The ERP/BI Connection

Adding Value through Actionable Intelligence

The ERP/BI Connection

Adding Value through Actionable Intelligence

David Hatch, Cindy Jutras

Executive Summary

Prompted by volatile markets and a troubled economy, the need to reduce costs is the top business driver impacting Enterprise Resource Planning (ERP) strategies. Combine this need with the ever-increasing need for transparency to both public and privately held companies and the marriage of ERP with Business Intelligence (BI) becomes the perfect storm, igniting improved performance and visibility. This report serves as a benchmark to those companies seeking these results.

Best-in-Class Performance

Aberdeen used five key performance criteria to distinguish Best-in-Class companies value derived from ERP and BI combined:

- 17% reduction in operating costs and 18% reduction in administrative costs
- 12 full-time employees eliminated or redeployed
- 3.7 days to close a month
- 19 months to achieve these benefits

Competitive Maturity Assessment

Survey results show that the firms enjoying Best-in-Class performance shared several common characteristics:

- 79% of Best-in-Class assign cross-functional teams for selection and implementation of ERP and extensions such as BI
- Best-in-Class are 56% more likely to be able to drill down from summary data to transactions that form the fiscal and operational audit trail
- Best-in-Class are 114% more likely to provide self-service BI capabilities to stakeholders

Required Actions

In addition to the specific recommendations in Chapter Three of this report, to achieve Best-in-Class performance, companies must:

- Take an integrated approach to ERP and BI projects
- Create cross-functional teams for implementation and continuous improvement of ERP; use BI to extract intelligence at each step
- Take an exception management approach; use BI, workflow, and event management to manage alerts and notifications

Research Benchmark

Aberdeen's Research Benchmarks provide an in-depth and comprehensive look into process, procedure, methodologies, and technologies with best practice identification and actionable recommendations.

"We're just trying to keep pace with the significant volatility that we are experiencing. Our BI solution provides us with crucial speed for reporting and analysis. We want to improve the non-system processes and procedures to speed entry of transactions, and to improve access to transaction and information across multiple platforms – including PC's, Mac's, Laptops, Handhelds, etc."

~ Senior Director of Finance and Planning in the Biotechnology Industry

Table of Contents

Figures

Tables

Aberdeen *Group*
A Harte-Hanks Company

Chapter One:
# Benchmarking the Best-in-Class

Business Context

Enterprise Resource Planning (ERP) systems provide much-needed capabilities, such as management of financial, product / inventory, human capital, purchasing, and other transactional data within one environment. The value proposition for investing in ERP has traditionally been tied to the standardization of business processes and centralization of information that makes it easier and faster to collect and manage data across many areas of the business. Increasingly, ERP customers have come to realize that the value from ERP investments can be increased dramatically through analysis of the consolidated data captured within and around the ERP system.

Enterprises of all shapes and sizes today are sitting on mountains of data resident in their transaction processing systems of record. While ERP solutions are at the very core of this transactional data, the volume and complexity of that data grows as ERP is surrounded by applications which extend its reach into areas such as Customer Relationship Management, Supplier and Supply Chain Management, Product Lifecycle Management and others. Given huge volumes of data from ERP and potentially other disparate sources, this can be a challenge. Yet achieving transparency and visibility is no longer simply a lofty goal, but a core necessity of the business.

Business Drivers Behind ERP and BI

Figure 1: Top 2 Business Drivers Impacting ERP Strategies
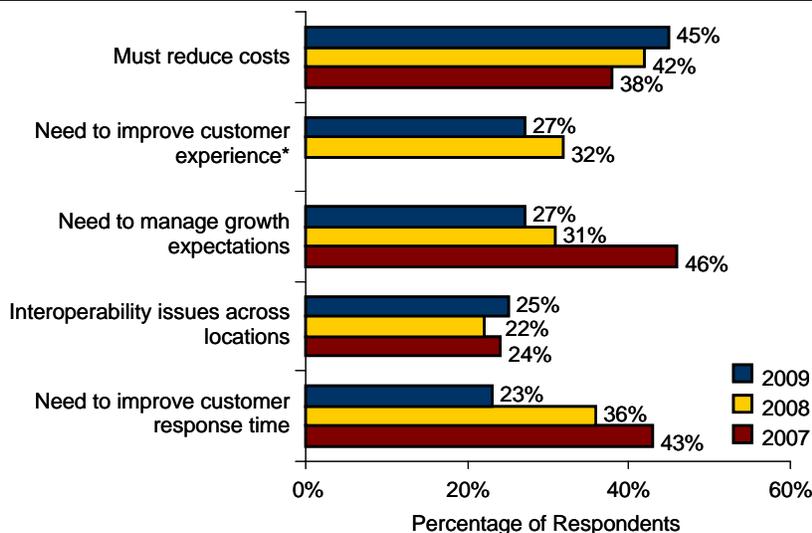
* The business drivers "Must improve customer response time" and "Need to be easier to do business with" were combined in the 2007 survey as a single response option.
Source: Aberdeen Group, June 2009

Fast Facts

Best-in-Class ERP implementations drive more visibility and value to the business:

√ **67%** more operational and administrative cost reductions

√ **66%** better improvement in internal scheduling

√ **63%** better improvement in complete and on-time shipments

In addition, Best-in-Class BI is reflected in:

√ **44%** more likely to seek improved ease of use for BI capabilities

√ **114%** more likely to provide self-service BI capabilities to stakeholders for decision-making

Source of data for this report

Data for this report was provided by a combination of ERP and BI survey data collected including:

√ Over 520 responses received in April 2009 to our annual 2009 ERP survey

√ 470 responses received between March and April 2009 for Aberdeen's BI Deployment Strategies and Pervasive BI surveys

Over the past three years Aberdeen has watched as the need to reduce costs bubbled to the top as the primary business driver behind ERP strategies. Together with growth and customer service, these three have dominated the pressures driving ERP implementation strategies. That is not to say that other factors do not come into play. Obviously ERP provides the transactional audit trail that forms the auditable system of record for many companies, and as such helps them comply with regulatory and reporting requirements. However, those requirements are a "given" and ERP is often viewed as a necessary infrastructure.

In the context of bringing transparency to the business and order to the potential chaos perhaps the most significant of the extensions to ERP is Business Intelligence (BI). Think of it as a layer on top of or embedded within ERP and other applications which wind up being giant repositories of data.

