

# **Business Intelligence for the Small to Medium Sized Business (SMB)**

Analytics Reaches Down Market

October 2008

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## Executive Summary

As information flows more freely in the business world, decisions need to be made quicker and based on sturdier data. The analytical capability that was once reserved for large enterprises has now permeated the world of Small to Medium Businesses (SMBs) and provided a solid foundation of visibility into what really matters to these companies. Aberdeen's research shows a marked uptake in the use of Business Intelligence (BI) solutions in the SMB market over the past year. Based on feedback from almost 650 end-user organizations, this report serves as a roadmap for SMBs looking to improve their analytical capability and achieve Best-in-Class performance through the deployment of BI.

### 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

### Best-in-Class Performance

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Aberdeen used four key performance criteria to distinguish Best-in-Class SMBs from Industry Average and Laggard SMBs:

- **Time-to-information.** 58% of Best-in-Class SMBs provide access to key information in real-time or near real-time versus 21% of Industry Average SMBs and 5% of Laggards
- **Utilization of BI assets.** 100% of Best-in-Class SMBs deliver self-service BI capability to non-technical end users, compared with 60% of Industry Average SMBs and 18% of Laggards
- **Employee productivity.** Best-in-Class SMBs achieved a mean average 11% increase in employee productivity - defined as time spent looking for information - compared with a 2% increase for the Industry Average and an 8% decrease for Laggards
- **Cost-per-user of BI applications.** Best-in-Class SMBs drove a 9% mean average reduction in cost-per-user of BI applications, versus a 0% reduction for the Industry Average and a 6% increase for Laggards

### Competitive Maturity Assessment

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

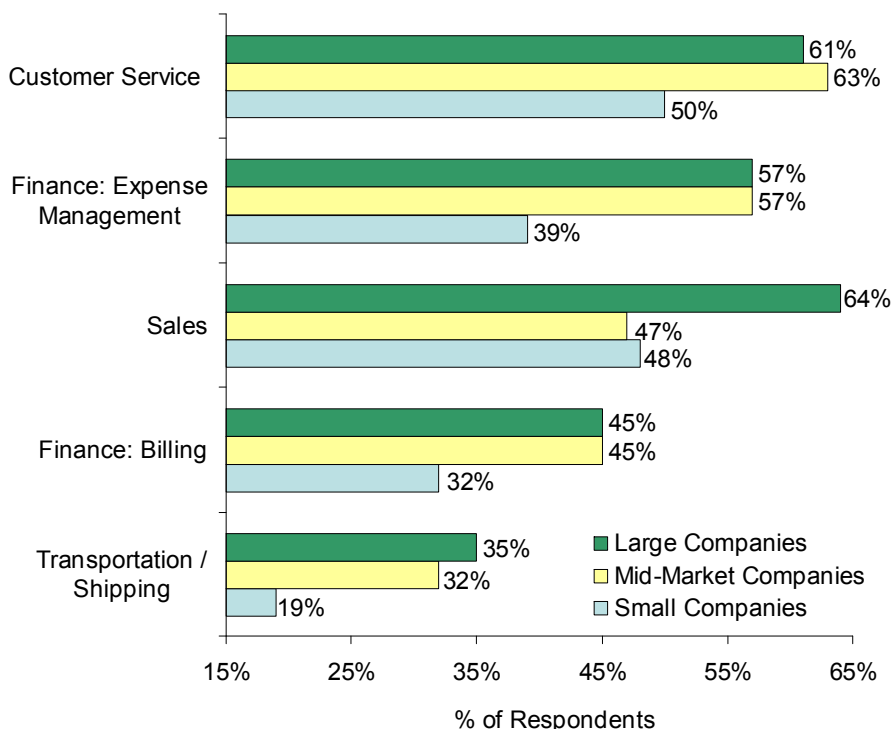
- Best-in-Class SMBs are **nearly three-times more likely** than Laggards to utilize a formal process of data collection and integration for BI projects
- Best-in-Class SMBs are **2.5-times more likely** than Laggards to automate report generation and deliver to end-users
- Best-in-Class SMBs are **almost four-times more likely** than Industry Average SMBs to have the ability to monitor usage levels of the BI system (number of users accessing)

## Required Actions

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

- Create a formalized training program for BI usage
- Define the BI and IT skill sets necessary to meet their goals
- Invest in BI dashboard technology

**Figure 1: Top Departments Driving the Need for BI**



Source: Aberdeen Group, October 2008



"We were using a variety of reporting methods for our different business systems. Some of that reporting was built into the system; other reporting was done in Excel by exporting data out of the system. After implementing a BI solution, we solved several problems:

1) We established a common platform for reporting for all systems.

2) The BI tool allowed us to integrate data across multiple business systems (ERP, CRM, web data, etc.) to provide more 'intelligent' reports.

3) We were given tremendous flexibility and capability in developing reporting and analysis tools.

Now we can easily create dashboards. Plus we can deploy reports across a web-based platform for anyone to view - without the need to install additional software on everyone's PC's."

~ Allan Dziwoki, Senior Director - Business Services, Mitsubishi Electric & Electronics USA

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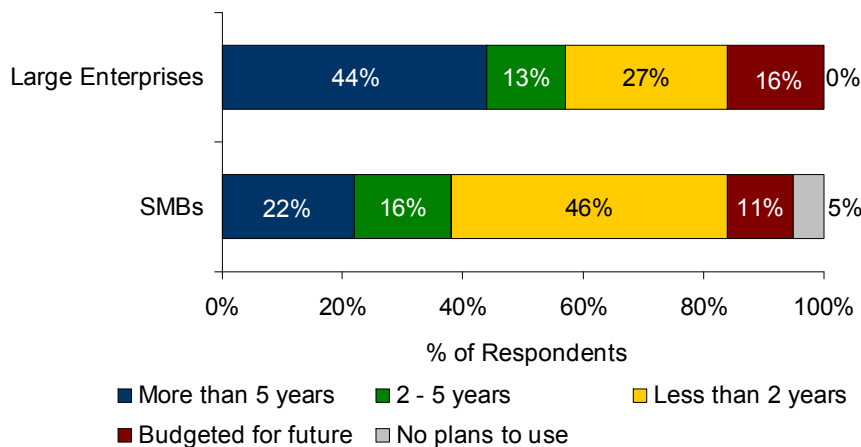
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## Chapter One: Benchmarking the Best-in-Class

### Business Context

From the bootstrapping startup to the large enterprise, just about every organization can benefit from the type of informed decision-making that Business Intelligence (BI) solutions can provide. Until somewhat recently however, implementation time, IT and end user skill set requirements, data management complexity, and deployment costs have presented major barriers to BI adoption for all but the deep-pocketed and liberally-staffed enterprise. Now, several new solutions are targeted and priced for small-to-medium sized companies, but are these offerings geared for customers with limited IT resources and inexperienced end-users? As SMB organizations (defined in this context as companies with annual revenue under \$500 million) experience organizational growth and heightened customer expectations, the need to provide timely information to key stakeholders is of paramount importance.

