaborate to ensure high-quality information at Lubrizol Additives

At many companies, finance and IT are working more closely together to provide business managers and outside stakeholders with accurate and timely financial and operating information. At Lubrizol Additives, the Wyckliffe, Ohio-based division of the \$4.2 billion Lubrizol Corp.—which makes lubricant additives for automotive and industrial markets—finance and IT also welcome people from across the enterprise to help them get the most from their IT investments.

Each month, members of the company's IT Action Committee (ITAC) meet with representatives of finance, operations, and support functions to review strategy and capital. Meanwhile, the company's Business Process Leaders (BPLs) meet monthly to help influence IT strategy from a functional perspective, covering business processes such as order-to-cash, procurement-to-pay, and hire-to-retain. In addition, the IT function has identified business partners to work with each functional area. Between these BPLs and the IT business partners, business needs are passed on to IT for prioritization. "These groups help us align our IT resources to the company's needs," says Greg Lieb, vice president of finance for Lubrizol Additives. "We want our IT to be driven with very specific commercial objectives in mind to ensure we know exactly where our spending is going and what our resources are supporting. Our goal is to improve the timeliness and accuracy of information. We believe information is power and can be a competitive advantage."

The company has already notched significant accomplishments, beginning with the implementation of an enterprise resource planning system eight years ago and two subsequent updates. Among other things, this has allowed finance to cut the time required for closing the books each month by

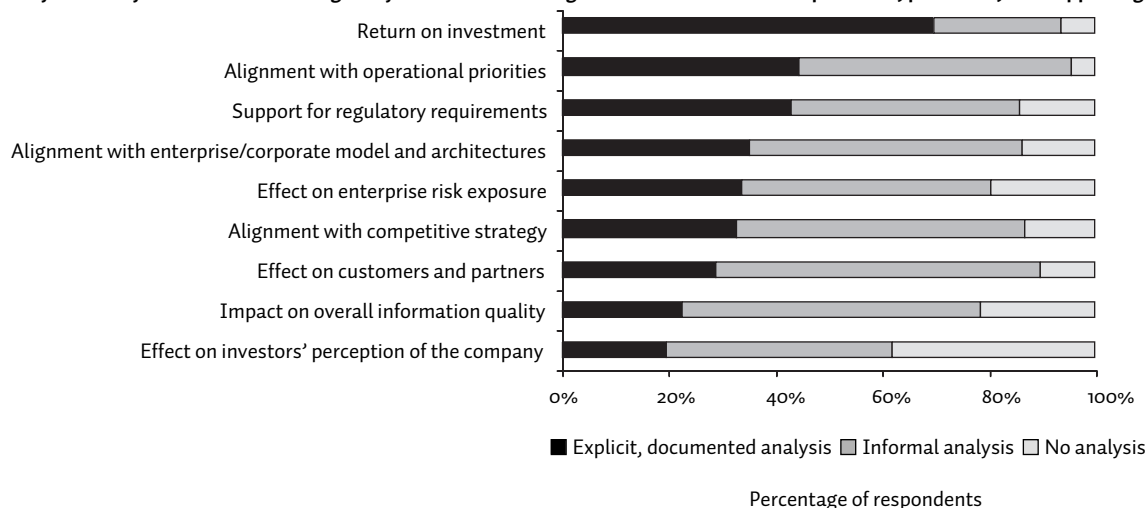
more than 50 percent. "This enables us to prepare our earnings releases efficiently and effectively and to get the story out to our people, in terms of what this company is all about," Lieb says. "The key thing here is that we have a wealth of information available to us much quicker. I remember when the head of sales would ask, 'What's going on in Europe?' We would assemble a group of three or four people, and a week later get back to him with an answer. Today, we can get a pretty good story in four hours."

