

# Delivering Actionable Information to the Enterprise:

## Does On-Demand BI Solve the Skill Set Shortage?

July 2007

~ Underwritten, in Part, by ~



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## Executive Summary

Organizations are prioritizing the timely, effective delivery of actionable information to the enterprise. This requires that companies have the ability to combine, aggregate and integrate information, and then deliver it to people when, where and how they need it. The business intelligence (BI) skill sets that are required to meet this demand are in limited supply, and the ability to integrate data from all sources is scarce. This has resulted in projects that are delayed, over-budget, and are often lacking the data and information necessary to meet business goals. This report is a roadmap for companies who want to achieve improvements in enterprise information delivery through Best-in-Class (BIC) use of BI technologies.

### Best in Class Performance

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Aberdeen used four key performance criteria to distinguish Best-in-Class companies. BIC organizations showed significant improvements in all four areas over the previous two years:

- **58%** have decreased the time-to-completion of BI projects
- **79%** have increased on-budget completion of BI projects
- **36%** have decreased the cost-per-user of BI applications
- **32%** Reported that increasing the number of people in the organization with relevant BI/IT skill sets directly impacted revenue

Additionally, **83%** of Best-in-Class organizations have seen an **increase in enterprise-wide use of BI applications**. This suggests that when BI applications are delivered enterprise-wide, performance is improved. Of this Best-in-Class group, **90% receive access to information within a day** of actual business activity.

### Competitive Maturity Assessment

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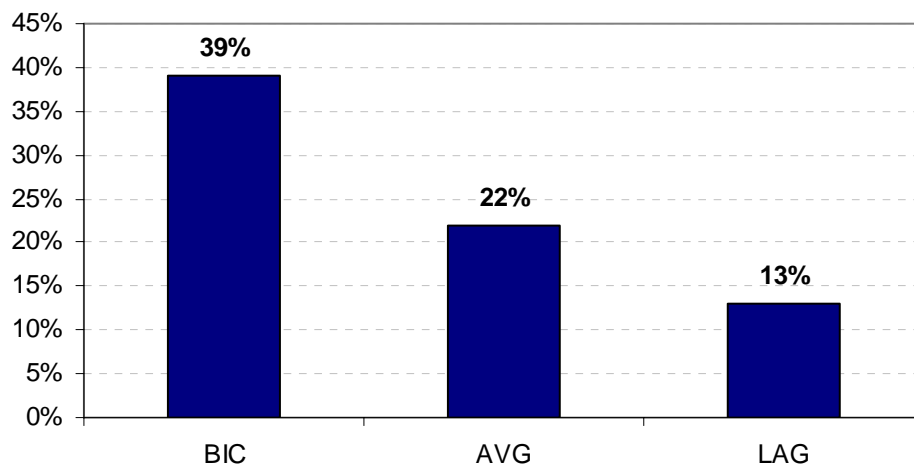
Survey results show that the organizations enjoying BIC performance shared several common characteristics with respect to their ability to deliver actionable information to the enterprise:

- **32%** of BIC organizations report a direct impact on revenue through increasing the number of people in the organization with relevant IT/BI skill-sets. This is more than twice the rate of Industry Average companies (15%), and four times the rate of Laggards (8%).
- **39%** of BIC companies deliver actionable information to a majority of stakeholders via a self-service environment. This is almost twice the rate of Average (22%) and three times the rate of Laggard companies (13%).
- **16%** of BIC companies currently use BI software applications accessed through a 3rd-party (Software as a Service, Hosted, On-Demand, hosted appliance, etc). This is twice the rate of Industry Average and Laggard companies.

## Required Actions

In addition to the specific recommendations in chapter 3 of this report, to achieve Best-in-Class performance, organizations must move toward a self-service BI environment. The need for IT involvement reduces efficiency, elevates cost, and lowers an organization's ability to deliver actionable information when, where and how people need it. Best-in-Class (BIC) organizations have reported a far greater propensity to achieve self-service BI than Industry Average and Laggard companies [Figure 1].