While ERP and BI may indeed be implemented together, just as often they are viewed as separate initiatives. In the context of the business drivers behind BI projects, we must consider what needs are attempted to be satisfied. The top requirement of a BI deployment indeed coincides with the need to extract additional value from the relevant business data which is inherent to an ERP implementation (Figure 2). Improving the speed of access to this data is the key to transparency, visibility, and informed decision-making.

Figure 2: Top 2 Requirements Behind BI Deployments
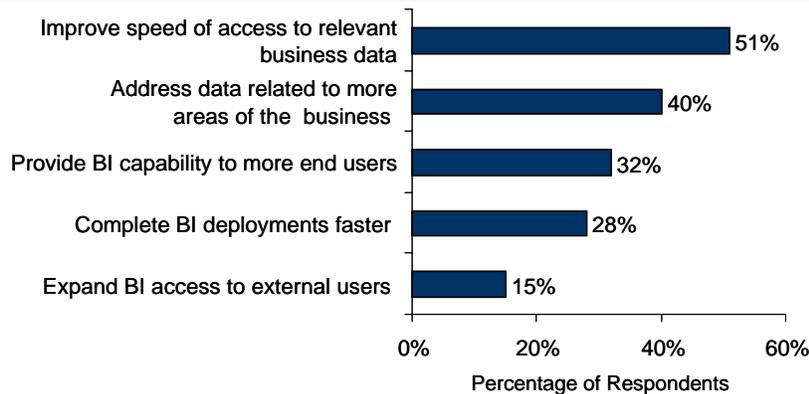
Source: Aberdeen Group, June 2009

The next two requirements relate to connecting the decision-makers directly to the data that is needed to support those decisions. This may require broadening the scope and reach to new areas of the business or it may mean providing access to data and tools to more knowledge workers within the organization. Both avenues lead to a clearer view of the data, which leads to a clearer view of the business.

The Maturity Class Framework

Aberdeen used five key performance criteria to distinguish the Best-in-Class from Industry Average and Laggard organizations. Given the top business driver impacting ERP strategies, many companies measure the business value of ERP in its ability to help them drive down costs. While BI deployments may be measured by speed of deployment, pervasiveness of BI's use throughout the organization and the ability of line of business knowledge workers to serve themselves with little or no support from Information Technology (IT) departments, the success of ERP is clearly measured by the quantifiable benefits it brings to the business itself.

Table 1: Top Performers Earn Best-in-Class Status

Definition of Maturity Class	Mean Class Performance
Best-in-Class: **Top 20%** of aggregate performance scorers	• 17% reduction in operating costs • 18% reduction in administrative costs • Reduction in headcount of 12 full-time employees • 3.7 days to close a month • 19 months to achieve these benefits
Industry Average: **Middle 50%** of aggregate performance scorers	• 7% reduction in operating costs • 6% reduction in administrative costs • Reduction in headcount of 3 full-time employees • 5.1 days to close a month • 27 months to achieve these benefits
Laggard: **Bottom 30%** of aggregate performance scorers	• 2% increase in operating costs • 2% increase in administrative costs • Addition of 1 full-time employee • 8.5 days to close a month • 40 months to achieve these benefits

Source: Aberdeen Group, June 2009

Best-in-Class BI Criteria

√ Best-in-Class on average spend 25 days to complete BI projects

√ 100% of Best-in-Class deliver self-service BI capabilities to end-users

√ Best-in-Class achieve an average composite user satisfaction score of 4.1 on a scale of 1 (very dissatisfied) to 5 (very satisfied)

While we collected reductions in inventory from our survey respondents in manufacturing and distribution industries, we viewed administrative costs, which will be closely aligned with General & Administrative (G&A) costs and operational costs, which would reflect cost of good / services sold (COGS) as more universal metrics. We also combined this with the headcount of full time employees (FTEs) that could be eliminated or (hopefully) redeployed for higher value-add to the organization. All three of these metrics were captured in the context of savings as a result of ERP implementation.

We temper these reductions with two additional metrics as a fail safe against anointing very poor performers who are able to pick low-hanging fruit as Best-in-Class. We add the number of days to close a month, a sure indication of the strength of the transactional audit trail and confidence in financial numbers stored within ERP, as well as the time to benefit. Those

companies that take many years to produce substantial results are
effectively eliminated from the Best-in-Class category.

The Best-in-Class PACE Model

To achieve significant cost reductions and meet other corporate goals from
ERP implementations also requires a combination of strategic actions,
organizational capabilities, and enabling technologies that can be summarized
in Table 2.

Table 2: The Best-in-Class PACE Framework

| Pressures	Actions	Capabilities	Enablers
▪ Must reduce costs ▪ Provide transparency through speed of access to business data	▪ Provide visibility across functions & departments pervasively across the enterprise ▪ Standardize business processes ▪ Streamline and accelerate business processes	▪ From summary data, decision-makers can drill down to transactions that form the fiscal and operational audit trail ▪ Real-time visibility of all processes from quote to cash ▪ ROI estimates are used to justify ERP projects and measured to validate business value ▪ Business Intelligence is integrated with other enterprise applications ▪ Ability to provide self-service BI capabilities to stakeholders	▪ Integrated ERP suite of modules ▪ Business Intelligence platform ▪ Analytical tools ▪ Workflow automation / Business Process Management ▪ Event Management (triggers and alerts) ▪ Internet access to ERP ▪ Access to ERP through mobile devices

Source: Aberdeen Group, June 2009

Best-in-Class Strategies

ERP plays a key role in both standardizing and streamlining business
processes. Several of the major ERP solution providers today also provide
content in the form of libraries of implementation templates and pre-defined
workflows that reflect best practices. As such, ERP can indeed prove to be a
vehicle for providing standards across departments and functions as well as
across operating locations. The process of standardizing and streamlining,
eliminating unnecessary steps and automating manual processes are both a
means of accelerating those processes. These are well recognized as a
primary benefit of implementing ERP, as reflected in our top two strategic
actions of all companies (Figure 3). Best-in-Class don't implement different
strategies. They are simply better at executing them.

But it is ERP's role in providing *visibility across functions and departments*
where we see a strong connection with BI and this strategic action aligns
well with the top strategic action of Best-in-Class BI deployments (Figure 4).