Despite its accomplishments, Lubrizol's IT team still has plenty to do. Last year, the parent company purchased privately held Noveon International for \$1.8 billion. Noveon operates multiple ERP systems and, says Lieb, the company plans to replace these systems with the Lubrizol ERP system. "This represents tens of millions of capital investment dollars over the next couple years," he adds. In addition, the company is planning to upgrade its ERP system again in 2007.

Lieb credits Lubrizol's management structure, in part, for the company's successful approach to IT. "Our CIO is a member of our top management team reporting directly to the CEO," Lieb says. "He has two lieutenants, the person in charge of applications development and the person in charge of infrastructure—the hardware and equipment. Each sits on the divisional management teams, so they're very tied into the business and business results." What's more, Lieb says, the company's CFO and CIO share common objectives as they try to build the company for sustainable growth. "They don't want to be penny-wise and pound-foolish, and our governance structure through the Business Process Leadership Team and the ITAC team—of which they're members—ensures that doesn't happen," he says.

Figure 6. ROI, alignment with operations, and regulatory compliance receive greatest scrutiny when companies make investments, say respondents.

Do you usually conduct the following analyses when evaluating investments in business operations, processes, and supporting systems?



important from a business process perspective and which will offer the biggest payback. At \$18.4 billion Goodyear Tire & Rubber Co., Chief Financial Officer Rich Kramer is building a multidisciplinary team of advisors from IT and other functional areas of the company to help lead a finance process improvement initiative. At Lubrizol Additives, the legacy unit of \$4.2 billion Lubrizol Corp., an “IT Action Committee” meets monthly with finance, support, and operational leaders to review strategy and capital. And at Respironics, Pavlick has assigned an IT “program manager” from his office to work directly with the company’s controller to make sure that finance is getting what it needs from the IT group. HCA, toward much the same objective, has physically moved its lead IT-relationship person for finance into the financial reporting department. “I think the face-to-face, everyday interaction really has helped improve our understanding of what we’re trying to do from a business standpoint and what we can do from a technical standpoint,” says HCA’s Johnson. Rogers Communications has created one finance group and one IT group for its entire company—it previously had three of each, with separate groups for each of its three lines of business—and makes sure that each group is fully represented on project steering committees. “Not only have we brought these functional groups together, but we’re also now collocated in the same campus, which some years ago wasn’t the case,” observes Fitzsimmons. “That’s gone a long way toward helping us interact better.”

But finance’s growing role in securing information quality—58 percent of survey respondents say their CFO now

participates in developing information and technology strategy—may be necessary but perhaps insufficient to realize the full range of benefits that investments in IQ can yield. Finance clearly brings a level of analytical discipline to IQ investments, and survey data shows that conventional, finance-driven practices for investment decision making are widespread. The vast majority of survey respondents—69 percent—report that their companies conduct explicit, documented ROI analyses for IT and process improvement projects (see Figure 6). But they conduct less formal analyses to assess alignment with operations and strategy, risk management, external perceptions, and information quality. By giving these and other metrics less scrutiny, finance and IT executives alike may be focusing too much on the dollars and cents of information quality initiatives at the expense of broader business benefits that are, admittedly, more difficult to pin down.

Collaboration Requires a New Understanding of Each Others’ Worlds

The road to more closely connected finance and IT organizations has not been without other obstacles, too. “Sometimes, people have different philosophies,” observes Ian Worden, CFO of St. Vincent Health, a not-for-profit Indianapolis-based health-care system with 16 hospitals in Indiana. “Finance tends to prefer unified systems that are integrated, while IT tends to prefer best-of-breed.” These “different philosophies” may be caused in part by executives’ lack of deep understanding of their peers’ disciplines, which stands in the way of truly high-performance collaboration.

How MedImmune is seeking to maximize returns from IT investments

Countless companies have learned that investing in technology is no guarantee that managers will get all the information they need to make smart business decisions. As noted elsewhere in this report, 45 percent of the respondents to this survey say that disparate, non-integrated business processes are hampering their efforts to produce high-quality information. Many of them are now seeking to integrate existing applications to improve the quality of management information, operations efficiency, and management effectiveness.