**Figure 2: SMBs versus Enterprises - Age of BI Deployment**



Source: Aberdeen Group, October 2008

Aberdeen's April 2008 Benchmark Report, [Business Intelligence Deployment Strategies](#), demonstrated a predictably younger age of BI deployment in the SMB world than at large enterprises (Figure 2). However this figure also shows that 95% of SMBs report that they are using or plan to use some form of BI, even if it is spreadsheet-based today, suggesting significant momentum in this segment.

As BI technology has advanced, the options for deployment, licensing and supporting implementations have broadened significantly. With this variety of alternatives, many smaller companies can now afford the financial "ante" to acquire true BI capabilities. The transformation and maturation of the IT world has paved the way for BI solutions that boast usability and lower

### Definition of Terms

In the context of this study, Small to Medium Businesses (SMBs) are defined as:

√ SMB = Organizations with annual revenues less than US **\$500 million**

Additionally, the total respondent pool was broken down into the following categories:

#### Small

Small businesses - annual revenue less than US **\$50 million**

#### Midsize

Midsize or mid-market companies - annual revenue between US **\$50 million and \$500 million**

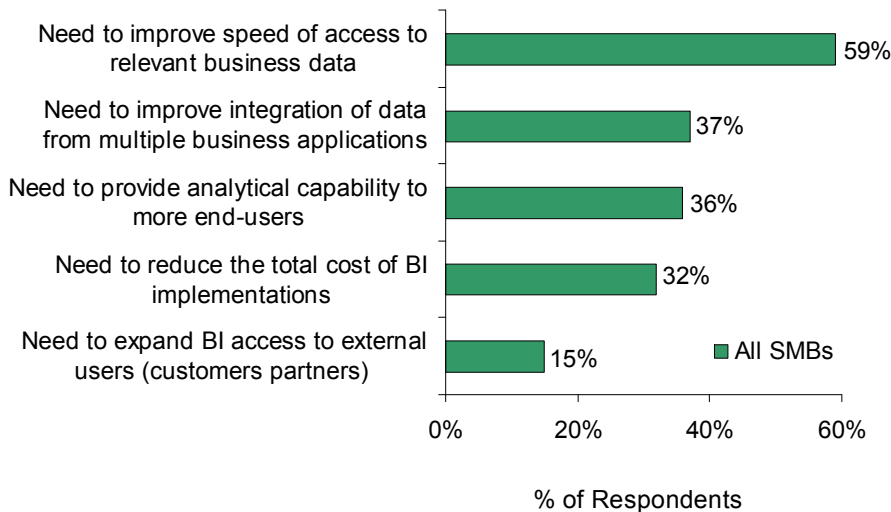
#### Large

Large organizations/enterprises - annual revenue more than US **\$500 million**

implementation costs as being far more palatable to SMB companies. SMBs are investing in a variety of BI technologies and services including industry-specific tools, web-hosted applications, and a diversity of other analytical solutions to capture their own breed of BI capabilities.

The reduced cost (including free software) of some newer solutions certainly plays into the increased adoption of BI, however there are numerous other external factors that compel SMBs in this direction. SMBs are now looking to make better decisions based on higher quality information and therefore strive for enhanced speed of access to their data. Additionally, while large enterprises typically face a degree of IT complexity that dwarfs smaller companies, the challenge of integration is very much prevalent in the SMB space as well. Figure 3 outlines the top challenges that compel SMBs to invest in BI and analytical technology.

**Figure 3: Top Business Pressures Driving BI Deployment for SMBs**



Source: Aberdeen Group, October 2008

In addition to providing the right information to the right decision makers, another major challenge for SMBs is delivering the analytical capability and BI functionality to all the users who can benefit from its use. The data also shows, perhaps not surprisingly, that cost is a major issue for SMBs. Viewed in totality, the information above suggests that SMBs are developing a holistic strategy for BI that encompasses the proper integration of disparate back-end systems, the appropriate deployment option for their particular organization, and the management of cost that includes not only up-front costs but ongoing maintenance and hidden costs as well.

### The Maturity Class Framework

Aberdeen used four key performance criteria to distinguish the Best-in-Class SMBs from Industry Average and Laggard organizations.

#### Fast Facts

Top vendor-provided services in use for SMBs (percentage of respondents currently using):

- ✓ Annual user support (via telephone, email, web): 60%
- ✓ On-line and / or printed documentation: 60%
- ✓ Annual software maintenance (upgrades and bug fixes): 57%
- ✓ Access to a community of end-users and peers for ad hoc support and Q&A activity: 44%
- ✓ End-user training: 39%

- **Time-to-information.** Percentage of respondents who provide access to data in "real-time" or "near real-time"
- **Utilization of BI assets.** Percentage of respondents who deliver self-service BI capability to non-technical end-users
- **Employee productivity.** Mean average change in employee productivity - defined as time spent looking for information
- **Cost-per-user of BI applications.** Mean average change in cost-per-user of BI applications

**Fast Facts**

Pervasiveness of BI deployment for small-to-medium businesses:

- √ Departmental (sales, marketing, finance): 42%
- √ Enterprise-wide: 34%
- √ Project based (defined project with end date): 19%
- √ External facing (extranet, service bureau, etc...) 5%

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

Definition of Maturity Class	Mean Class Performance
<p><b>Best-in-Class:</b> Top 20% of aggregate performance scorers</p>	<ul style="list-style-type: none"> <li>▪ 58% provide access to key information in real-time or near real-time</li> <li>▪ 100% deliver self-service BI capability to non-technical end users</li> <li>▪ 11% average improvement in employee productivity</li> <li>▪ 9% average reduction in cost-per-user of BI applications</li> </ul>
<p><b>Industry Average:</b> Middle 50% of aggregate performance scorers</p>	<ul style="list-style-type: none"> <li>▪ 21% provide access to key information in real-time or near real-time</li> <li>▪ 60% deliver self-service BI capability to non-technical end users</li> <li>▪ 2% average improvement in employee productivity</li> <li>▪ 0% average reduction in cost-per-user of BI applications</li> </ul>
<p><b>Laggard:</b> Bottom 30% of aggregate performance scorers</p>	<ul style="list-style-type: none"> <li>▪ 5% provide access to key information in real-time or near real-time</li> <li>▪ 18% deliver self-service BI capability to non-technical end users</li> <li>▪ 8% average <b>decline</b> in employee productivity</li> <li>▪ 6% average <b>increase</b> in cost-per-user of BI applications</li> </ul>

Source: Aberdeen Group, October 2008

**The Best-in-Class PACE Model**

Achieving the performance levels shown in Table 1 requires blending a combination of strategic actions, organizational capabilities, and enabling technologies that are summarized in Table 2.