**Figure 1: Self-Service BI to most information stakeholders**



Source: Aberdeen Group, July 2007

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## Chapter One: Benchmarking the Best in Class

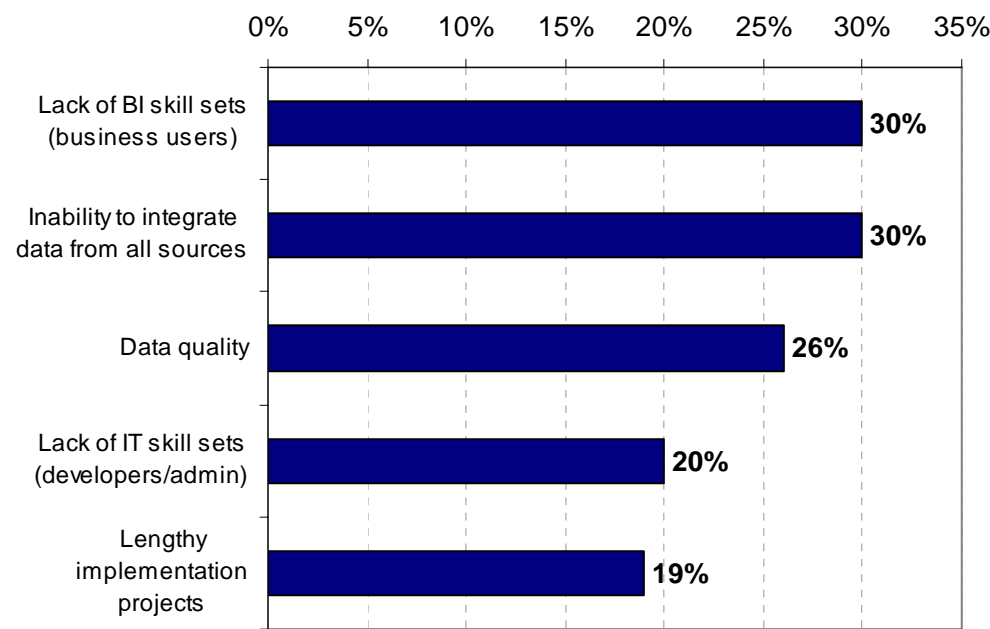
### Aberdeen Analysis

Over 80% of all companies surveyed rate the delivery of actionable information to the enterprise as a top-10 priority, yet 37% report that enterprise use of business intelligence applications has remained the same, decreased, or that they do not know which way usage is trending. Companies are seeking to overcome staffing, process, organizational, and financial barriers to achieve improved performance in several areas:

- Increased access to actionable information – to new stakeholders who have been underserved in the past
- Improved delivery of actionable information – via a self-service method to the enterprise
- Decreased “time to completion” of BI projects – to accelerate the decision-making process
- Controlled cost and financial impact – of delivering information within known technical and resource constraints

The top pressures driving these initiatives [Figure 2] are the need to develop the BI skill sets among business users (30%), and the capability to integrate data from all sources (30%).

**Figure 2: Top pressures**



Source: Aberdeen Group, July 2007

### Fast Facts

- √ **33%** of those surveyed indicate they have deployed BI applications at a department or project level, yet **only 23%** of these respondents say they have a documented process for measuring ROI of each BI project.
- √ **38%** of organizations with enterprise-wide BI deployments currently or plan to use BI software applications accessed through a 3rd-party (i.e. Hosted, On-Demand, SaaS, etc).