Lota Zoth, chief financial officer for \$1.1 billion biotechnology company MedImmune in Gaithersburg, Maryland, says her company is among those seeking to leverage its existing enterprise-wide technology platforms. MedImmune uses an ERP module for finance, human resources, materials management, and strategic sourcing, and is contemplating using it for supply chain and demand management activities. But it also operates several other enterprise-wide IT systems, including some aimed at ensuring compliance with the various government regulations to which pharmaceutical and biotechnology companies are subject. To achieve optimal results, she says, MedImmune will have to streamline the number of systems it is using but

also reengineer some of its underlying business processes. Technology itself, she notes, is merely a tool to get at high-quality information. “The real focus needs to be on the underlying business processes, and making them as efficient as possible,” she says. “Once you have optimized them, you’re truly ready to begin automating them through some form of information technology.”

To get her company’s efforts underway, Zoth says, her finance team is in the midst of benchmarking its financial processes against leading practices. The company also is developing a “blueprint” of its enterprise-wide technology architecture and giving thought to what that blueprint should look like in the future.

Fortunately, Zoth says, the finance and IT teams at MedImmune share her vision for the future and are working together closely to achieve their goals. “Instead of simply providing tools, our IT colleagues are really becoming much more consultants to the business,” Zoth says. “It’s not just, ‘What do you need, and I’ll provide it.’ They’re asking why we need what we’ve requested, and offering to help us find better and different and more efficient solutions. It’s much more strategic thinking than just tactical execution.”

Only one in five survey respondents say their finance leaders have an excellent understanding of IT—their “current condition, functionality, potential, and limitations.” Similarly, fewer than one in five IT executives say their CIO has an excellent understanding of their company’s “current financial condition, business drivers, regulatory concerns, and the relative benefits, costs, and risks of investments under consideration.”

To overcome the hurdles to finance-IT cooperation, finance executives report that their teams are spending more time with their IT counterparts to help them better understand business processes and the way managers use the information their IT systems help collect. “We overcome the roadblocks by sharing information with them that is beyond their individual accountabilities,” says Lubrizol’s Lieb. “We try to get them to look at the total picture, and to understand that having common systems and installations benefits them in terms of their ongoing system support costs and their internal control environment.” St. Vincent, meanwhile, has created an IT governance council to help it better assess the benefits of unified versus best-of-breed systems. And Jones Lang LaSalle has shuffled its management structure so that its technology leaders around the globe now report not to the head of the country where they are located, or even the head of their region, but to corporate headquarters. As a result, says Martin, “application decisions are made in the context of a global strategy.”

What is the core business benefit of closer collaboration and higher-quality information? The next chapter explores evidence from the global survey indicating that companies with higher quality information rate their performance and their decision-making capabilities more favorably and suffer less from the consequences of poor IQ and decision making.

Chapter 3:

Companies that Have Raised Information Quality Feel Less Pain, Make Better Decisions

To test the survey's hypothesis that improving information quality yields tangible benefits, respondents were segmented into two groups: those who say they have achieved their objectives for IQ, and those who see room for improvement. The 39 percent of respondents who say they are now comfortable that the financial information they generate accurately reflects business performance enjoy meaningful benefits in comparison to their peers. For example, they suffer less often than other companies from decision-making problems such as having to spend time developing custom reports or wrestling with "multiple versions of the truth," information overload, or irrelevant performance metrics (see Figure 7).

NV Roche's Timmermans recalls, by way of example, that before his company began using an ERP system to manage most of its business activities, business units, lacking the information they needed to make reliable forecasts, would sometimes inflate projected costs when preparing budgets. Headquarters would inevitably catch on, of course, and make whatever adjustments it deemed appropriate. But this gamesmanship left everyone—especially those at headquarters—questioning the real forecast. "I think you should be able to rely on your figures," Timmermans says flatly.