**Table 2: The Best-in-Class PACE Framework**

Pressures	Actions	Capabilities	Enablers
<ul style="list-style-type: none"> <li>Need to reduce time to information for end-users</li> </ul>	<ul style="list-style-type: none"> <li>Understand end-user requirements for BI</li> <li>Define the business rules and calculations required for reports and analysis</li> </ul>	<ul style="list-style-type: none"> <li>Automation of report generation</li> <li>Formal BI training program for end-users</li> <li>End-user training</li> <li>Ability to track and measure project costs versus budgets</li> <li>Integration of business rules and thresholds</li> </ul>	<ul style="list-style-type: none"> <li>Data cleansing tools</li> <li>Data integration tools</li> <li>Data warehouse software</li> <li>System integration tools</li> <li>Desktop BI</li> <li>Software as a Service (SaaS) /on-demand BI</li> </ul>

Source: Aberdeen Group, October 2008

### Best-in-Class Strategies

When it comes to the management of their BI solutions, SMBs are exhibiting a strong focus on four key areas that help them address the pressures listed in Figure 3:

- Understanding end-user requirements.** Different areas of the business require different analytical capability. Sales analysis involves the aggregation of clean and timely data to help understand current performance and where to allocate resources. Financial analysis often involves a more strategic forward looking view and typically won't carry with it the same time urgency of other areas of the business. Best-in-Class SMBs are making the effort to understand who can best drive value from BI capability and where the expertise exists within the organization.
- Automation.** Particularly from an IT perspective, reducing the number of manual steps in key business processes is a powerful way to free up resources and drive enhanced productivity. Automating the collection, assembly, and delivery of corporate information is a strategy that Best-in-Class SMBs are prioritizing in order to drive the improvements in performance listed in Table 1.
- Culture and adoption.** Communicating the value of BI, especially in a smaller organization where resources are scarce, can prove to be a daunting task. Taking strides to promote an "information culture" that permeates the organization beyond just the project level helps increase the adoption and usage of BI technology. The research shows Best-in-Class SMBs prioritizing this strategic action significantly ahead of all other SMBs.
- Integration and data management.** The notion of "garbage-in garbage-out" certainly applies at the SMB level as well. The top performing SMBs have a strategic forward looking view of data management that enables them to provide clean data, and smooth

#### Fast Facts

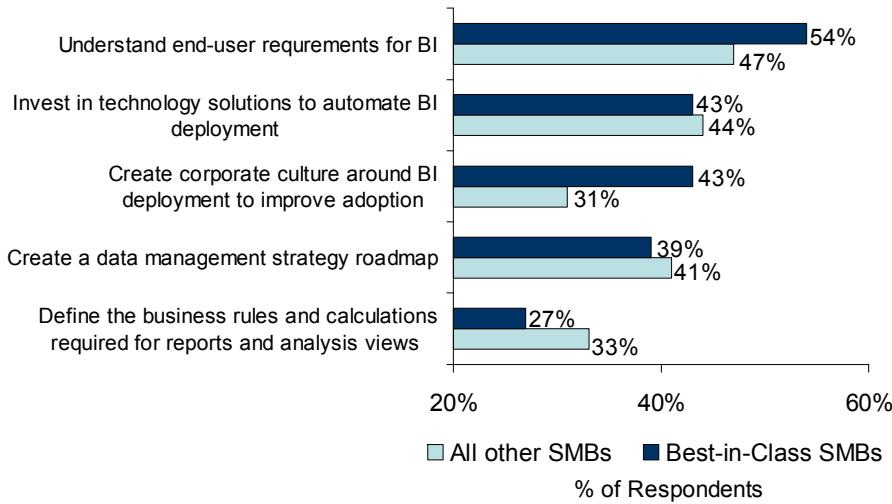
Top factors preventing SMBs from deploying BI:

- ✓ Lack of IT resources: 56%
- ✓ End-users have not provided well-defined information needs: 49%
- ✓ Lack of top management commitment to projects: 47%
- ✓ Business need is not high enough: 27%
- ✓ Software and services are too expensive: 25%



integration of that data in order to transform it into insight for better business decisions.

**Figure 4: Top Strategic Actions for Best-in-Class SMBs**



Source: Aberdeen Group, October 2008

**Fast Facts**

The company size segments are experiencing the following **annual rate of data growth:**

Small: 29% per year

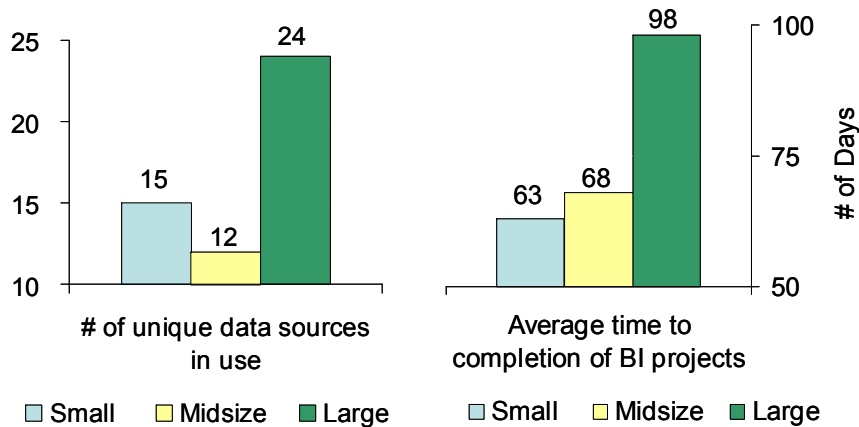
Midsize: 25% per year

Large: 26% per year

**The Challenge of Data Complexity**

Organizational expansion can be a double-edged sword. Whether attained through acquisition or solid organic growth, companies often experience an inflation in applications and data sources, the efficient management of which can prove challenging. Figure 5 illustrates how large organizations are managing large numbers of data sources and the effect this has on the time-to-completion of BI projects versus the experiences of mid-sized and smaller companies.