## Maturity Class Framework

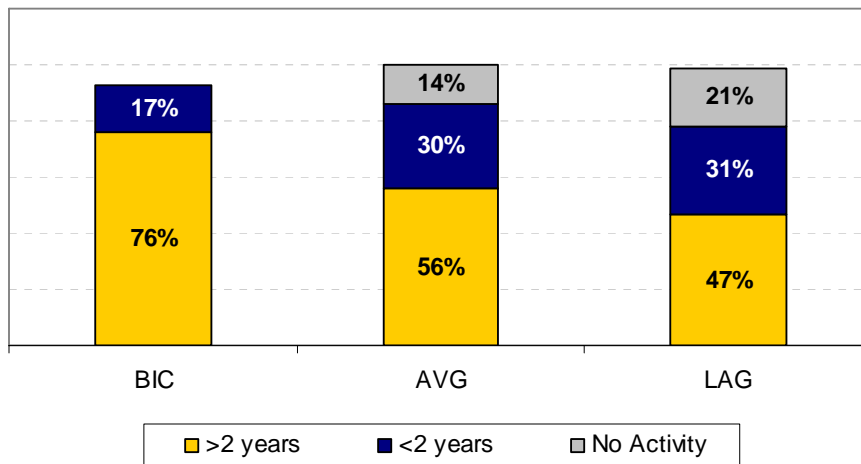
Aberdeen used four performance criteria to distinguish Best-in-Class (BIC) companies from Industry Average and Laggard organizations [Table 1]:

**Table 1: Companies With Top Performance Earn “Best-in-Class” Status:**

Definition of Maturity Class	Mean Class Performance
<b>Best in Class:</b> Top 20% of aggregate performance scorers	<ul style="list-style-type: none"> <li>• 58% have decreased the time-to-completion of BI projects</li> <li>• 79% have increased on-budget completion of BI projects</li> <li>• 36% have decreased the cost-per-user of BI applications</li> <li>• 32% reported that increasing the number of people in the organization with relevant BI/IT skill sets directly impacted revenue</li> </ul>
<b>Industry Average:</b> Middle 50% of aggregate performance scorers	<ul style="list-style-type: none"> <li>• 18% have decreased the time-to-completion of BI projects</li> <li>• 12% have increased on-budget completion of BI projects</li> <li>• 16% have decreased the cost-per-user of BI applications</li> <li>• 15% reported that increasing the number of people in the organization with relevant BI/IT skill sets directly impacted revenue</li> </ul>
<b>Laggard:</b> Bottom 30% of aggregate performance scorers	<ul style="list-style-type: none"> <li>• 2% have decreased the time-to-completion of BI projects</li> <li>• 0% have increased on-budget completion of BI projects</li> <li>• 7% have decreased the cost-per-user of BI applications</li> <li>• 8% Reported that increasing the number of people in the organization with relevant BI/IT skill sets directly impacted revenue</li> </ul>

93% of Best-in-Class companies have started pursuing enterprise-wide delivery of actionable information, and 76% have been actively pursuing this [Figure 3] for over two years. Meanwhile, 14% of Average companies and 21% of laggards have not yet begun to develop a strategy.

**Figure 3: BIC experienced with enterprise information delivery**



Source: Aberdeen Group, July 2007

## Best in Class PACE Model

The top pressure that Best-in-Class companies face is a lack of internal BI skill sets. A combination of strategic actions, organizational capabilities and enabling technologies has been identified by Best-in-Class companies. These can be summarized as follows...

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

Pressures	Actions	Capabilities	Enablers
<ul style="list-style-type: none"> <li>Lack of internal BI skill sets (business users)</li> </ul>	<ul style="list-style-type: none"> <li>Develop a training program to increase IT and BI (user) skill sets</li> <li>Establish a BI Center of Excellence to facilitate enterprise-wide use of BI</li> <li>Undertake pilot or proof of concept project with vendors</li> <li>Engage a 3rd-party consultant or systems integrator</li> <li>Seek vendor demonstrations and customer references</li> </ul>	<ul style="list-style-type: none"> <li>Well defined skill sets required to deliver actionable information</li> <li>Acquisition of an enterprise BI application or toolset</li> <li>Ability to effectively measure and track BI project timelines and deadlines</li> <li>An effective method for training internal and external users on new BI applications</li> <li>Established recruiting process for attracting necessary IT/BI skill sets</li> <li>A documented method for measuring the cost of BI application development and deployment</li> </ul>	<ul style="list-style-type: none"> <li>On-site installed BI software applications (query/reporting, analytics, dashboards, scorecards, etc)</li> <li>Microsoft Excel only (or other spreadsheet program)</li> <li>Emailed/Faxed reports</li> <li>Printed/Static reporting</li> <li>BI software applications embedded within other enterprise applications (ERP, CRM, CPM, etc)</li> <li>3rd-party consulting services</li> <li>BI software applications accessed through a 3rd-party (Software as a Service, Hosted, On-Demand, hosted appliance, etc)</li> </ul>