Figure 3: Top 2 ERP Implementation Strategies
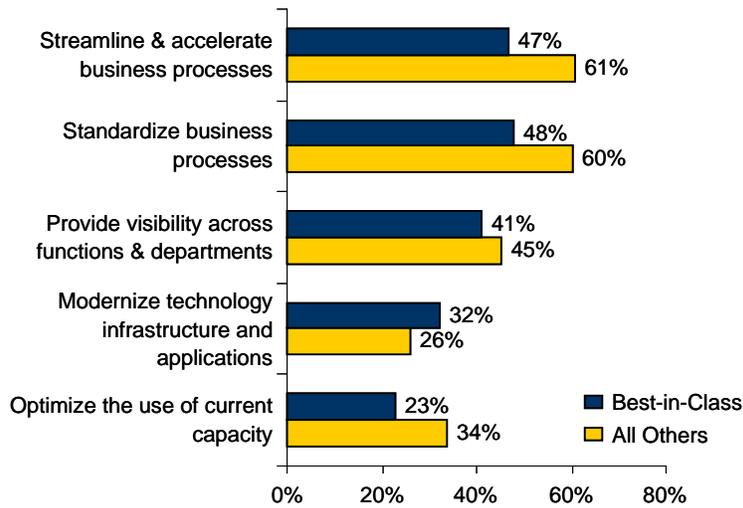
Source: Aberdeen Group, June 2009

Unlike ERP, we see a strong differentiation between the top BI strategies of Best-in-Class, Industry Average, and Laggards. Best-in-Class understand that the key to pervasive adoption of the tool requires that it be intuitive and easy to use. As a result, Best-in-Class are 114% more likely to provide self-service BI capabilities to some combination of internal and external stakeholders. When it is hard to work within a solution, the natural tendency is to work around the solution. When that happens, data becomes duplicated and the integrity is compromised. Visibility to the wrong data or "dirty" data leads to decisions made with inadequate information.

Figure 4: Top 2 Strategic Actions for BI

Percentage of Respondents
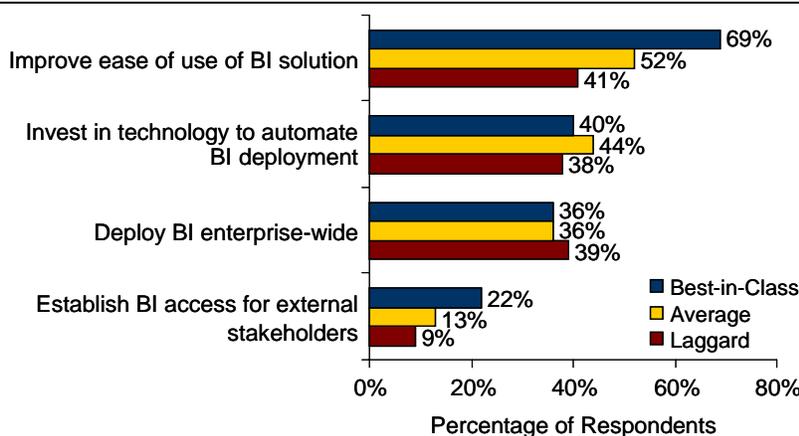
Source: Aberdeen Group, June 2009

"Access to information can be very useful in guiding decision making, but the users must have access, know how to use the information and how to utilize the capabilities of spreadsheets in order to extract more information to share with others."

~ CEO, Midsize US Manufacturing Firm

Aberdeen *Group*
A Harte-Hanks Company

Aberdeen Insights — Strategy

Today we hear a lot about doing "more with less" – less people, less resources, less money. That sentiment, however, rarely applies to data. Never have we been inundated with more data sources, both unstructured (via the news, the web, and other sources) and structured data in enterprise applications, with data from ERP squarely at the hub. But when is "more" actually "less?" When you don't know it is there; when you can't access it or when you have access but no context.

All of these reasons contribute to the fact that in spite of all the data that resides in ERP and other enterprise applications, executives, line managers, and business analysts still rely heavily on spreadsheets for business intelligence. Few individuals coming out of business schools today are likely to willingly give up spreadsheets any time soon, but those that have met the criteria for Best-in-Class BI deployments have indeed relegated spreadsheets to more of a supporting role. (Figure 5).

Figure 5: The Role Spreadsheets Play
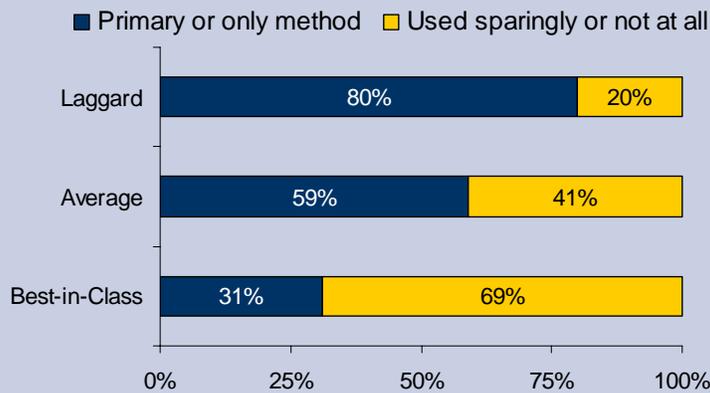
Source: Aberdeen Group, April 2009

Today almost every ERP solution, and many other enterprise applications as well, have the ability to export data to spreadsheets. There is an inherent risk in providing this capability, populating a familiar tool with enterprise level data. Best-in-Class companies make sure that in extracting data, the spreadsheet doesn't take on a life of its own apart from the enterprise application. There is a tradeoff between being able to access and work with the data offline, and making sure that it always reflects the most recent version (which requires that the user remain connected). In addition to being an effective reporting mechanism, spreadsheets can be a collaboration tool used to share data across applications, companies, or partners, and therefore, a source of data and input. The trick is to import the data from the spreadsheet through the same controls and input mechanisms of the enterprise application, making sure to provide all the same data checks that ensure security and data integrity.

"In the past people have held onto Excel based data records because of their preference to sort, analyze and graph data in Excel. Immediate transfer of data from our ERP gave the users what they perceived to be powerful manipulation and analysis tools along with the power of live central data storage. We have recently gone one step further and embedded a real-time BI tool that runs circles around Excel. This functionality has given the business the tool necessary to shift immediate operational decisions from instinct driven to information based."

~ Supply Chain Manager, Consumer Packaged Food Manufacturer

Aberdeen *Group*
A Harte-Hanks Company

Chapter Two:
Benchmarking Requirements for Success

The selection of a business intelligence solution and integration of this with existing ERP assets plays a crucial role in the ability to turn the strategies described in Chapter One into profit. The following case study provides a view into the benefits and potential pitfalls that can be encountered.

