PART ONE

Building the Business Case for Data Governance

CHAPTER 1

Making the Case for Better Data

The whole is more than the sum of its parts.

—ARISTOTLE (384–322 B.C.), PHILOSOPHER

EXECUTIVE OVERVIEW

One of the biggest mistakes that organizations make is to approach data as a technology asset. It is not. It is a corporate asset and needs to be treated and funded as a corporate asset. Justification for data management projects lies in the ability to create a business plan based on the benefit to an organization. Executives want to know how a data

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management initiative will enhance the business. To do this, any attempt to improve your organization must emphasize these benefits:

- Risk mitigation
- Revenue optimization
- Cost control

Building the business case is the first and most important step.

Remember

1. Data quality and data governance should *never* be considered a one-time project. A quality culture must be established as an ongoing, continuous process.
2. No organization can tackle enterprisewide data quality and data governance all at once. To be successful, your journey must be evolutionary. Start small and take achievable steps that can be measured along the way.

Many organizations find that they cannot rely on the information that serves as the very foundation of their business. Unreliable data—whether about customers, products, or suppliers—hinders understanding and hurts the bottom line. It seems a rather simple concept: Better data leads to better decisions, which ultimately leads to better business. So why don't executives take data quality and data governance more seriously? In my experience, this lack of attention to data severely and negatively impacts numerous organizations—some of which will be highlighted in this book. We all need to understand that we are seeing a shift in the way that we think about and treat data. Successful organizations are moving from a focus on *producing data* to a focus on *consuming data*.

For most organizations, this journey is just beginning. And for most organizations, this journey begins with education. Part of my reason for writing this book is to help organizations establish a solid data foundation as they embark on this journey.

This is what happens in organizations today. Data is typically somebody else's problem—until something bad happens. The CEO of a plumbing manufacturer learned this the hard way a few years ago. One of his major manufacturing plants burned to the ground, and the CEO was eager to immediately inform

customers of the situation. He asked for a list of products that were expected to be manufactured in the destroyed plant and for a list of customers that were expecting delivery.

This CEO, like any chief executive, undoubtedly believed that this information was a readily available corporate asset. In the era of business applications like enterprise resource planning (ERP), customer relationship management (CRM), and data warehouses, it should have been a simple request. It wasn't. The finance department provided a list of everybody who had bought something, but that department didn't know the product delivery schedule. The sales office knew who every customer was and what they had purchased, but not where the products would be manufactured. The manufacturing plant had a delivery list of what to produce, but not a full inventory of what was in the production pipeline.

Of course, the closest thing to what the CEO needed—the delivery list—was destroyed in the fire. Eventually, the IT department cobbled together an incomplete list and presented this to the CEO. Predictably, the CEO became frustrated ("How can you *not* know who our customers are?"). In the end, the CEO decided data wasn't such a dull topic at all. It was integral to his business.

The CEO—and this entire organization—realized Aristotle's message. The sum of the data in the individual systems did not accurately depict the whole of the business. Aristotle was one of the greatest of the ancient Greek philosophers and is still considered one of the most visionary thinkers of all time. As a pioneer in the field of study of metaphysics, Aristotle sought to develop a way of reasoning by which it would be possible to learn as much as possible about an entity.

While most discussions about data do not start with philosophical references, it is important to note that the crux of Aristotle's philosophy is applicable to most enterprises. Exhaustive efforts at studying, cataloging, and accessing information led Aristotle to the observation that the whole is more than the sum of its parts. Like Aristotle's quest to know and understand, data management is about learning everything there is to know about your organization—and more specifically, learning everything there is to know about the data that is required to run your organization.

The quality, accessibility, and usability of data have an impact on every organization, but the issue rarely captures the attention of executives. Mergers and acquisitions, creative marketing campaigns, and outsourcing

are much hotter topics that can create the sales spikes or cost cutting that shareholders like to see.