Source: Aberdeen Group, 2007

### Aberdeen Insights – Strategy

Traditional BI application development projects consist of long, complex implementations that are characterized by difficult data integration issues, costly software licenses, and user training requirements (all three are reported as top pressures) that are often beyond the time and skill-set boundaries of the organization. This has presented a problem for CIOs who must meet demand for the delivery of actionable information, but are constrained by budget, time and skill set limitations. In fact, as cited in [The 2007 Aberdeen Report](#), over 3,600 companies surveyed ranked “perform despite budget constraints” as the #1 business driver of technology priorities.

Best-in-Class organizations have come to realize that traditional approaches may not be the answer. In order to affect performance, information must be:

- **Actionable** – relevance is tied to business goals
- **Timely** – information must be delivered within a time-frame that provides opportunity to act
- **Accessible** – knowledge workers and decision-makers must be able to grasp the meaning of the information and take advantage of the BI tools without a high requirement for arcane technical skills

Based on the performance measures of Best-in-Class organizations in Table 1, there is a lot to be gained from adopting a best-practices approach to information delivery for the purposes of decreasing costs and project timelines, increasing on-budget project completion, and addressing previously underserved employees. The BI and IT skill sets necessary to achieve these objectives are in demand, and companies are striving to find the right mix of internal strategies and tactics, along with external services and technology enablers to alleviate this pressure.

In the next chapter, we will see what the top performers are doing to achieve these gains.

### Customer Perspective

*“A lot of our BI capability is outward facing to customers. We have been delivering information externally for a few years, but our internal capabilities with large BI vendors have not been as successful. We are planning to use a SaaS BI solution that is delivered via the Internet, and relieves some of the IT and BI skill set requirements to deliver BI projects to the enterprise. One of our staff has used a SaaS approach at a past employer with great results.”*

*Chris Harris  
Manager, Business Intelligence  
UTi Worldwide – Large Supply  
Chain & Logistics Company*

## Chapter Two: Benchmarking Requirements for Success

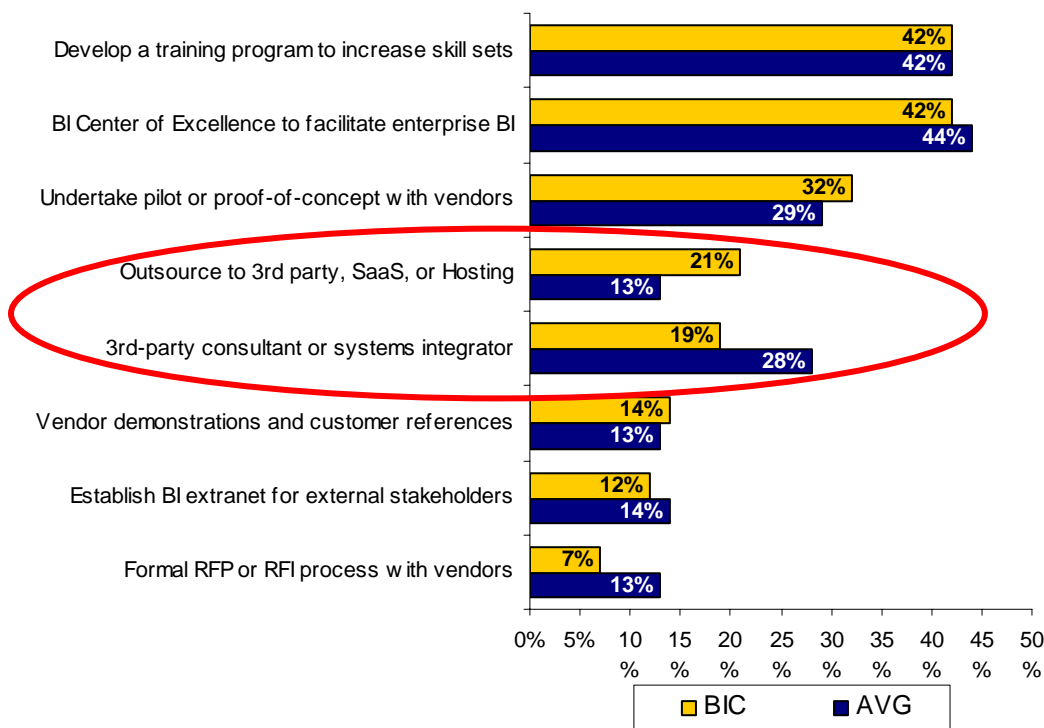
Best-in-Class organizations have clearly identified the strategies and tactics they are planning to take in order to deliver actionable information to the enterprise [Figure 4]. While the development of training programs, the institutionalization of BI through a Center of Excellence (or BICC), and the commencement of pilots and proof of concept projects are common approaches across Best-in-Class and Industry Average companies, the ways that these two groups approach outsourcing to third-parties is different.