CFOs comfortable with their IQ also say their management teams are better able to manage dynamically, improve operations, implement and consolidate IT systems, execute M&A transactions, and integrate business units (see Figure 8). And while there appears to be no single category wherein the achievers overwhelmingly outperform the aspirants, the achievers consistently rate their performance more strongly across nearly all types of dynamic business change. Finally, they also report closer collaboration between their finance and IT groups than do their peers, and take a more expansive view when evaluating their process and technology investments. They are, for example, more likely to explicitly document their ROI, regulatory and strategic/business model alignment reviews, and less likely to forego analyses altogether.

Figure 7. Those who have achieved basic information quality suffer less from decision-making problems.

To what extent do you believe your management suffers from the following decision-making problems?

Frequently or occasionally a problem—aspirants versus achievers

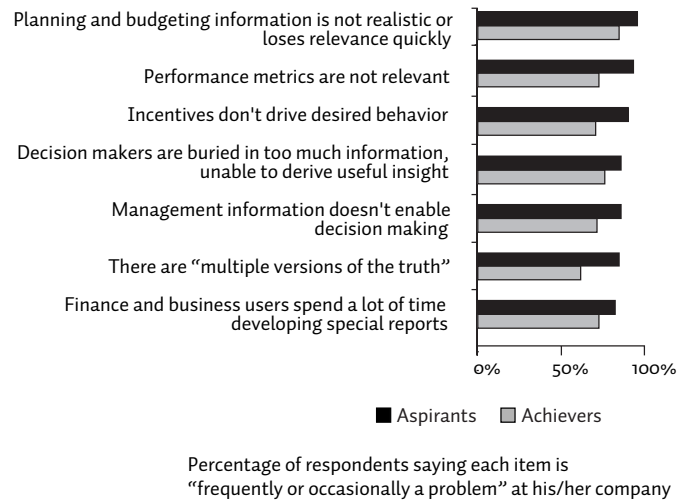


Figure 8. Those who have achieved basic IQ say they are more successful in changing their businesses, processes, and systems.

How strong is your company's track record in pursuing the following types of initiatives?

Strong performance—achievers versus aspirants



China's booming manufacturing sector drives the need for higher information quality

In this study, finance and IT executives from around the world say their companies continue to struggle to provide the basic financial and operating information needed to run the business. To understand how IQ and executive opinions vary around the world, we segmented respondents geographically. Analysis of this segmentation indicates that problems with IQ are more commonplace in China than in North America and Europe. In particular, Chinese respondents are more likely than their Western peers to say their information on operating activities needs improvement—and also that by improving information quality they will “make better operating decisions faster” and better mitigate enterprise risk.

One explanation of the Chinese respondents' greater concern for IQ and for its impact on enterprise risk stems from the country's unique economic climate. Economic liberalization and international trade have driven the Chinese economy at a robust rate in recent years. Industrial production in China grew 16 percent last year, compared with only 3.1 percent in the United States and .05 percent in Europe, according to current data from the Economist Intelligence Unit. Chinese respondents—who comprise 29 of the 385 total respondents of the survey—are enjoying a great economic boom, driven in large part by a robust manufacturing sector. Amid this rapid growth and opportunistic expansion, building the well-designed, well-integrated processes and systems that provide high-quality information may get delayed in favor of near-term, revenue-producing investments.

In a series of interviews, finance and IT executives in China confirmed many of these inferences about the dynamics of IQ in Chinese companies. In China, the demand for improved information quality and timeliness comes principally from management, which finds improved information quality absolutely necessary to enable the continuing growth of their businesses. Says Li Bingbing, CFO of the \$1.67 billion Desay Group, an electronics manufacturer, “I think pressure [for improved IQ] comes from the fierce competition in the electronics industry and from internal management. We are under huge pressure for development and growth—it's as though we are walking on thin ice. We can, no doubt, meet all requirements from the outside regulators or the government, but in the information era, the electronics market competition is fierce.”