**Figure 5: Data Complexity = Increased Deployment Time**



Source: Aberdeen Group, October 2008

"Recently, we have been implementing Business Intelligence applications to improve our processes around budgeting, planning, and forecasting activities. As our company grows, having the ability to accurately forecast revenues and costs going forward is essential to our success. Having the appropriate BI tools available to our managers can greatly improve this process."

~ Steven Canter, CIO, Berlin Packaging

Drawing a correlation between the number of data sources in use and the time required to complete BI projects (creation of a set of reporting or analysis views to support a specific information requirement), we see that large organizations, on average, require almost 50% more time to put these analytical capabilities in place. This data serves to illuminate an opportunity for the SMB market. Particularly through new deployment options like SaaS and on-demand BI, SMBs are ideally suited to leverage their smaller size and nimbleness to deliver BI capability to the organization in an abbreviated time frame, thus paving the way for substantive productivity enhancements and cost reductions.

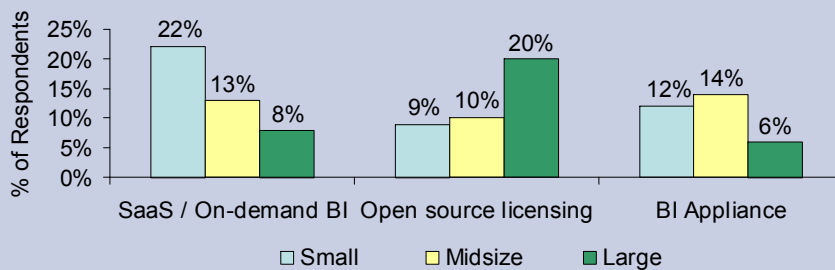
**Fast Facts**

- Best-in-Class SMBs achieved:
- ✓ A **56% ROI** on BI projects
- Compared with:
- ✓ A **37% ROI** for Industry Average SMBs
  - ✓ A **28% ROI** for Laggard SMBs

**Aberdeen Insights — Strategy**

When it comes to driving business value through BI deployment, organizations are faced with several deployment options that they can tailor to their particular analytical needs. The emergence of SaaS and on-demand BI (BI software is hosted and accessed via a third-party web-based service) has affected the deployment of BI among SMB companies. The data in Figure 6 shows that small companies are more than twice as likely as large enterprises to utilize a SaaS deployment.

**Figure 6: BI Deployment and Licensing Methods in Use**



Source: Aberdeen Group, October 2008

The data also shows a much greater adoption rate of open-source licensing in large organizations, perhaps suggesting more IT-led implementations versus business-led. In many experienced large IT organizations, without a corporate sponsor or a well defined budget, IT managers will gravitate towards open-source to "build it" rather than "buy it." Additionally, with BI appliances (BI software and / or hardware is located on-premise, but is managed and supported by a third party via VPN or other connection) the strongest adoption is currently happening in the SMB market as well. Whichever deployment or licensing method used, it is necessary to understand the total cost of ownership that extends beyond just up-front licensing costs and the cost of ongoing support and maintenance.

"In my last BI implementation we started during the development stage with BI Models as part of the solution and no single report was written by IT staff. More importantly, instead of complex data mining strategies to be implemented after the fact, we included some analytics at model creation time which allowed the automation of "warn indicators" that trigger E-Mail messages to specific individuals that were part of the project up front! In a couple of words: BI implementation from the ground-up, thus included as part of the solution while developing any project, saves huge amounts of time and therefore, money"

~ Cristian Fiedler, CIO,  
PointPAY International (Chile)  
Ltda

In the next chapter, we will see some the ways that Best-in-Class SMBs are structuring their organization in order to achieve these gains.

## Chapter Two: Benchmarking Requirements for Success

The selection of a BI solution and integration of its functionality with key business systems plays a crucial role in improving operational efficiency. The following case study demonstrates how one mid-market company was able to gain widespread access to their data and make better informed decisions in a more timely fashion.

### Case Study — US Lumber Group

Take, for example, the case of US Lumber Group. Based in Atlanta, Georgia, US Lumber is a distributor of building materials that sells and ships out of eight distribution centers spread across the southeastern US.

The initial experience with basic BI capability was time consuming and limited in scope as US Lumber used a third-party service for its report generation. The analysis and reporting was done primarily for budgeting and planning purposes and was generally confined to sales and inventory data. "We were data starved," recalls Felipe Herrera, Senior Financial Analyst at US Lumber. "We were making sophisticated decisions based on un-sophisticated information. We needed to be in a position to generate more data, faster, in order to base our decisions on developed information rather than gut feel."

After getting educated on the benefits and applicability of BI, US Lumber chose a flexible on-premise BI solution that enabled them access to all the data stored in the company ERP system. Not only was there more information available, but it was accessible on a near real-time basis, and with this availability of data, the generation and use of reports increased exponentially. Departments across the company, ranging from sales and finance, to operations and procurement, were seeing the benefit that comes along with informed decision making.

As a financial analyst, Herrera saw perhaps the greatest impact to the organization in managing the company's receivables. Especially with the fluctuations in the economy and uncertainty in the housing market, maintaining a clean and accurate Accounts Receivable (AR) is of paramount importance the cash flow of the organization. The BI tool enabled US Lumber to monitor customer payments, credit risk, and other changes to the AR account in order to stay in front of any looming threats to this critical balance sheet item.

However, the effect of BI implementation spread well beyond the financial arm of US Lumber. According to Herrera, "Once people across the company discovered all the different functionality of the solution, they started to get creative with their reporting and analytics to the point that BI and information usage has truly become ingrained into the organizational culture."

### Fast Facts

√ **50%** of Best-in-Class SMBs report having an enterprise-wide procedure for BI deployment,

Compared with:

√ **19%** of Industry Average SMBs

√ **17%** of Laggard SMBs

## 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 their results to improve their 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.

"I would say that one of the biggest advantages of using BI is that as reports are generated, I then have the ability for fast statistical analysis (I am a certified Lean 6 Sigma Black Belt). This provides me with statistically significant trends etc... I have been able to turn around this type of analysis in 24/48 hours as a result."