Best-in-Class organizations have indicated a “buy-it” approach, identifying the outsourcing of BI to third-party solution providers – Software-as-a-service (SaaS); and “hosting” (traditional ASP/dedicated hosted solution) – as their preferred method. Industry Average companies are more apt to take a “build-it” approach by working with consultants and system integrators to provide assistance with implementation and deployment of systems for the delivery of actionable information to the enterprise.

**Figure 4: BIC enterprise information delivery strategies – A “build-it” vs. “buy-it” approach**

### Fast Facts

- √ While **57%** of all survey respondents report that they are currently purchasing BI through traditional per-user licensing; **only 16%** plan to continue this into the future. Meanwhile **25%** plan to look into subscription “pay-for-play” licensing, and **25%** plan to investigate open source products.
- √ **C-level executives are the most underserved** by current BI capabilities, as reported by **40%** of survey respondents.



Source: Aberdeen Group, July 2007

### Case Study: Lee Memorial Health Systems Increases Staff visibility to Patient Satisfaction & Profit Margins through Business Intelligence

As a leading not-for-profit community-owned healthcare provider, one of the primary aims of Lee Memorial Health System (LMHS) is to increase patient satisfaction. This measure is a top driver of profit margins – the key to giving back more to their community. This is akin to customer satisfaction in other industries, and as such, patient satisfaction is driven by key indicators that must be constantly measured, monitored and acted upon:

- Decreased wait times
- Increased nursing-to-patient ratios
- Improved quality of care measures
- Lower cost & higher revenue-per-patient

In essence, the factors that drive operational efficiency and performance also drive patient satisfaction. This presented a need to tap into years of accumulated clinical and financial data in order to provide new and timely insights into the operation of the business for managers and staff who work directly with patients. Like most healthcare providers, LMHS has a large number of disparate IT applications to manage both clinical and business operations. While each individual application is outstanding at recording transactions for a given medical or business function, many were implemented before the need to have a holistic view of the business was recognized. LMHS struggled to deliver timely information that was easy to access and use by decision-makers.

By partnering with a BI application provider, LMHS was able to gain insight into information previously unavailable. This has resulted in several performance improvements:

- Increased patient satisfaction by reduction of waiting time
- Reduction of operating costs by increasing bed utilization
- Increased revenues by maximizing reimbursements
- Continual improvement of business efficiency by spending more time on intelligent analysis of task-specific data

The key to their success was the ability to identify the data necessary for a set of people who are tasked with specific goals (i.e. patient satisfaction) and deliver it within a very straight-forward environment that allows for analysis and decision-making by line-of-business managers and staff. This has proven to be far more successful than the previous process of having technical data experts drilling into massive sets of corporate data to answer point-questions from management.