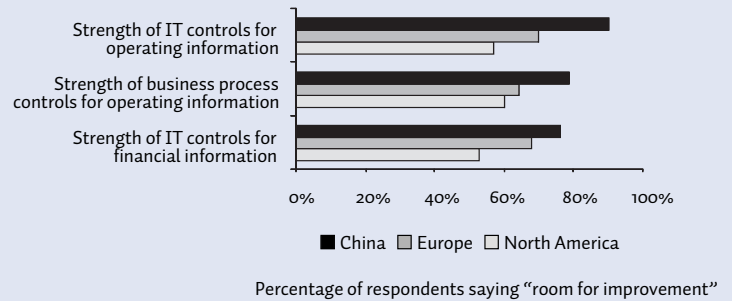
Amid this feverish growth, Chinese manufacturers are scrambling to meet market demand amid both international competition and collaboration within company supply chains. Accordingly, it comes as little surprise that risk management and supply chain/inventory concerns are the primary beneficiaries of improved IQ among Chinese respondents. Finance and IT executives interviewed for this study confirm this entrepreneurial focus on core business operations. Charles Wan, the CIO of Midea Group, a \$3.7 billion appliance manufacturer, expressed views held by many of his high-growth peers: “With revenue growing by more than 50 percent annually, Midea Group has found it very important to obtain accurate information on its production and operations. For that purpose, the Group [began investing in IT for information quality] and hopes that its IT department can help the Group and its subsidiaries to keep closer track of their operations and thereby make well-informed decisions.”

CFOs in China, say respondents, are more likely to be responsible for information quality than their Western peers, but collaboration between finance and IT seems fairly consistent around the world. Coupled with Chinese respondents' concern for “insufficient accountability for information quality at the analytical level (e.g., summarized transaction data and enterprise performance),” survey results suggest that transparency and collaboration between functions and organizational levels is less commonplace in China than in the West.

Chinese executives confirmed this detachment between functions—at least historically—and cited closer collaboration as an important contributor to growth and efficiency. Says Li of Desay Group, “The coordination between IT, finance, and the business units used to be loose because we viewed IT merely as a technology support service. But in the last few years, our CEO and management attached more importance to IT. For example, we have more meetings to discuss information technology and to institutionalize our IT systems. And the GMs of the subsidiary companies also found IT helps the business grow by improving productivity and efficiency. As a result, senior managers have more understanding of IT and support IT more.”

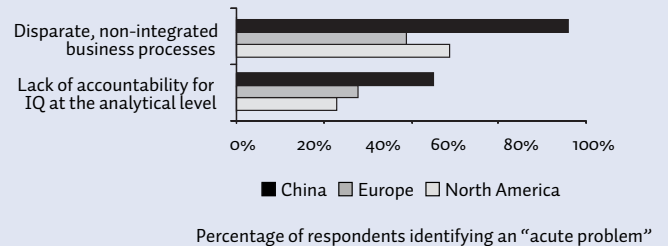
Chinese respondents see more room for improvement in information quality than do their Western peers...

In your opinion, is there room for improvement in the following categories of information at your company? Or have you fully achieved your objectives?



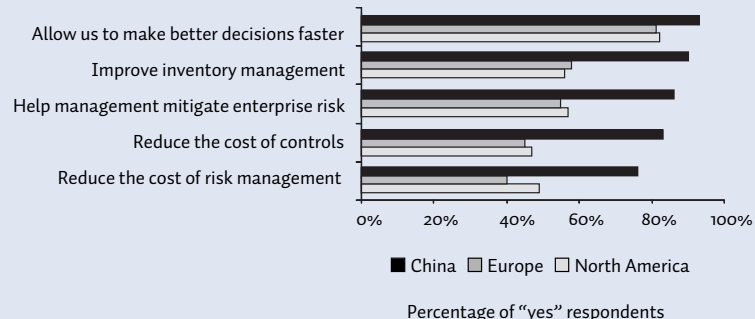
...but information quality problems in China are driven by process complexity and by a lack of accountability at the analytical level.