Case Study — Large U.S. Manufacturing Rep

This large Consumer Packaged Goods (CPG) sales and marketing broker acts as a liaison between manufacturers and retailers across all states in the U.S. and Canada. It offers a full range of value-add services to CPG companies, including category management and retail merchandising, all delivered as turnkey solutions to customers. The company's products are represented by its people (over 22,000 strong and growing) and the challenge it faced was a growing need to make strategic decisions based on current, factual data.

"We were making broad strategic plans based on gut feel and without the level of data needed to substantiate the decisions we were making," states the Technology and Communications Director. "We had a lot of ad hoc reporting capability, but the data that could be accessed from our ERP system was limited. We realized that we needed to learn about new solutions, and see if there was something that could meet our requirement of near real-time visibility into the business."

The company needed to gain visibility into its existing ERP data in order to improve human resource hiring and development plans. This required a solution to satisfy some specific needs:

- Current view of product mix being sold into customers, and the related demand on human resources

- Detailed analysis of headcount and human resource allocation

- Understanding of turnover rates and their effect on the business

The Technology Director and his team investigated several vendors and tools, and narrowed it down to two vendors with similar solutions. They ultimately decided to work with a BI appliance vendor that offered a bundled hardware and software solution that was integrated with their existing ERP system and offered specialized functionality for meeting their unique requirements. "The solution we chose offered what appeared to be the most seamless implementation and deployment for our organization. Our journey was not without challenges, but overall we are very pleased with results to date and expect to continue our development and roll out of this technology."

continued

Fast Facts

Best-in-Class companies do more with less. According to the research Best-in-Class companies use:

√ An average of 3.3 FTEs (Full Time Equivalents) for BI deployment

Compared with:

√ An average 4.8 FTEs for all other companies

60% of employees at Best-in-Class companies have direct access to BI functionality, more than double the percentage at all other companies

"A BI platform was not the cheapest option and integrating the solution with our ERP system was not easy, but the value for money is there. One thing I would recommend to anyone thinking about this is to plan for one full time employee to be dedicated to the project. We did not commit this resource up front, and had we done it, we would have saved quite a bit of time."

~ Technology Director; U.S. Manufacturing Representative

Aberdeen *Group*
A Harte-Hanks Company

Case Study — Large U.S. Manufacturing Rep

Some of the challenges that were experienced along the way included:

- **Proper assignment of IT resources and skill sets**. The process of building BI cubes was complex and not within the skill sets of the IT administrator originally assigned. This introduced a consulting services requirement from the vendor which was provided and helped alleviate the skill set requirement.

- **The implementation timeframe was longer than expected**. Due to the need for consulting services and limited internal IT resources, the implementation went from an expected 60 days to a year. The solution is not yet fully deployed, but it is implemented locally. The company is limiting exposure to a larger user base until wrinkles are ironed out.

Once the first full deployment is completed, management will develop metrics for measuring Return on Investment (ROI), with a goal of achieving 100% ROI within 18 to 24 months.

"The first set of applications and dashboards were developed for the Human Resource (HR) management group as a beta project. This includes about eight people who are shaking out the wrinkles and engaging in very open dialog about changes and improvements. Once that is completed we will deliver an expanded set of deliverables to the executive team, and then to a larger audience of over 150 business leaders around the country.

We have had a great experience working with the solution provider. We know that challenges should be expected, and their approach to working with us to solve them was top notch. A BI platform was not the cheapest option and integrating the solution with our ERP system was not easy, but the value for the money is there. One thing I would recommend to anyone thinking about this is to plan for one full-time employee to be dedicated to the integration project. We did not commit this resource up front, and had we done it, we would have saved quite a bit of time."

Competitive Assessment

Aberdeen Group analyzed the aggregated metrics of surveyed companies to determine whether their performance ranked as Best-in-Class, Industry Average, or Laggard. In addition to having common performance levels, each class also shared characteristics in five key categories: (1) **process** (the approaches they take to execute their daily operations); (2) **organization** (corporate focus and collaboration among stakeholders); (3) **knowledge management** (contextualizing data and exposing it to key stakeholders); (4) **technology** (the selection of appropriate tools and effective deployment of those tools); and (5) **performance management** (the ability of the organization to measure its results to improve its business). These characteristics (identified in Table 3) serve as a guideline for best

practices, and correlate directly with Best-in-Class performance across the key metrics.

Table 3: The Competitive Framework

	Best-in-Class	Average	Laggards
Process	Standardized implementation of ERP across a potentially distributed enterprise		
	68%	59%	46%
Organization	Cross functional teams of IT and line of business individuals involved in both the selection and implementation of ERP and extensions		
	79%	69%	53%
	Cross-functional continuous improvement teams are responsible for improving operational performance		
	61%	51%	45%
Knowledge	From summary data, decision-makers can drill down to transactions that form the fiscal and operational audit trail		
	67%	46%	38%
	Decision makers are notified in real time as exceptions occur and can react immediately		
	53%	33%	22%
Technology	Business Intelligence implemented as an extension to ERP		
	44%	34%	31%
	Event Management implemented as an ERP module		
	14%	3%	2%
	Workflow management implemented as an ERP module		
	38%	17%	17%
Performance	ROI continues to be measured even after it has been achieved		
	44%	22%	13%

Source: Aberdeen Group, June 2009

> "Data reporting and access to the right information in the right way is crucial to the service we provide our members. Our move into BI was a necessary part of maintaining our leading position. So far the early indications are very positive that our investments will have the impact on decision making and influence that we aim to support."
>
> ~ Ian Cook, Director, HR Knowledge and Research, BC Human Resources Management Association

Capabilities and Enablers

Based on the findings of the Competitive Framework and interviews with end-users, Aberdeen's analysis of Best-in-Class companies shows that a combination of capabilities are necessary to derive the most value from integrating and deploying BI within an ERP environment.

Process Management

As illustrated in Table 3 above, a standardized implementation process for ERP is a leading Best-in-Class process management action. In today's world, business dynamics change rapidly, and volatile conditions require that a potentially dispersed organization employ standard processes in order to

maintain the ability to see valid comparisons of performance across the business. The potential difficulties are compounded when mergers and acquisitions occur, often leaving a company with multiple ERP systems and processes to integrate. Best-in-Class companies are 14% more likely to standardize their ERP implementation processes than Average companies, and 33% more likely than Laggards to do the same.

When it comes to the integration of Business Intelligence with existing ERP assets, Best-in-Class companies are even more likely to standardize on enterprise-wide deployment procedures (Figure 6).