~ John Fraser, Auto Insurance  
Leader, GE Money UK

**Table 3: The Competitive Framework**

	Best-in-Class	Average	Laggards
<b>Process</b>	Data collection and integration process for BI projects		
	59%	37%	20%
<b>Process</b>	Method for prioritizing high-demand end-user data		
	46%	24%	23%
<b>Organization</b>	Committee or group for obtaining end-user and corporate BI requirements		
	42%	37%	24%
<b>Organization</b>	Formalized BI training program and documentation		
	38%	26%	12%
<b>Knowledge</b>	Ability to optimize queries		
	43%	25%	15%
<b>Knowledge</b>	Automated report generation and delivery to end-users		
	70%	39%	20%
<b>Performance</b>	Ability to monitor usage level of the BI system (number of users accessing)		
	59%	25%	15%
<b>Performance</b>	Ability to measure and track project costs versus budgets		
	53%	34%	31%
<b>Technology Enablers</b>	Business intelligence applications embedded in other enterprise applications (ERP, CRM, etc...)		
	48%	30%	23%
<b>Technology Enablers</b>	Data cleansing tools		
	53%	34%	27%

	Best-in-Class	Average	Laggards
<b>Technology Enablers (cont.)</b>	Data integration tools		
	76%	43%	27%
	BI data modeling or cube building tools		
	55%	32%	15%
	Operational BI reporting and analysis tools		
	53%	36%	14%
	BI dashboards		
	53%	34%	31%

Source: Aberdeen Group, October 2008

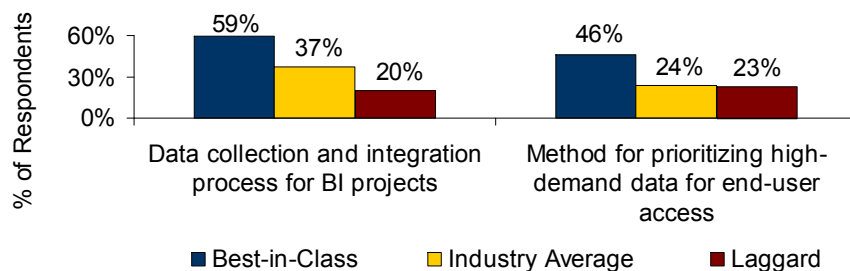
## Capabilities and Enablers

Based on the findings of the Competitive Framework and interviews with end users, Aberdeen’s analysis of the Best-in-Class demonstrates that successful deployment and use of analytical tools within the SMB market depends on a combination of specific capabilities and technology enablers. Aberdeen’s research has identified several capabilities that Best-in-Class companies leverage in order to achieve their analytical goals.

### Process

Figure 5 revealed that even small businesses manage an average of 15 unique data sources. As data is collected from these multiple sources (such as transactional systems, spreadsheets, data warehouses, and external data sources), it is of paramount importance to define a formal process for this activity. Aberdeen’s research shows that Best-in-Class SMBs are almost twice as likely as all others to have this capability (Figure 7). The research also shows that data volumes are growing at a compound rate of over 27% each year for SMBs. With this inherent complexity, completing projects in a timely fashion becomes challenging without some form of formal process and documentation.

**Figure 7: Best-in-Class Process Capabilities**



Source: Aberdeen Group, October 2008

### Fast Facts

- ✓ **63%** of large organizations are utilizing an on-premise client / server business intelligence software deployment
- Compared with:
- ✓ **50%** of midmarket companies
- ✓ **32%** of small companies

Additionally, as analytical capability grows within an organization, certain data sets hold greater value to BI users than others. Depending on the time of day or year, financial reports and analysis might be in high demand, whereas on a daily basis sales information may be the most relevant. The ability to prioritize and provide judicious access to these data sets is a capability that Best-in-Class SMBs possess.

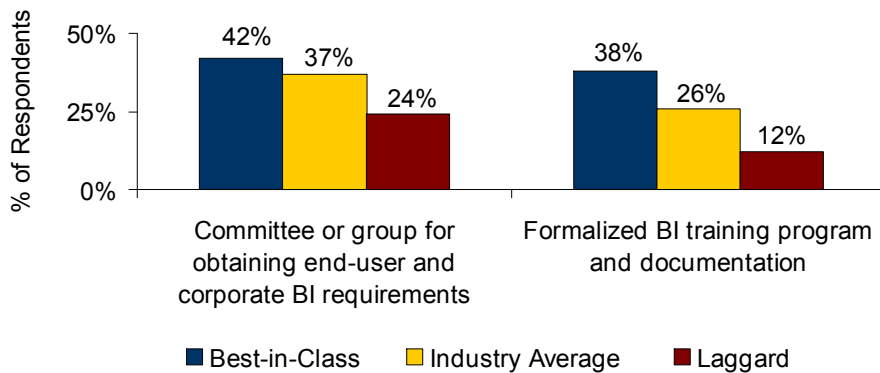
### Organization

When it comes to managing a BI deployment, it is valuable to understand who within the organization can most benefit from analytical capability and thoughtfully distribute functionality to those who can most efficiently make use of it. The research demonstrates that Best-in-Class SMBs are 75% more likely than Laggards to leverage a formalized committee or group to obtain end-user BI requirements. Utilizing this capability allows for more economical use of BI investment and helps drive better performance. Additionally, given the challenge of providing BI capability to more end users listed in Figure 3, it follows that having a formalized training program in place will help increase adoption. In fact, Best-in-Class SMBs are 46% more likely than the Industry Average to develop and use BI training program to educate the workforce and promote more widespread usage (Figure 8).

"The key deliverables we have benefited from in using our BI tool was the collaboration matrixes that have developed. In using Dashboards and Alerts with many of our processes we have adopted a Balanced Scorecard approach in building strategies between and within our operating divisions. Management has realized the potential in this tool which holds to the axiom of trust but verify!"