To what extent do you believe these issues negatively affect the quality of information at your company?



Chinese respondents are more likely to expect better decision making and risk management as a result of improving information quality.

Improving information quality would...



Conclusion

If the process of turning data into accurate, timely, and useful information is not actually “broken” at a great many companies, it is clearly hobbled. At too many companies, decision makers lack the information they need to make decisions that will drive sustainable growth, thanks to disparate and disconnected legacy systems coupled with ingrained business processes that owe their survival to inertia alone. The good news is that CFOs and CIOs recognize these problems and are working together to address them, investing in a broad array of technology and process initiatives to boost the quality of information. Companies that have achieved their baseline IQ objectives have done so by taking steps to clean up, simplify, and standardize data and systems and by aligning these investments with the business. Most importantly, they have assigned accountability for IQ at all levels of their organization.

They’ve also concluded that to achieve the best information quality, two heads—finance and IT—may be better than one. “If you go back ten years, IT was not seen as an integral part of how you run the business,” concedes Arrow’s Reilly. “And finance in the past was looked upon as scorekeepers; we were perceived as backward-looking. What we’ve seen philosophically in many best-in-class organizations is that is no longer true. IT and finance teams can offer a competitive advantage. There’s enough room at the table for both organizations to have a real impact on how we do business.”

Improving Information Quality Is Worth the Effort

We are at a watershed moment in attitudes toward information quality. Finance is changing: Business leaders are asking finance to go behind the numbers and spend more time on analytical processes, while reducing the effort it spends on transactional processes. Without high-quality information to streamline management reporting processes, this simply won't happen. Furthermore, boards and executives face new compliance challenges and heightened governance responsibilities whose fulfillment depends critically on access to accurate, reliable, timely, and transparent information.

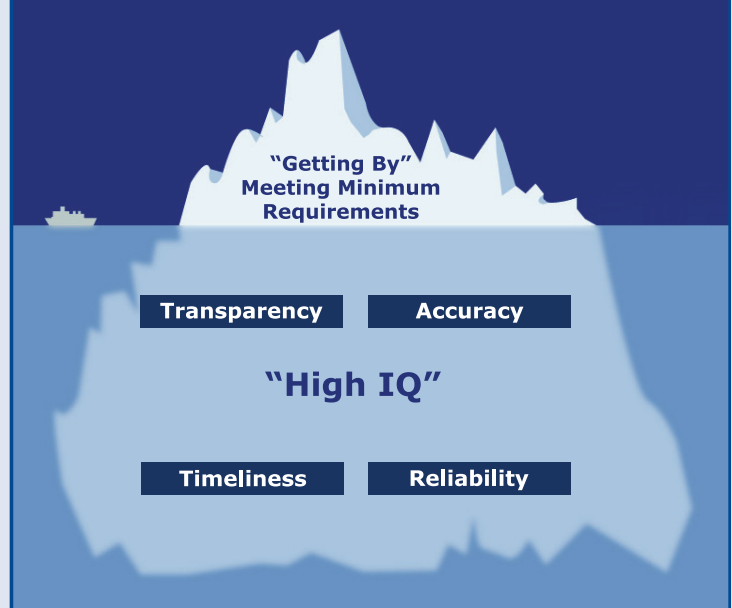
Information quality has a significant and ever-growing impact on shareholder value. Eighty-one percent of survey respondents say that better information can improve profitability; 82 percent say it can reduce costs. Accurate, timely, relevant, consistent information—a "single version of the truth"—can enhance performance analysis, improve operational and strategic planning, and facilitate regulatory compliance. Better information quality can also improve ROI on IT investments, revenue growth, and customer retention and profitability.