Figure 6: Best-in-Class Process and Organizational Capabilities

Source: Aberdeen Group, April 2009

"Until now, the cost of BI solutions has been prohibitive. However, as our business has grown, our needs have increased resulting in a more favorable cost / benefit ratio. Because we run lean, timely information is important, so the speed of access to relevant business data is also important."

~ Finance Director
US Food & Beverage Company
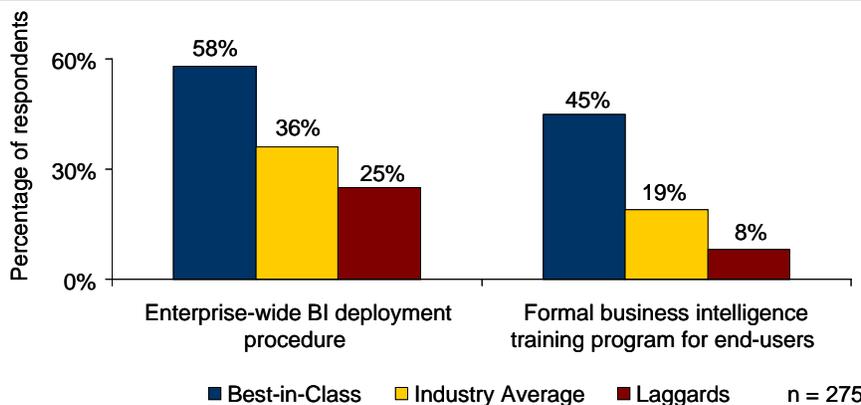
Fostering better informed, more timely decision-making is not a turnkey undertaking for any organization regardless of size or industry. Companies of all flavors face challenges when it comes to data cleansing, integration, and overall data management. The ability to standardize a process for collecting and integrating that data for use in reporting and analysis is a crucial element for transforming data into a more usable and "digestible" form. The research shows that Best-in-Class companies are more than twice as likely as Laggard organizations to have a formalized data management and integration process for BI projects. Additionally, as companies look to spread BI functionality throughout the organization, many are reaping the benefit of a normalized procedure for BI deployment that promotes faster and more efficient implementation across the organization. The data shows that Best-in-Class companies are 61% more likely than the Industry Average to have an enterprise-wide procedure for deploying BI.

Organization

Aberdeen research shows that the establishment of cross-functional teams (IT and line-of-business management) to facilitate both the selection and continuous improvement of ERP systems and extensions is a Best-in-Class organizational capability (Table 3 above). Too often, interviews conducted with end-user organizations reveal that these decisions are made "in a

vacuum" where either IT or (less often) business management are solely tasked with the decisions and mandate to "get something implemented now." A cross-functional team alleviates many of the problems inherent in an implementation and ongoing support and maintenance by uncovering the business requirements up-front, and allowing the IT organization to implement a system that is designed to meet both current and future needs. This also should include the establishment of accountability for ongoing support, maintenance, and continuous improvement of the implementation and its value across operational areas of the business.

This approach is often formalized through the establishment of a Center of Excellence, or "competency center," that is comprised of key management from both line-of-business and IT. One of the purposes of the cross-functional team is to investigate and define end-user needs and levels of skill required to be able to use the new system. When it comes to Business Intelligence software, Aberdeen has found that a wide gap exists between the functionality provided and the lack of analytical skills among end-users. Therefore, the focus on a formal business intelligence training program (Figure 6 above) is critical to the success of any BI deployment, whether it is integrated with the existing ERP system, or deployed as a stand-alone "overlay" application. Best-in-Class companies are 2.4-times more likely to take this approach than Average companies, and 4.5-times more likely than Laggards to do the same.

Knowledge Management

Modern ERP systems are capable of delivering rapid access to "rifle-shot" data – information that can be obtained by running either pre-defined reports or a standard query against data within the system. While this is certainly an advance over earlier days when a batch update needed to be run overnight – or worse, over the weekend – before information could be aggregated and retrieved, it is still not enough. Best-in-Class companies are deploying BI functionality in order to enable end-users to drill into the data and go beyond existing static reports in order to get at the root causes for performance anomalies in the business. Best-in-Class companies are 32% more likely than Industry Average companies to enable drill-downs from summary data to underlying information for the purpose of investigating and determining both fiscal and operational root causes and identification of an audit trail within the data.

Additionally, Best-in-Class companies are also automating alerts that inform management when anomalies and exceptions occur. Best-in-Class companies are 38% more likely to be pulling automated alerts from their ERP systems than Industry Average companies.

The deployment of BI capabilities enables this activity, and Aberdeen research shows that when it comes to the use of BI, another important benefit emerges. In addition to the enablement of automating alerts and reports to end-users, an integrated BI solution can also silently monitor the use of reports and information views. This allows organizations to streamline their BI deployment by understanding which information is most

"State-of-the-art logistics applications have complex data architectures and modern BI tools require sophisticated IT literate users to do the analysis. So the real challenge of a BI project is to get real business end-users to properly use the 10% of the functionality of the BI tool they need and, even more importantly, understand the data they are working with."

~ Michael Baumann
Global Head – Service Parts
Logistics IT
DHL

needed by operational line-of-business users, and which reports no longer need to be created and maintained within the system (Figure 7).

Figure 7: Best-in-Class Knowledge Management Capabilities
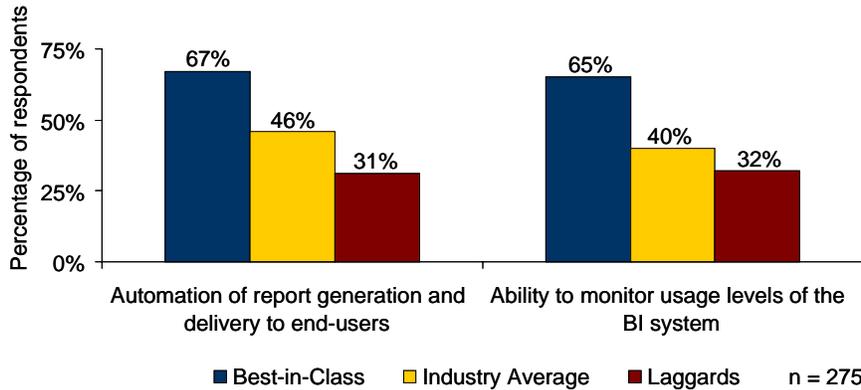
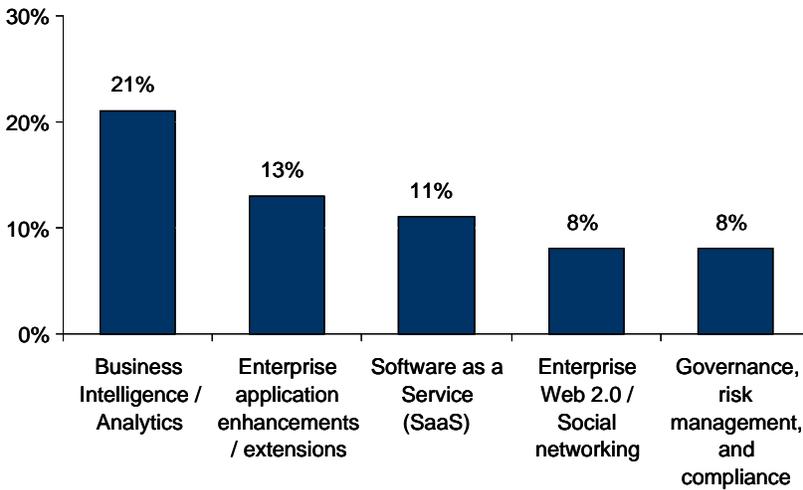Source: Aberdeen Group, April 2009