#### Customer Perspective

*“Our BI solution helped us make decisions on data that we were never able to get to and never able to see before. We used to rely on month-end reporting that was then loaded into another system to perform analysis. With our BI capability, we can now do the analysis on a real-time basis, not just at month-end.”*

*Jeff Ward, Manager,  
General Financial Systems, LMHS*

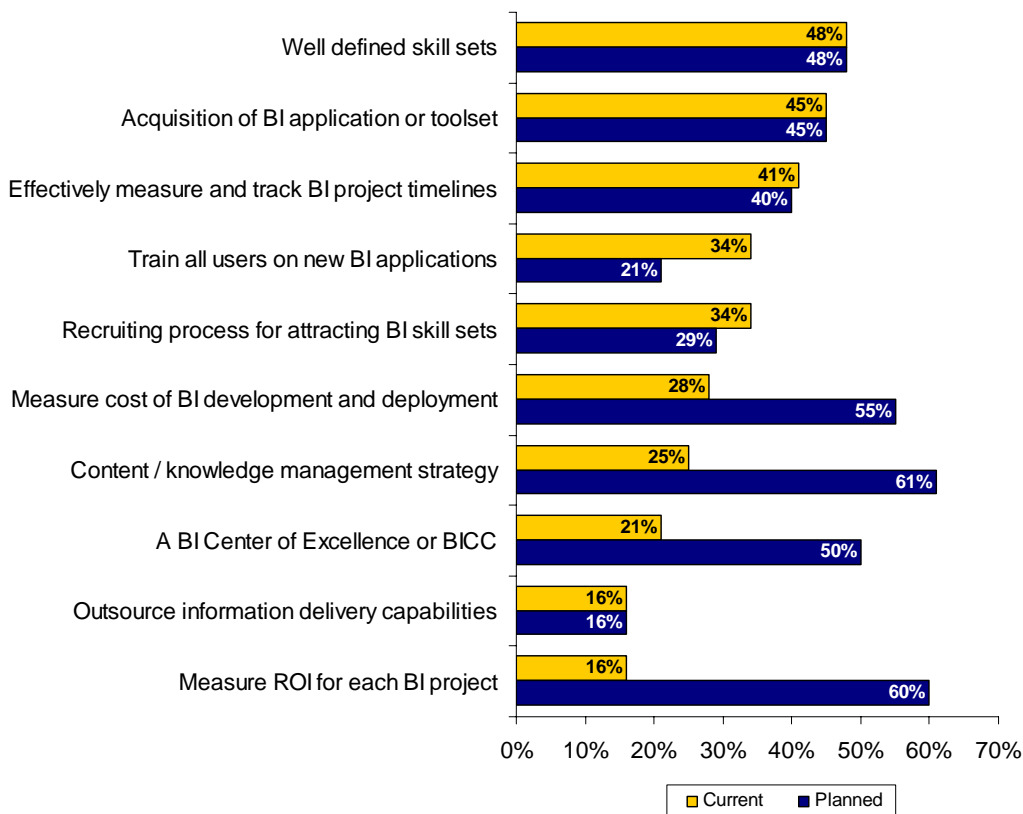
#### Customer Perspective

*“Our BI system takes the power of information and decentralizes it for all departments that need it, without them having to come to decision support to get it.”*

*Richard Senicola,  
Senior Decision Support Analyst,  
LMHS*

Best-in-Class organizations continue to emphasize the development of well-defined skill-sets, project management, and user training for the BI toolsets they are acquiring. Looking out to the next 12-24 months, these same companies are shifting their emphasis toward measuring ROI/cost, broadening their efforts toward the establishment of a content management strategy, and institutionalizing BI through a BI Center of Excellence. This is not surprising considering the findings in Figure 2 above. As companies seek to build their internal BI skill sets and solve their data integration and quality issues, an intensified focus on content management, ROI and cost measurement, and the development of a BI culture is logical.