~ Art Johnston, CIO, Argo  
Turboserve Corporation

**Figure 8: Best-in-Class Organizational Capabilities**



Source: Aberdeen Group, October 2008

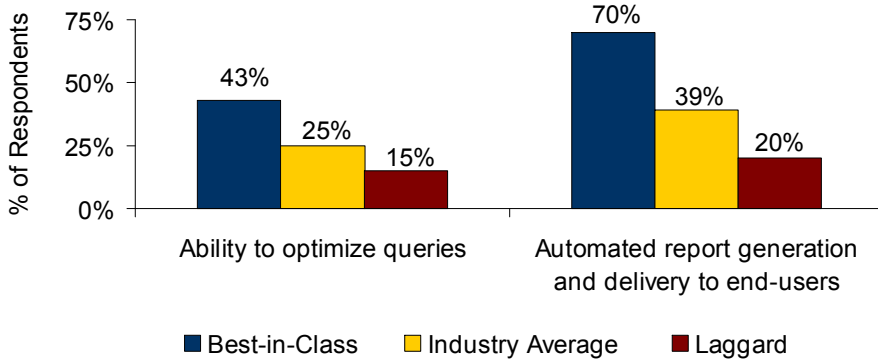
### Knowledge Management

In order to drive productivity through reduced time-to-information, an organization needs to have a strong understanding of its query process and how these different queries place strain on the data management infrastructure. Through optimization of these queries - achieved through an understanding of the query assemblage and prioritization of their delivery - companies can insure that the right data will be delivered to the right people within the required timeframes, thus enabling an elevated level of priority. Best-in-Class SMBs are twice as likely as all other SMBs to utilize query optimization (Figure 9).

#### Fast Facts

- ✓ **45%** of all SMBs are using local spreadsheets as a primary business intelligence tool
- Compared with:
- ✓ **36%** of large companies

**Figure 9: Best-in-Class Knowledge Management Capabilities**



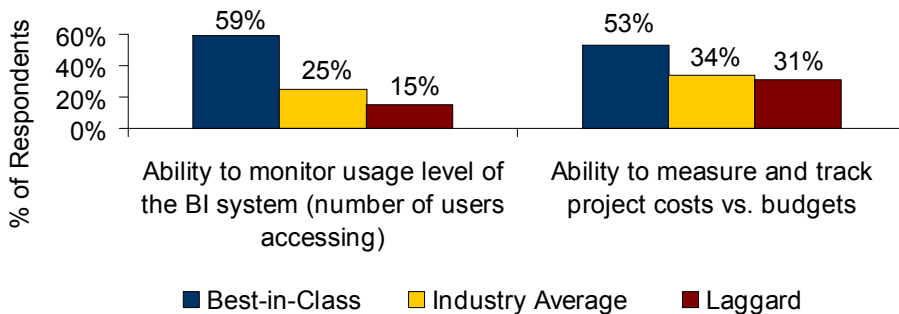
Source: Aberdeen Group, October 2008

In the SMB market, companies lacking expertise in managing the end-to-end process of BI - as it relates to Extract, Transform, Load (ETL), data warehousing and other expertise intensive processes - stand to benefit greatly through the use of automation. Aberdeen's research shows that Best-in-Class companies are 2.5-times more likely than Laggards twice as to automate report generation and delivery to end users. This capability relieves many of the manual processes that other organizations struggle with to ensure that the right information gets into the hands of the right people at the right time.

**Performance Management**

The old adage "you can't manage what you don't measure" has a very distinct application for BI within SMBs. Several of the other capabilities listed in this report, particularly with respect to prioritization and optimization of functionality, are difficult to attain without sound measurement of how, and to what extent the BI solution is being used. Top performing SMBs were more than twice as likely as all other organizations to monitor the usage level of the BI system (Figure 10).

**Figure 10: Best-in-Class Performance Management Capabilities**



Source: Aberdeen Group, October 2008

**Fast Facts**

- ✓ **83%** of large organizations are currently using data warehouse software
- Compared with:
- ✓ **64%** of midmarket companies
- ✓ **46%** of small companies

"From a user benefit perspective, as you increase usage of BI you decrease the total cost of ownership while at the same time increasing the total return / benefits from the solution. Especially if you are using BI in a real-time or near real-time basis, your users then have a chance to make business decisions and take action in a very short period of time. If something happening in sales they can catch this immediately and take action accordingly. As soon as everyone takes part in decision making, the company performs better I think."

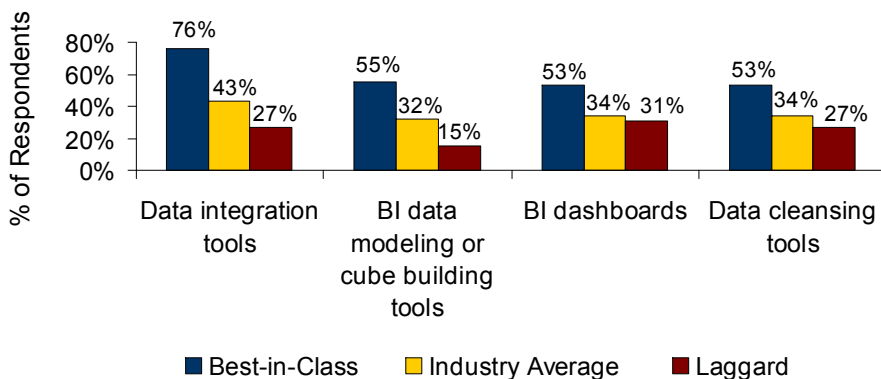
~ IT Manager, US Based Transportation & Logistics Company

An additional capability that provides significant value to organizations looking to manage the total cost of a BI implementation is the ability to track how the money is being spent with respect to the allocated funds. With traditional on-premise deployments, the costs can build up and rise above budget very quickly. By keeping a close eye on project costs throughout the process, companies are better positioned to keep those costs down and stay within budget. This is critical to the ability to measure the ROI of a BI investment.

### Technology

While technology on its own can't deliver substantial performance improvements, when used in combination with many of the tactical capabilities listed above it can enable markedly improved decision making and more visibility into the business. Aberdeen's research shows that Best-in-Class SMBs have made substantially more investments in technology than all other companies (Figure 11). These top performing SMBs are utilizing technology in all three main elements of BI - collection, assembly, and delivery. The IT complexity that SMBs face necessitates the use of tools that can integrate disparate data sources into one common pool. Best-in-Class SMBs are 2.8-times more likely than Laggards to utilize data integration tools to aid in their collection process.

**Figure 11: Best-in-Class Technology Enablers**



Source: Aberdeen Group, October 2008

Aberdeen's research shows that one of the top complaints that SMBs have in regards to their BI solution is that "the data within reports is not clean enough for decision-making." In order to combat this challenge and promote better data assembly, the Best-in-Class are utilizing data cleansing tools at a significantly higher rate than their peers. Lastly, when it comes to increasing BI adoption and delivering analytical capability to more end users, BI dashboard tools offer delivery of key performance indicators that help managers make better decisions in a timely fashion. Aberdeen's research shows that Best-in-Class SMBs are 70% more likely than all other SMBs to leverage BI dashboard visualization tools.