Yet most of these high-profile initiatives fail or underperform if the data cannot be trusted. That creative marketing campaign may cost too much per sale if the customer list is riddled with redundant or inaccurate customer records. Buying another company to gain new customers is an expensive mistake if the purchased company turns out to share the same customer base. The cost savings of outsourcing are erased if the business cannot gather and measure customer complaints that emerge if the outsourced help desk isn't doing its job. Inconsistent, inaccurate, and unreliable data has a huge impact on organizations. According to Gartner, a leading technology firm, "Through 2011, 75 percent of organizations will experience significantly reduced revenue growth potential and increased costs due to the failure to introduce data quality assurance and coordinate it with their data integration and metadata management strategies (0.7 probability)."[1]

High-quality, trusted data serves another purpose—one that executives wish they didn't have to address. It keeps them out of trouble. Any financial services company must report potentially laundered money to a regulatory agency to avoid fines—or even jail time. An oil company needs to know which state-owned pipelines it uses to stay current with local regulations. Across the compliance arena, quality data can make the difference between spending money on fines or investing in the business.

New compliance regulations have illuminated a pressing need that has always been a critical part of running a successful business. Twenty-five years ago, it was common for a publicly-traded company to remain in the dark about profits and revenue until days before the quarter ended. Financial planning has now grown sophisticated enough that CEOs of publicly-traded companies are expected to project revenue and income and alert shareholders if the company is falling short. The quality of the data is critical—and more than one CEO has been shown the door when the company failed to get it right.

Even with the millions and billions of dollars invested in sophisticated information management systems and applications, CEOs are still getting hopelessly burned by incomplete, poorly managed, and inaccessible data. In early 2008, the French bank Société Générale (SG) took $7 billion in losses after

a rogue trader made unauthorized trades for many months—this loss represented almost all the profits SG had made in the past few years. The trader apparently covered his tracks by manipulating the way the company's computer systems worked, but better data control and consistent monitoring would have uncovered the illegal trades—well before $7 billion evaporated.

Having money launderers as customers, overpaying for pipeline rights, rogue derivatives trading—these all seem to have very little in common. But there is one major commonality: These types of risk can all be minimized with better management of data.

Dwelling on the negatives is easy when it comes to data because disasters in data quality make the headlines. I have been on the phone with enough panicked executives to collect scare stories that could keep a CEO from ever sleeping again. But there is another side to data quality—how properly managed information turns to gold and creates the aha! moment that drives productivity and innovation. It does not always come with a precise return on investment (ROI)—since companies so often do not have a benchmark for how much errant data is costing them. The value of good data comes instead with what one business executive described as "leveraging maximum value from our investments."

Building the Business Case

In business today, it is impossible to get executive sponsorship or funding for any initiative without a clear and compelling business justification. How is spending this money going to help us increase revenue? How can this program improve the business? Can we afford to fund this initiative at this time? To make an investment in your data—and to ensure that it becomes a strategic corporate asset—you must first build the business case. The reason to better manage data is to improve your business. When it comes to building the business case, you have to document the potential benefits for your organization. As I have already indicated, there are three major benefits to improving your company's data that are front-of-mind with executives in every organization: risk mitigation, cost control, and revenue optimization.

Risk mitigation is the most likely reason a company focuses on data quality, according to an *Information Age* survey of 279 companies.[2]

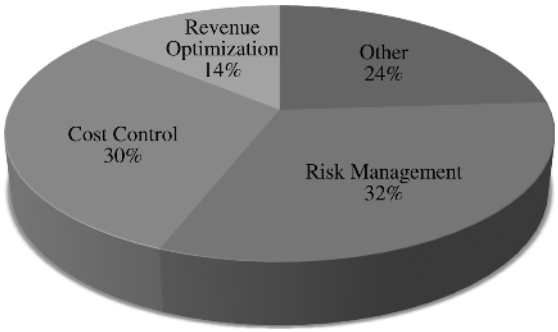

FIGURE 1.1 **Why do companies focus on data quality?**

Almost one-third of companies said risk management (which encompasses compliance and regulatory issues) was a key driver of data quality (see Figure 1.1).

A few years ago, I worked with a company that had just completed a difficult and time-consuming acquisition. On the surface, the acquisition looked great. The two companies had some complementary products, but there was a fair amount of competitive products. The idea was to streamline the product offerings and reduce costs by combining redundant functions. Since the company that was acquired generated 60 percent as much revenue as the acquiring company, the merger would create a company with substantially more income. In reality, though, the results were not so satisfactory.

The reason for this underperformance was a lack of knowledge about the new company. One of the things the new parent company never discovered during the due diligence process was that almost half of the acquired company's customers were already customers of the acquiring company. The amount of revenue that the merged company generated was substantially less than anticipated. This was a huge risk that could have been mitigated with better data management. By understanding who the customers really were, the new parent company would have been able to identify the scores of duplicate customers and would have had that information at the ready during the due diligence process.