Performance Management

Before simply purchasing and implementing a business intelligence extension, module or stand-alone software package, top performing companies are also incorporating methods for defining and measuring ROI for the BI purchase. Best-in-Class companies are twice as likely as Industry Average peers to take this approach. Aberdeen research has also found that Best-in-Class companies are achieving 100% (or greater) ROI faster than their peers, reaching this milestone on average within the first six months as opposed to timeframes that start at a year and go well beyond two years for Average and Laggard companies.

Measuring the ROI of a BI investment within large- and even medium-scale deployments always carries a risk of under-utilization. Whether the organization is leveraging only a fraction of the functionality or only a small percentage of the intended employees are actually using the solution, this type of investment can be squandered by low capacity utilization. The first step to improving the usage levels is actually gaining visibility into how many employees regularly use the BI solution (Figure 7 above). Once the utilization levels increase, an organization will be in a much more advantageous position for realizing a strong return on the BI investment. Best-in-Class companies are 63% more likely than the Industry Average to monitor the usage level of their BI solution.

Technology

Aberdeen Group has conducted extensive research across all industries and geographies (see _The 2009 Aberdeen Report_) to determine the technologies that will have the most impact in the next two to five years (Figure 8).

Figure 8: Technologies with most Business Impact: Next 2-5 Years
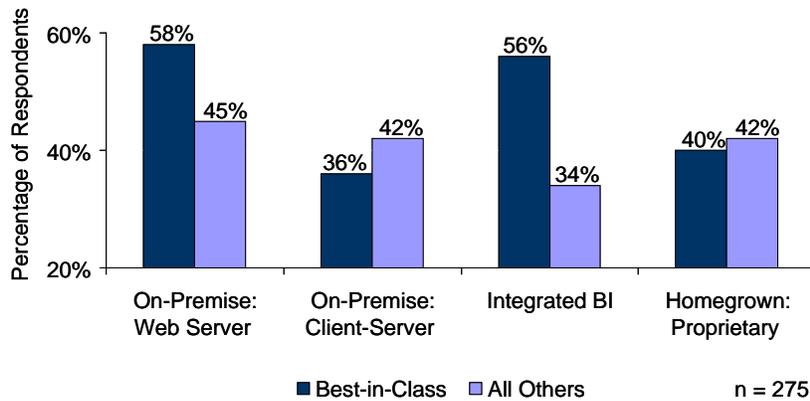

Source: Aberdeen Group, June 2009

While "business intelligence" ranks (for the second year in a row) as the top technology in terms of business impact, it is the second item that deserves additional analysis. "Enterprise application enhancements / extensions" refers to the ongoing improvements that drive extended value from ERP (and CRM) investments. A more detailed dive in to the data, along with conversations with end-user organizations reveals that BI is the top enhancement or extension that companies are planning. This further increases the importance of the connection between ERP and BI, and shows that companies are focusing more over time on adding this capability as an integrated technology with their ERP investments.

In fact, Aberdeen research shows that this is a Best-in-Class approach to increasing and extending the value of ERP investments over time (Figure 9). Best-in-Class on-premise deployments of BI solutions have begun to migrate away from traditional client-server architectures, and more to web application server environments. An integrated approach (BI is integrated within enterprise applications) is far more likely to be chosen by Best-in-Class companies than a home-grown proprietary implementation.

Figure 9: BI Deployment - "Integrated BI" (with Enterprise Applications) is a Best-in-Class Approach

Source: Aberdeen Group, April 2009

When it comes to a hosted, "outside the firewall" implementation companies are seeing value in a SaaS or cloud deployment approach. While there are wide ranging opinions as to the definition of these terms, Aberdeen simplifies the categories as follows:

- **Software as a Service (SaaS) BI**: BI <u>applications</u> hosted offsite by a third party vendor as a single instance or shared instances

- **BI in the Cloud**: Analytical <u>infrastructure</u> that exists in a cloud (virtual web-based) environment. It can include data warehouse & integration tools, BI application development kits, etc.

The use of SaaS BI is something that Aberdeen measures continually, and while the overall usage rate of this survey sample was roughly 15%, this number has grown by a factor of two since August 2008. Perhaps more importantly, the Best-in-Class have ventured into SaaS / Cloud territory and are more than three-times as likely as all others to utilize SaaS BI deployment and infrastructure (Figure 9).

**Figure 10: SaaS BI Gains a Foothold with the Best-in-Class**
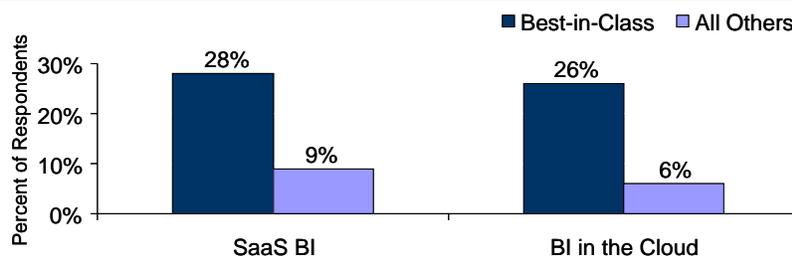
Source: Aberdeen Group, April 2009

**Aberdeen Insights — Technology**

Best-in-Class companies are acting upon their top strategy of "providing visibility across functions and departments pervasively across the enterprise." The integration of BI within ERP implementations is a multi-stage process that involves decisions about how the BI capability will be deployed, and the internal resources available for making this happen. Well-provisioned organizations approach this strategically and have implemented formal means of addressing adoption and deployment though the formation of cross-functional teams and training that combines IT and line-of-business buy-in. Meanwhile Average and Laggard companies have not taken this approach and are seeing a greater amount of underserved users, typically at the line-level where customer-facing activity takes place (Figure 11).