**Figure 5: Best-in-Class Capabilities – current vs. planned shows a shift toward measurement and a “BI culture”**



Source: Aberdeen Group, July 2007

### Competitive Assessment

Survey respondents fell into one of three categories – Laggard, Industry Average, or Best-in-Class — based on their characteristics in five key categories: (1) process (ability to deliver actionable information to all stakeholders); (2) organization (involvement and acceptance of information delivery by stakeholders); (3) knowledge (exposing actionable information previously unavailable to stakeholders who were historically underserved); (4) technology (appropriate tools and services aimed at providing a solution for the delivery of

actionable information); and (5) performance (ability of the organization to measure the benefits of technology deployment and use the results to improve key processes further).

**Table 3: Competitive Framework**

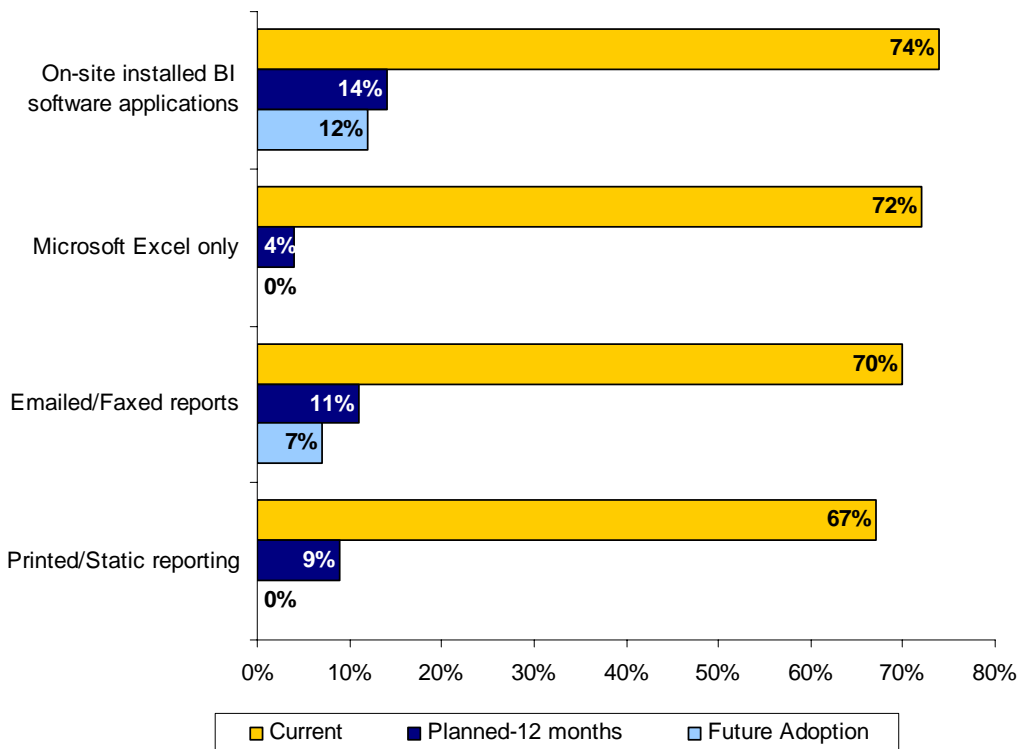
	Laggards	Average	Best-in-class
Process	Delivery of actionable information to people who were not receiving it before:		
	25%	36%	53%
Process	Actionable information is available to a majority of stakeholders via a self-service environment		
	13%	22%	39%
Organization	Direct impact on revenue realized through increasing the number of people in the organization with relevant IT/BI skill-sets:		
	8%	15%	32%
	User satisfaction with BI application access		
	30%	39%	68%
Organization	The enterprise-wide use of BI applications has increased over past two years		
	48%	63%	83%
Knowledge	Increasing mindshare among external parties (i.e. partners, customers) through delivery of actionable information has improved in the past 12 months		
	10%	19%	33%
	Number of data sources included within BI applications has increased within the past two years		
	48%	58%	86%
Technology	Traditional approaches: On-site installed BI applications, MS Excel, Printed/Static reporting, Email/Fax reports		
	67%	72%	71%
	Emerging approaches: BI embedded within enterprise applications (ERP, CRM, CPM, etc); BI via 3 <sup>rd</sup> party (SaaS, On-Demand, etc); Third-party consulting services		
	24%	25%	31%
Performance	On-time delivery of information and business intelligence applications has directly impacted revenue in the past 12 months		
	20%	31%	41%
	Cost-per user of BI applications has decreased in past two years		
	7%	16%	36%
	Time-to-completion of BI projects has decreased in past two years		
	2%	18%	58%
Performance	On-budget completion of BI projects increased in past two years		
	0%	12%	79%