According to 30 percent of the respondents in the *Information Age* survey, cost control is the second-most-likely reason companies look at data

quality or data governance,. Properly managed data can help companies unearth numerous areas where money is leaking out of the organization. And, with a diligent data quality approach, you can deliver significant gains for your organization.

A global chemical manufacturer wanted to control costs when it purchased items. More than 600 people worldwide had purchasing authority, and they were inconsistent in the way they coded items at the time of purchase. These item codes were intended to provide a way to aggregate and sort products purchased, providing a better view of the organization's spending habits. Unfortunately, the inconsistent product code entries did little to help with spend analysis. The company didn't know what it was buying, nor did it have an understanding of what it was buying from its different suppliers. This prevented it from attaining any sort of bulk purchasing discounts. By incorporating product data rules, automating the classification, analyzing the results, and making changes to its purchasing process, the company now estimates that it will save up to 5 percent on its annual indirect spend of $3 billion. That's a number that would excite any executive.

The third reason—and one I think companies have yet to address sufficiently—is revenue optimization. Only 14 percent of respondents in the *Information Age* survey ranked revenue optimization as the reason to improve data quality. Using information wisely to become more agile and responsive is so simple that it is amazing how many companies dismiss it. If done properly, data management can pay for itself in a short time.

Risk Mitigation: One Version of the Truth Helps Retail Bankers Manage Risk

Many retail banks have product-oriented risk management systems (for instance, a risk management system for loans, another for credit cards, another for banking [savings and accounts], and another for mortgages). There is often no single integrated customer-oriented risk management system to see the true risk exposure of every customer level for all credit-risk products that a customer holds. If a customer fails to make a loan

payment, the bank can often take up to several weeks to change the credit limits on credit cards held by the same customer. Because there is no single integrated operational view of customer and product data, the bank risks an increase in bad debt.

However, with a single view of a customer, shown in Figure 1.2, banks can easily view the total exposure with each customer, since

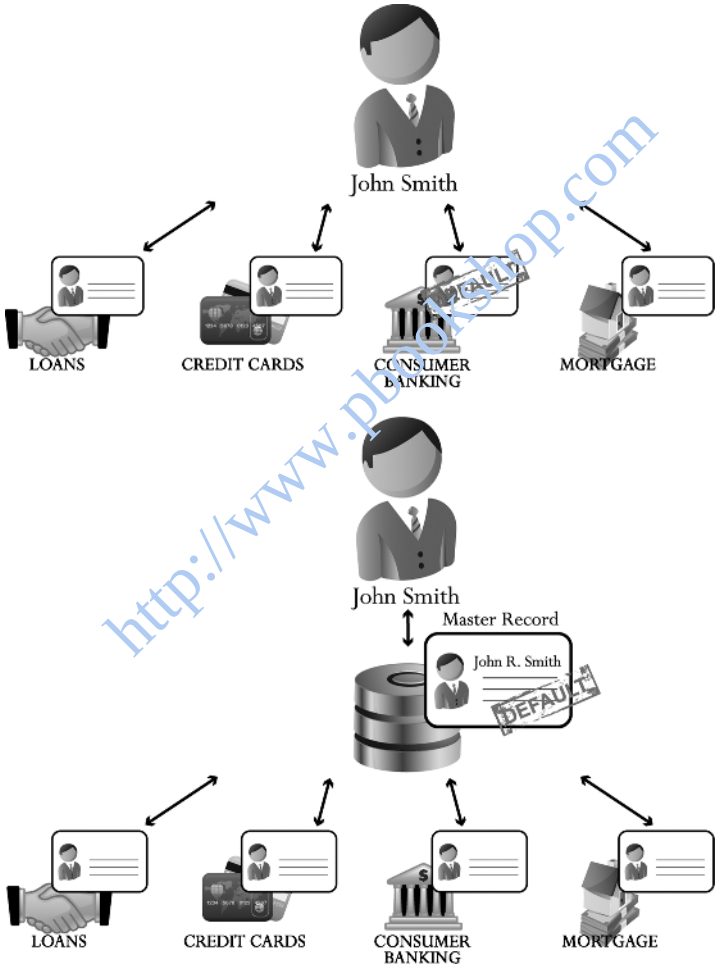

FIGURE 1.2 **A single, rationalized view of the customer can result in improved risk management**

they can be made aware of all transactions and how the transactions are related.