Figure 11: The Barrier to Pervasive BI – Adoption among the Underserved Users

Source: Aberdeen Group, April 2009
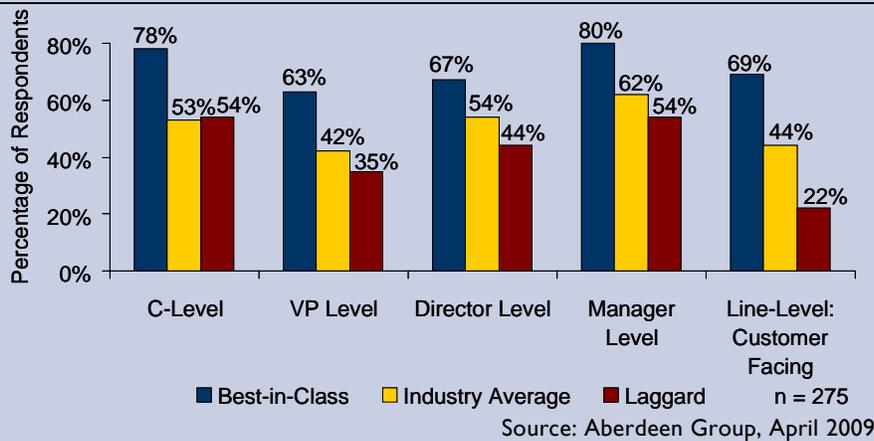
Through the capabilities that Best-in-Class companies have employed, a greater degree of heavy to pervasive access to BI has resulted. The results are clear: Average and Laggards experience a significantly lower rate of workforce access to BI, and therefore lower visibility to data within ERP, resulting in a performance risk compounded by a continuation of decisions being made based on gut feel rather than based on data (Figure 12).

Figure 12: Best-in-Class Achieve Higher Degree of Pervasiveness

Percent of Workforce with Access to BI, n = 370

Source: Aberdeen Group, May 2009
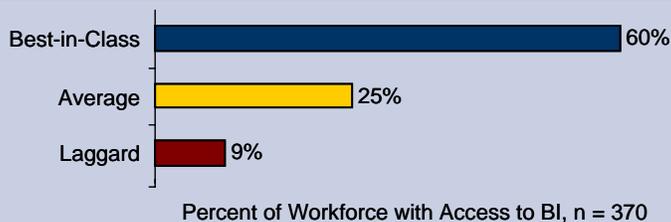
"The current business environment has elevated the importance of accountability and responsibility of business executives and their key business decisions. The application of business intelligence tools is critical to enable informed tactical and strategic decision-making. The inability to truly understand your business data often leads to poor decisions and unnecessary business risks."

~ Edward Kazanjian
Principal Consultant, Dextrys
Wyeth Pharmaceuticals

Aberdeen *Group*
A Harte-Hanks Company

Chapter Three:
Required Actions

Whether a company is trying to move its performance in delivering actionable intelligence to the enterprise from Laggard to Industry Average, or Industry Average to Best-in-Class, the following actions will help spur the necessary performance improvements:

For All Companies

Regardless of current maturity class or stage of implementation, Aberdeen recommends taking an integrated approach to ERP and BI. Whether BI tools are currently embedded within your ERP solution, tightly integrated, bolted on after-the-fact or non-existent, don't treat ERP and BI as separate projects. Take the approach of using BI as a means to extract enhanced value from data within ERP (as well as other enterprise applications). ERP can transform data into information but BI tools are required to complete the transformation from information to intelligence. Whether you are implementing ERP for the first time, replacing it or upgrading, adding users, features or modules, consider the implications for extracting actionable intelligence every step of the way.

Laggard Steps to Success

- **Form cross-functional teams for both ERP and BI projects**. When ERP or BI projects are "owned" by the Information Technology (IT) department the true Return on Investment (ROI), measured in cost reductions and performance improvements, is often overlooked. When left entirely to IT the success of projects is often measured by cost and speed of implementation. These are important factors but using them as the exclusive measure of success loses sight of the original business goals of the project. Over the past three years we've seen a trend toward more implementations owned by line of business executives that are indeed measured on metrics such as those Aberdeen uses in our Best-in-Class criteria. Yet we still see this as a point of differentiation for our Best-in-Class, with 79% combining IT and line of business in cross functional teams for deployment and 61% creating continuous improvement teams to drive additional operational performance.

- **Form a "competency center" or "center of excellence" that is comprised of key management from both IT and line management.** This is the next step to take after forming cross-functional teams. The use of a centralized competency center allows the entire enterprise to benefit from the lessons learned in each ERP and / or BI project. Best in Class are 4.5-times more likely than Laggards to employ this approach.

Fast Facts

√ 79% of Best-in-Class form cross functional of ERP and BI projects

√ Best in Class are 4.5-times more likely than Laggards to form a competency center for BI

√ 67% of the Best-in-Class have the ability to drill down to transactions from summary data

- **Make sure you have the technical capability to easily view summary data and selectively drill down** to successive levels of detail to transactions that form the fiscal and operational audit trail. This capability may be offered directly as a feature of ERP or built as an additional layer of functionality. Either way, it is important to have data easily accessible in summary or exception format, keeping decision-makers "out of the weeds" until such time as that detail is necessary. When a deep dive into detail is necessary, knowledge workers should not be required to look elsewhere for necessary data. They should be able to drill down directly an exception, alert or summary.

Industry Average Steps to Success

- **Provide formal BI training.** Over the past decade enterprise applications have become easier to use. ERP solution providers have provided graphical user interfaces (GUI) that are intuitive and easy to use. The easier these applications are to use, the less training is provided and the more it is assumed that the user will be able to "figure it out on his or her own." At the same time both ERP and BI solution providers are delivering more power to the user by way of drill-downs, hyperlinks to additional data, and analytical tools. Making the assumption that the user needs no training is almost sure to guarantee a small percentage of the functionality and the power of the tools is used. Best-in-Class are 136% more likely to have formal BI training programs.