#### Fast Facts

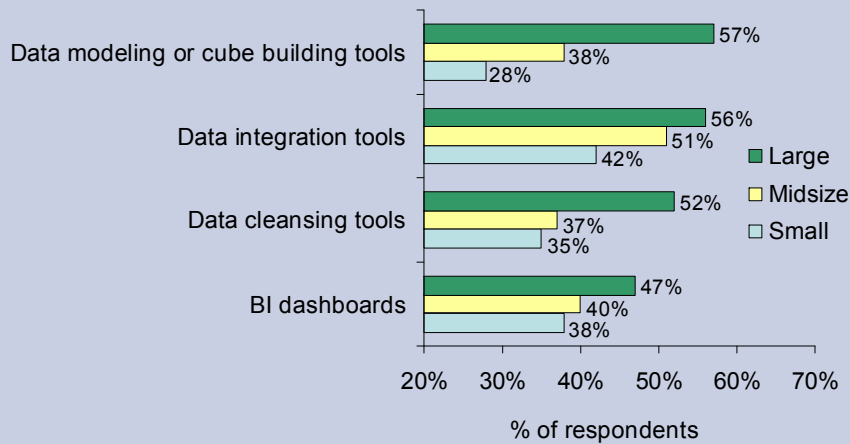
- ✓ **42%** of large organizations are currently using stand-alone ETL tools
- Compared with:
- ✓ **31%** of midmarket companies
- ✓ **21%** of small companies



**Aberdeen Insights — Technology**

Despite the fact that Best-in-Class SMBs have a far greater adoption rate than their peers when it comes to the technologies listed above, both the small and midsize segments in aggregate are significantly behind their enterprise counterparts in terms of deployment (Figure 12).

**Figure 12: Technologies in Use by Company Size**



Source: Aberdeen Group, October 2008

In some cases, this slower technology adoption rate in the SMB space can be attributed simply to limited financial and human capital resources. However, as more vendors offer these types of features in a low cost easy-to-use package, SMBs are in a better position to leverage analytical technology than ever before. Aberdeen's research shows that Best-in-Class SMBs are already equipped with the organizational capability required for success with BI implementation. The opportunity now is to scrutinize the organization's analytical requirements and financial capacity in preparation for deployment of the appropriate technologies that will enable growth.

## Chapter Three: Required Actions

Whether a company is trying to move its performance in BI deployment from Laggard to Industry Average, or Industry Average to Best-in-Class, the following actions will help spur the necessary performance improvements for SMBs:

### Laggard Steps to Success

- **Examine methods to automate report generation and delivery.** In an organization where resources are scarce, the ability to alleviate the burden of manual processes is of paramount importance to efficient resource utilization. Aberdeen's research shows that only 20% of Laggards have this capability, compared with 70% for Best-in-Class. Removing some of the pitfalls of end-to-end BI management through automation will help Laggard SMBs to deliver valuable reports to the right people within the organization at the right time, all without the time required to do it manually and the associated cost.
- **Create a formalized training program for BI usage.** One of the complaints uncovered through Aberdeen's one-on-one end-user discussions was that the BI tool was not being used by enough of the key decision makers within the organization. A likely reason for this slow adoption is a lack of understanding and expertise on the part of the managers best positioned to use the BI tool. A relatively low impact solution for this problem is to develop training programs and leverage in-house BI expertise to help educate end-users on the power and functionality of the BI solution. According to the data, only 12% of Laggards are currently using these training programs, less than one-third the rate of a Best-in-Class SMB. Building these training programs will help increase adoption of BI within the organization as well as help foster a corporate culture around the value of data analytics.
- **Investigate the use of data cleansing tools.** Another complaint revealed through qualitative interviews and survey instruments was the notion that organizational data is not well-structured or clean enough to draw any valuable insight from its analysis. Data cleansing tools help reduce the manual burden of data management and generate more relevant valuable information for analysis. The data shows that only 22% of Laggard SMBs are using these tools, compared with 63% for the Best-in-Class. Addressing the underlying cause for bad data and utilizing data cleansing tools will greatly improve the quality and usability of organizational information. Given that the value of business analysis is so closely tied to the underlying data, these tools will help transform data into timely, well-founded business decisions.

### Fast Facts

- √ SMB respondents reported a mean average **29% increase** in the number of knowledge workers over the past year

"One of the challenges of BI use in the SMB market is getting more employees to leverage more of the solution's functionality. This involves creating a culture that encourages the use and delivery of information for better decision making. Many of the SaaS BI tools available can help alleviate the financial and technical burden of BI deployment, but in order to deliver measurable business impact, these small and mid-size companies must seek to integrate the ideals of BI into their corporate culture"

~ CEO, US Based Financial  
Marketing Services Firm

## Industry Average Steps to Success

- **Define the BI and IT skill sets necessary to meet goals.** As technology has advanced in functionality and usability, organizations are leveraging more than just IT skills to deliver value through tools like BI. Increasingly, the business decision makers are more poised than ever to leverage BI capability to drive better decisions. However, one of the major roadblocks to successful project implementation is having a misalignment between what needs to be done, and the skills available to do it. The data shows that only 25% of Industry Average SMBs report having well-defined skill sets mapped to the goals of a particular project. Especially in the SMB market, an organization-wide BI solution may require augmenting in-house skills and competencies with external assistance. With a solid understanding of the required skill sets to complete a BI implementation, the Industry Average will be better prepared to meet the budget and time-frame set forth at the outset.
- **Improve ability to monitor the usage level of the BI system.** Regardless of the level of investment made, efficient BI usage requires avoiding the pitfalls of under-utilization and in some cases, over-utilization. In order to justify the investment in a BI system an organization needs a critical mass of users who understand how to make it work for their particular area. With low utilization much of the investment can waste away without ever delivering the value promised. Conversely, without prioritizing business-critical data and applications, the BI system can be strained and over-utilized to the point of delivering insight too slow to fit the necessary time frames. Mitigating these risks is not possible without visibility into usage of the BI system, and the research shows that only 25% of Industry Average SMBs have the ability to monitor this usage level, compared with 59% for the Best-in-Class. By gaining this visibility into BI usage, organizations will be better positioned to validate their BI investment and drive tangible business performance improvements.
- **Invest in BI dashboard technology.** Delivering analytical capability to non-technical end-users requires making the front-end functionality more palatable to a business decision maker rather than an IT person. BI dashboards accomplish this by generating a clear visual interpretation of key business performance indicators and facilitate better decision making based upon that information. Given that 100% of Best-in-Class SMBs were able to provide self-service BI capability to their end-users, it should come as no surprise that the Best-in-Class were 56% more likely than the Industry Average to leverage BI dashboards. Through the use of BI dashboard technology, business users at these Industry Average SMBs will be able to gain a clear picture of business performance, see changes as they happen, and make decisions that will positively impact the overall performance of the organization.