Cost Control: Manufacturing Costs Rise When Data Isn't Integrated

Manufacturing operations are highly dependent on shared information. The customer data created in sales is needed in customer service, marketing, finance, and distribution. Product development data is needed in manufacturing, planning, and stores. Order data is needed throughout the enterprise. Maintaining consistency and preventing conflicts to this data across operational applications and processes is critical to business operations. If product development wants to package a product in 16 oz. bottles, instead of 8 oz. cans (Figure 1.3), manufacturing needs to reset its equipment, buyers need to purchase bottles and make sure they are delivered to the plants, and stocking specialists need to work with retailers to display the new size. Basic errors in the data chain can lead to manufacturing errors, additional distribution costs to make up for shortages caused by those errors, oversupply in distribution centers, and customer dissatisfaction.

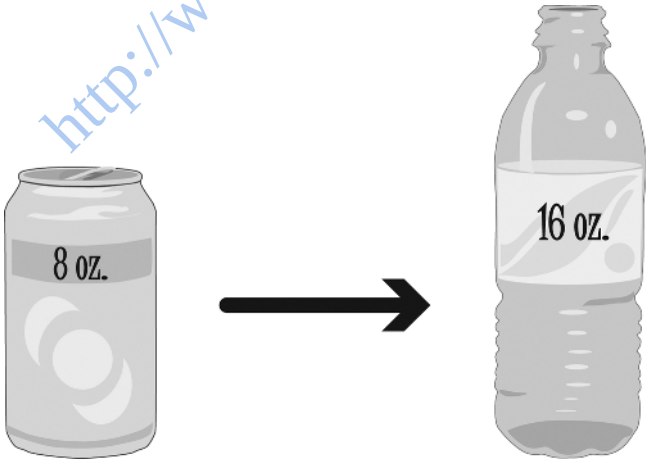

FIGURE 1.3 **Shifting manufacturing to produce 16 oz. bottles can be disastrous unless data issues are resolved**

Revenue Optimization: How a Leading Retailer Revolutionized Inventory Management through Data Management

Wal-Mart may be one of the best in the world at revenue optimization based on consumer demand. Wal-Mart's supply chain technologies allow it to replenish inventory on the shelf in less than three days—not just from the warehouse to the shelf, but from the manufacturer to the shelf. While other retailers struggle with getting adequate product on their shelves, Wal-Mart has reached back to the assembly line itself to streamline their supply chain programs. That's why Wal-Mart shoppers are almost always able to find the right item when they need it.

The key to Wal-Mart's success is in the quality and management of their supply chain data. Within 14 seconds of the purchase of a product at Wal-Mart, the Wal-Mart central warehouse is notified of the change in inventory. In addition, manufacturers of the product are made aware of the sale so that as inventory moves from the warehouse to the store, the products in the warehouse will be replenished by the manufacturer. Even the raw material suppliers that the manufacturer needs are alerted, so that they can supply the manufacturer the necessary raw materials. And this process is repeated throughout the supply chain.

Can every company replicate the Wal-Mart model? A 14-second inventory change notification might be difficult without other processes in place. But with high-quality data flowing throughout your systems, you can more accurately model your supply chain to react to market changes, customer requests, and supplier dynamics.

In today's competitive environment, with high customer expectations, employee satisfaction, and regulatory demands—it is essential to run your business as efficiently as possible. The key to better business is better data, managing and funding your data infrastructure as you would your other corporate assets. This is achievable only if you build data management and data governance processes based on business requirements. To do this, concentrate on risk mitigation, cost control, and revenue optimization as you build your business justification for better data.

Integrated, Quality Data Means Better Business

Suppose that you are thinking to yourself, *Yes, I have already been sold a bill of goods for an enterprise-wide solution that would mitigate my risk, control my expenses or optimize my revenue, and if you want to advocate for another type of enterprise-wide solution, I'm going to toss this book in the recycling bin.* Well, stop! No one wants you to scrap your existing investments. What businesses need is an integration strategy built on a firm foundation of quality data across applications. This will not replace, but rather leverage existing strategic enterprise-wide investments, and even help the one-off solutions work better across the enterprise.