Best-in-Class Steps to Success

- **Develop a mechanism to notify decision makers of exceptions**. The ERP and BI connection can detect exceptions and report them using a variety of delivery mechanism such as portals, dashboards, reporting, and analytics. But these views are only useful to the extent they are used. Which is more effective? Waiting for an executive to log into a portal and ask, "Are any orders for important customers late?" Or pushing a message to alert the executive as soon as the exception is detected? A variety of tools, sometimes in combination, can alert decision makers to exceptions. Workflow technologies and event management are key to effective exception management, but many executives today do not understand the power these tools can bring or the impact they can have on operational performance. While Best-in-Class are ahead of the pack, adoption of these technologies is still very low.

"We needed to be able to add new geographic regions, attack new market segments and change our corporate structure as needed. We needed to look at gross profit from many different angles. We wanted to eliminate the need for offline spreadsheets. We still have some, more as backup, but we are continuing to move away from them. We have eliminated manual processes and those hard copy file swaps. We are still bringing sales onto the system, but now we have a 360-degree view of our company."

~ Brent Walters, CFO, OneVision Solutions

Aberdeen Insights — Summary

Companies today sit on mountains of data both in ERP and surrounding enterprise applications. While the economy has forced everyone to attempt to "do more with less," by leaving this data largely untapped, companies instead run the risk of "more is less." Massive amounts of data can be overwhelming, particularly when the relationships between data elements become more complex. The good news is that BI tools have reached a level of maturity which can elevate executives from the depth of the details, bringing them to a higher operating level where they can add strategic value to the organization. The ability to provide better decision support with integrated enterprise data is an important factor in turning data into actionable intelligence. The synergistic relationship between ERP and BI can indeed be the perfect storm, igniting improved performance and visibility.

Aberdeen *Group*
A Harte-Hanks Company

Appendix A:
Research Methodology

Between March and April 2009, Aberdeen examined the experiences and intentions of more than 990 enterprises using BI solutions within an ERP implementation environment.

Aberdeen supplemented this online survey effort with telephone interviews with select survey respondents, gathering additional information on strategies, experiences, and results.

Responding enterprises included the following:

- *Job title:* The research sample included respondents with the following job titles: C-Level (25%); EVP / SVP / VP (9%); Director (10%); Manager (28%); other (26%).

- *Industry:* The research sample included respondents from the following industries: discrete manufacturing (40%); process manufacturing (18%); hybrid of discrete and process (11%), wholesales / distribution (6%), service industries (27%).

- *Geography:* The majority of respondents (65%) were from North America. Remaining respondents were from the Asia-Pacific region (13%) and Europe (17%) and the rest of the world (4%).

- *Company size:* Seventeen percent (17%) of respondents were from large enterprises (annual revenues above US $1 billion); 41% were from midsize enterprises (annual revenues between $50 million and $1 billion); and 42% of respondents were from small businesses (annual revenues of $50 million or less).

- *Headcount:* Twenty-one percent (21%) of respondents were from large enterprises (headcount greater than 1,000 employees); 50% were from midsize enterprises (headcount between 100 and 999 employees); and 29% of respondents were from small businesses (headcount between 1 and 99 employees).

Table 4: The PACE Framework Key

Overview
Aberdeen applies a methodology to benchmark research that evaluates the business pressures, actions, capabilities, and enablers (PACE) that indicate corporate behavior in specific business processes. These terms are defined as follows: **Pressures —** external forces that impact an organization's market position, competitiveness, or business operations (e.g., economic, political and regulatory, technology, changing customer preferences, competitive) **Actions —** the strategic approaches that an organization takes in response to industry pressures (e.g., align the corporate business model to leverage industry opportunities, such as product / service strategy, target markets, financial strategy, go-to-market, and sales strategy) **Capabilities —** the business process competencies required to execute corporate strategy (e.g., skilled people, brand, market positioning, viable products / services, ecosystem partners, financing) **Enablers —** the key functionality of technology solutions required to support the organization's enabling business practices (e.g., development platform, applications, network connectivity, user interface, training and support, partner interfaces, data cleansing, and management)

Source: Aberdeen Group, July 2009

Table 5: The Competitive Framework Key

Overview	
The Aberdeen Competitive Framework defines enterprises as falling into one of the following three levels of practices and performance: **Best-in-Class (20%) —** Practices that are the best currently being employed and are significantly superior to the Industry Average, and result in the top industry performance. **Industry Average (50%) —** Practices that represent the average or norm, and result in average industry performance. **Laggards (30%) —** Practices that are significantly behind the average of the industry, and result in below average performance.	In the following categories: **Process —** What is the scope of process standardization? What is the efficiency and effectiveness of this process? **Organization —** How is your company currently organized to manage and optimize this particular process? **Knowledge —** What visibility do you have into key data and intelligence required to manage this process? **Technology —** What level of automation have you used to support this process? How is this automation integrated and aligned? **Performance —** What do you measure? How frequently? What's your actual performance?

Source: Aberdeen Group, July 2009

Table 6: The Relationship Between PACE and the Competitive Framework

PACE and the Competitive Framework – How They Interact
Aberdeen research indicates that companies that identify the most influential pressures and take the most transformational and effective actions are most likely to achieve superior performance. The level of competitive performance that a company achieves is strongly determined by the PACE choices that they make and how well they execute those decisions.

Source: Aberdeen Group, July 2009

Appendix B:
Related Aberdeen Research

Related Aberdeen research that forms a companion or reference to this report includes:

- *2008 ERP in Manufacturing Benchmark Report*; June 2008

- *The Order-to-Cash Cycle: Integrating Business Processes to Improve Operational Performance*; March 2008

- *ERP in Complex Manufacturing: Improving Collaboration and Visibility*; December 2008

- *ERP Plus in Process Industries: Beyond Compliance*; November 2008

- *Measuring the ROI of ERP in SMB*; March 2009

- *ERP in Industrial Machinery and Components Manufacturing*; November 2007

- *2008 ERP in the Mid-Market*; August 2008

- *Is Your GRC Strategy Intelligent?*; July 2008

- *Operational KPIs and Performance Management*; August 2008

- *Do More with Less: Merging Enterprise Applications with Desktop Tools*; September 2008

- *Operational Business Intelligence*; March 2009

- *Managing the TCO of Business Intelligence*; April 2009

Information on these and any other Aberdeen publications can be found at www.aberdeen.com.

Authors: Cindy Jutras, VP & Research Fellow, Enterprise Applications, (cindy.jutras@aberdeen.com); David Hatch, VP & Group Director, Technology Research, (david.hatch@aberdeen.com)