### Fast Facts

Top SMB complaints about their current BI capabilities:

- √ The data required to answer business questions is not fully available in the current BI implementation: 61%
- √ The data within reports and analytic views is not correct / clean enough for decision-making: 29%
- √ The BI interface and tools are too difficult to use and require to high a level of IT capability: 27%

## Best-in-Class Steps to Success

- **Establish a BI center of excellence.** In light of how widespread the applicability of BI can be within an organization - sales, marketing, finance, IT, customer service, etc... - having a cross-functional understanding of BI needs and where BI can best be used facilitates smoother implementation and more efficient use. A BI center of excellence is an independent internal organization that represents all departments and focuses on increasing the understanding of the BI system as well as training on the intricacies of its particular deployment. According to the research, only 11% of Best-in-Class SMBs reporting having this capability. In order to maintain and improve their elevated level performance in employee productivity and self-service BI capability, Best-in-Class SMBs can create a BI center of excellence to communicate best practices for analysis that is directly tied to company specific data.
- **Leverage automated alert reporting tools.** Having a strong foothold in all three areas of collection, assembly, and delivery of key organizational information, Best-in-Class SMBs should now consider taking it a step further and remove one more manual step in the process of decision making. The performance shown in Table I shows how a majority of Best-in-class SMBs report having information available in real-time or near real-time. This means that things change, and they change fast. Having dashboard visualization into key business metrics is valuable only to the extent that it is monitored. If state changes occur when the system is not being used, threats can be missed and opportunities can be lost. Automated alert reporting tools will provide faster visibility into these key state changes and allow for faster response.

"BI tools play a significant part of each business process at our organization. The insights we derive allow us to not only manage the business more efficiently, but also are a key determining factor in our increased satisfaction index with clients and suppliers"

~ Fabrizio P. Busso-Campana,  
Vice President, Marketorum

### Aberdeen Insights — Summary

At most SMBs, deep BI technical expertise is hard to come by. While SMBs most certainly see an increased need for analytical capability, they also need to provide their managers and decision makers with a solution that is easy to use and can be integrated with the existing applications. Additionally, with scarce resources to draw upon, cost also factors heavily into the choice of BI solution. Below are the top 5 most important criteria that SMBs prioritize in selecting a BI solution:

1. Ease of use for end users
2. Software license cost
3. Implementation consulting costs
4. Integration capabilities with other applications
5. Ongoing support costs

*continued*

### Aberdeen Insights — Summary

While the choice of a solution certainly factors into the performance depicted in Table 1, success in BI implementation is also heavily driven by a company's organizational maturity. Top performing SMBs have a strong focus on building a portfolio of tactical capabilities that span the areas of process, organization, knowledge management, and performance measurement. Leveraging these capabilities has enabled Best-in-Class SMBs to realize significant improvements in employee productivity.

*Send to a Friend* 

## Appendix A: Research Methodology

Between February and April 2008, Aberdeen examined the use, the experiences, and the intentions of more than 640 SMBs using business intelligence technology in a diverse set of enterprises.

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

Responding enterprises included the following:

- *Job title / function:* The research sample included respondents with the following job titles: operations manager (13%); IT manager or staff (39%); sales and marketing staff (17%); logistics / procurement manager (6%) senior management (25%).
- *Industry:* The research sample included respondents from numerous industries. The largest segments represented were: High tech / software (23%); education (10%); financial services (9%); and retail (8%).
- *Geography:* The majority of respondents (61%) were from North America. Remaining respondents were from the Asia-Pacific region (13%) and Europe (26%).
- *Company size:* Twenty-three percent (47%) of respondents were from midsize enterprises (annual revenues between \$50 million and \$500 million); and 53% of respondents were from small businesses (annual revenues of \$50 million or less).
- *Headcount:* Twenty-three percent (19%) of respondents were from large enterprises (headcount greater than 1,000 employees); 41% were from midsize enterprises (headcount between 100 and 999 employees); and 40% of respondents were from small businesses (headcount between 1 and 99 employees).

Solution providers recognized as sponsors were solicited after the fact and had no substantive influence on the direction of this report. Their sponsorship has made it possible for Aberdeen Group to make these findings available to readers at no charge.

### Study Focus

Responding SMB executives completed one or more of three online surveys that included questions designed to determine the following:

- √ The degree to which business intelligence is deployed in their company and the operational implications of the technology
- √ The structure and effectiveness of existing business intelligence implementations
- √ Current and planned use of business intelligence to aid operational and promotional activities
- √ The benefits, if any, that have been derived from business intelligence initiatives

The study aimed to identify emerging best practices for business intelligence usage, and to provide a framework by which readers could assess their own management capabilities.

**Table 4: The PACE Framework Key**

Overview
<p>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:</p> <p><b>Pressures</b> — external forces that impact an organization’s market position, competitiveness, or business operations (e.g., economic, political and regulatory, technology, changing customer preferences, competitive)</p> <p><b>Actions</b> — 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)</p> <p><b>Capabilities</b> — the business process competencies required to execute corporate strategy (e.g., skilled people, brand, market positioning, viable products / services, ecosystem partners, financing)</p> <p><b>Enablers</b> — 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)</p>

Source: Aberdeen Group, October 2008

**Table 5: The Competitive Framework Key**

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

Source: Aberdeen Group, October 2008

**Table 6: Relationship Between PACE and the Competitive Framework**

PACE and the Competitive Framework – How They Interact
<p>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.</p>

Source: Aberdeen Group, October 2008

## Appendix B: Related Aberdeen Research

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

- [\*One Version of the Truth 2.0: Are Your Decisions Based on Reality?\*](#); September 2008
- [\*Operational KPIs and Performance Management\*](#); August 2008
- [\*Business Intelligence Deployment Strategies\*](#); April 2008
- [\*Data Management for Business Intelligence\*](#); March 2008
- [\*Managing the TCO of Business Intelligence\*](#); February 2008
- [\*Operational BI: Getting Real Time About Performance\*](#); December 2007

Information on these and any other Aberdeen publications can be found at [www.Aberdeen.com](http://www.Aberdeen.com).

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