If you use a handheld device like a BlackBerry, you are pretty familiar with the idea of synchronization. You do it daily to make sure your e-mail and calendar info syncs up. Companies need to do the same thing with their enterprise-wide and non-enterprise-wide data to create consistent and trusted data. Without data quality and data integration in an enterprise environment, business processes will still be plagued by defects caused by inability to eradicate data errors, and an inability to integrate, consolidate, share and synchronize core operational data, master data and historical analytical data across the enterprise.

Even if you aren't using an enterprise-wide application, data quality and data integration issues can bedevil companies. Uncontrolled and unmanaged data regularly wreak havoc on business operations, decision making, performance management, and compliance. Business operations are affected because employees, customers, partners, and suppliers struggle to find information. Also, incomplete and inaccurate data can cause operational process errors and inefficiencies, as well as the inability to respond quickly to business changes.

To the BlackBerry user, the synchronization process is automatic, fast, and easy—just push a button and—*voilà!* Business executives often wonder why automating one of their processes doesn't end up saving money. For starters, it is not uncommon to see companies rekeying data across multiple applications as part of an operational process. Keying anything into any system involves humans who are prone to making mistakes. Synchronization is also often considerably more complex than it needs to be, because subsets of data are maintained in multiple systems (often with partial

duplication) without creating one single integrated view. All of this can result in increased operational costs and customer dissatisfaction that, in turn, can impact profitability and growth.

Poor data quality—and the lack of data integration for single integrated views of application data—can lead to unsatisfactory decisions. If multiple data warehouses across the enterprise are fractured with conflicting subsets of data, the problem can lead directly to performance management problems. One example is a company whose employees respond to data that can't be reconciled by creating their own personal spreadsheets. Then, they attach their spreadsheets to a distribution e-mail. Soon, the company is awash in spreadsheets that don't match up. After a while, the owners of the different spreadsheets begin to realize that something isn't quite right, although it still feels right. The assumption is that the data is correct—when it is often invalid and out of date. This leads to decision making that is flawed. Even when the actual truth from the dispersed spreadsheets is discovered, the results are delayed decisions and untimely responses. And if causing internal trouble isn't enough, the lack of integrated data and poor data quality can also affect a company's ability to remain compliant amid growing regulatory burdens. Regulation violations can bring expensive prosecutions and penalties as well as loss of shareholder value, customer confidence, and corporate reputation. Even when a company sets very high compliance standards, violations due to defective data may make it impossible to meet those standards.

Information for Every Member of the Executive Team

As much data as flows through businesses today, executives often tell me they do not know where to begin to get the information they need. In some companies, the IT department is keeper of data, and a simple question such as "How many units did we sell of this product vs. a similar product packaged differently?" can involve a request to IT that will take a week or more to turn around. Lengthy delays fuel the pessimistic mindset rampant in many companies where data is viewed as sensitive and in need of safeguarding.

In still other companies, each C-level executive has built her own silo of information. The chief marketing officer (CMO) has data on sales and

marketing efforts and may be able to create automated marketing campaigns. The chief financial officer (CFO) is tracking dollars and cents, using a solution unique to the world of finance. The executive vice president of merchandising or manufacturing sets up his own supply chain, buying and planning systems.

There are, of course, problems with each of these approaches. When IT holds the data captive, executives tend to request the same type of static report over and over, because asking for unique reports is often a time-consuming exercise in futility. Figure 1.4 illustrates that when information is managed in silos, there is no single version of the truth. The CMO may be raving about a marketing campaign bumping sales over last year, while the CFO stares at a sheet with data that suggests the exact opposite.

Each executive may manage very different worlds, but they need to work from the same data foundation—and they can benefit from exposure to the kind of data that other executives use and manage. For instance, the CMO is typically responsible for retention, market share, branding, cross-sell opportunities, and up-sell effectiveness. How many CMOs, though, can readily determine whether a new marketing campaign for a lower-margin product or service is actually cannibalizing existing high-margin customers? Meanwhile, the executive vice president of manufacturing's finely honed supply chain may not be flexible enough for the CMO's plan to market products in several different types and sizes of packaging.

The CFO is looking at the business from a completely different perspective, because she is responsible for the financial performance across the organization. In publicly-held companies, the CFO needs to forecast reliable earnings expectations. In both private and public companies, the CFO is constantly under pressure to maximize performance and value, establish key performance indicators (KPIs), predict trends, and align strategic goals. The CFO also shares some of the burden of regulatory compliance. A CFO isn't responsible for a supply chain disruption, but without that information the forecasts can't be reported accurately.