Yet many companies are still reluctant to address information quality problems. Their hesitance may arise from the realization that there is no off-the-shelf solution to enhance information quality. Yes, improving information quality isn't necessarily cheap, fast, or easy. It almost can't be, given the complexity of today's enterprises and the enormous amounts of data they generate. But that's no reason not to proceed. Indeed, we at Deloitte Consulting believe progress must be made for companies to thrive in today's marketplace and regulatory climate.

Where to Begin

Your company must first recognize that improving information quality is an ongoing process driven by a lasting, organization-wide commitment to information excellence. Improving the technology, of course, is a major part of this process—but equally important is establishing the right strategy, governance, and accountability structures to support information quality.

If you're just getting by,
you're not reaching your IQ potential.



Set the Tone at the Top

Your executive team can build the strategic foundation by promoting information quality as a strategic imperative and aligning IT with business strategy. Evaluate what information is needed based on its utility to the business. Encourage IT and other areas to work together—to collaborate closely—on defining business-critical information, identifying information stewards and subscribers, and developing ways to meet the business's decision-making and reporting needs. Finance in particular has become the aggregator and interpreter of most operational information, and its critical knowledge about business and analytical requirements makes finance-IT collaboration essential to improving information quality.

Also essential is an effective information governance framework to determine information-management policies, procedures, and principles. Consider forming cross-functional councils to oversee information quality in specific areas, such as customer information or product information. These councils should be deliberately structured and authorized to act across functional and business-unit silos, and they should promote stakeholder cooperation and cross-functional collaboration in addressing information quality issues. Equip the councils with strong executive sponsorship and a charter outlining their mission and goals, which should be tightly bound to clear business objectives related to the information "cleanup" effort.

Tear Down Roadblocks

The next step is to identify and begin to remove barriers to information quality. Sort through the factors that contribute to poor-quality information and determine what needs to be done to address them. Then, identify stakeholders to be responsible for processes that contribute to information-quality issues and task them with solving information-quality problems in their bailiwicks. Clearly defined roles and responsibilities are key, as is holding stakeholders accountable for successes and failures. Measure and applaud successes, and move on to the next issue, one by one.

Gain Buy-in

Finally, no large-scale initiative can succeed without directly addressing the human side of the change. Fundamentally, people need to understand the reason for the change and be willing to support it. Find ways to encourage individuals and groups to think and behave differently with regard to information quality, and continually reinforce the importance of fulfilling their information quality responsibilities on an ongoing basis.

Deloitte Consulting understands that improving information quality is challenging. It takes time and resources to identify the issues, understand the contributing factors, assess the case for change, define initiatives and assign responsibilities, assess and measure results, and communicate plans and progress. More than that, it takes deep insight into your industry and business to understand what's important—and a thorough knowledge of today's technological tools to understand what's possible. We invite you to consider Deloitte Consulting as practical, capable advisors and facilitators in your quest to harness the full power of information quality for your business.

For more information on Deloitte Consulting, visit www.deloitte.com or contact any of the offices on page 21.



Getting Started: Five information quality questions to ask your teams:

1. What are the sources of information quality problems?

- Disparate, uneven business processes?
- Different data definitions across business units or functions?
- Poorly integrated IT systems?

2. Who is affected by your information quality problems?

- Customers?
- External stakeholders?
- Management?
- Operations leaders?
- Sales, marketing, and service delivery personnel?

3. What are the implications of low-quality information?

- Lost sales?
- Loss of customers?
- Inability to meet management's decision-making needs?
- Inability to meet external stakeholders' information needs?

4. What information do you really need to run the business effectively?

- What operating information?
- What financial metrics?
- What level of information quality (i.e., timeliness, accuracy, transparency, etc.)?

5. What will it take to fix the information quality problem?

- Operational changes?
- Systems changes?
- Leadership changes?

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