In advanced organizations, the chief information officer (CIO) is more business focused, understanding the needs of the other executives, helping align IT and business, and explaining the value of reaching one version of the truth. This person provides a critical role in establishing the data sharing that is needed to make the business run better. This is not an easy task—even starting may be difficult. The vast majority of companies have

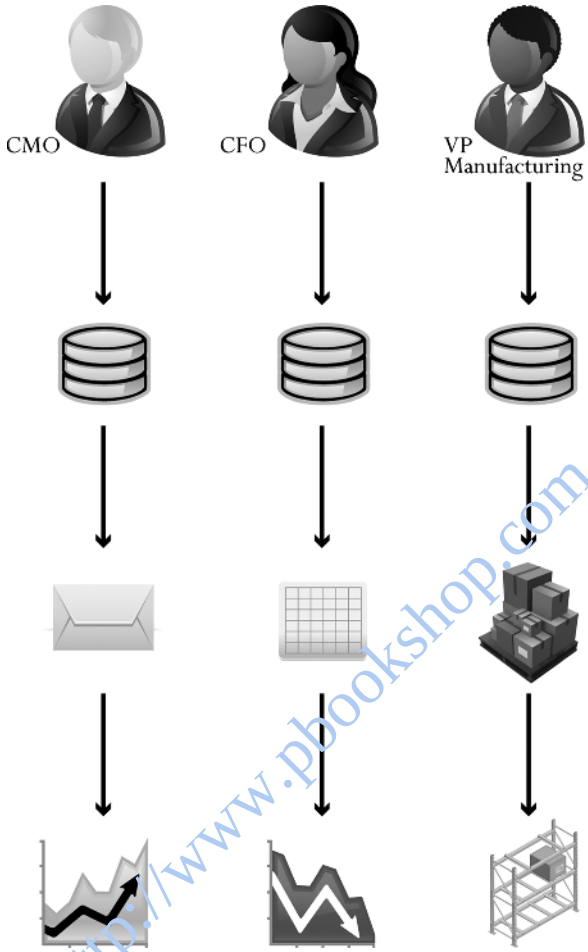

FIGURE 1.4 **How can siloed information affect the business? If the CMO views a marketing campaign as a success based on the number of orders taken, but those orders are for losses, the CFO will have a different view of the outcome. And if the manufacturing team isn't clued in on all the products sold, customers may find the shelves empty with a long lead time before restocking is possible.**

multiple applications and systems, and executives are quite fond of their own solutions. Business users, meanwhile, maintain—or clamor for—a solution that solves their specific problem. Championing an enterprise-wide approach involves a huge upfront cost, a great deal of risk, and the potential

dissatisfaction of business users who are tied to their siloed solutions. Realistically, the CIO can't advocate scrapping a myriad of systems, solutions, and software that are in use. The CIO can't impose a one-size-fits-all solution, even if such a solution were available in the market today. But the CIO *can* focus on making the organization successful by creating a collaborative, aligned, and integrated data environment.

Adding data quality and data governance to the existing data silos or the enterprise-wide applications and systems can fix many of the problems a CIO faces in data management, while limiting the pain to the business users.

Even though the benefits of successful data management can be substantial, getting to that point shouldn't consume you. Improvement is not about buying one solution, scrapping existing solutions, or patching together 20 disparate systems. The process is not about the next 12 months being the "Year We Get Our Data in Order." This is a process that is best done by taking one step at a time, one project at a time, one action at a time—while always focusing on the business reasons.

I like cars, so I like car analogies. We tend to spend a lot of time and effort choosing the right car. We research the brands and comparison shop, and when it's all finished and we drive off the lot, we think "Phew, glad that's over with." Achieving quality data is not like the process of buying the car. But it is like the process of maintaining the car. It is putting the right gas in, getting the oil checked, replacing worn tires. It is the routine, everyday things that are critical when it comes to keeping the car running and maintaining its value. Quality data keeps your business running smoothly, it keeps your company's value high, and ultimately it keeps your company in business. Period.

NOTES

1. Donald Feinberg. "Poor-Quality Data: The Sure Way to Lose Business and Attract Auditors," 2006.
2. "Data Governance: Protecting and Exploiting a Key Business Asset," *Information Age* Research Report, Michelle Price, February 22, 2008.