Source: Aberdeen Group, July 2007

## Technology Enablers – A Shift Away from Traditional Methods to Emerging Technologies and Services

Best-in-Class organizations are planning for a sea-change in the types of technology and services they use for the delivery of actionable information to the enterprise [Figures 6a and 6b]. The days of MS Excel™-only, static/printed reports and Email/fax reports are over, and even traditional BI applications are no longer the dominant planned technology for the future. The BIC are planning to utilize BI applications embedded within existing enterprise applications, BI delivered as a service (SaaS, Hosted-BI, On-Demand, Appliances, etc), and are also looking toward third-party consulting services.

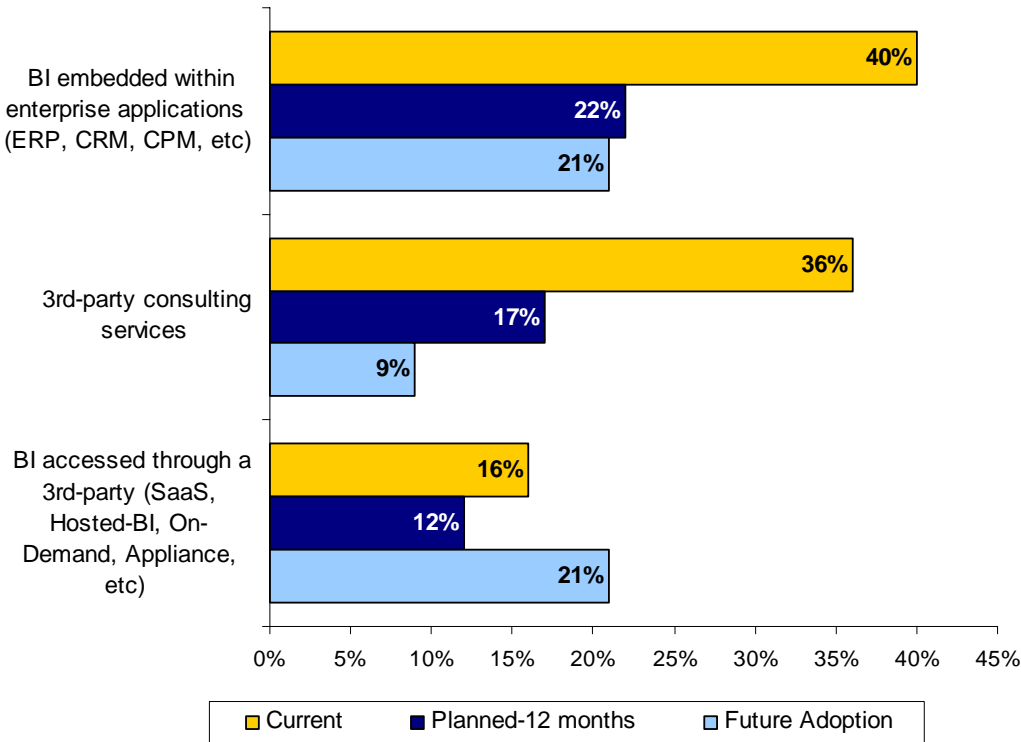
**Figure 6a: Best-in-Class Technology Enablers – a shift away from traditional methods**



Source: Aberdeen Group, July 2007

The current use of traditional information delivery technologies among Best-in-Class organizations will give way to emerging methods within the next 12-24 months, according to survey responses. This shift in planned investments suggests that companies are beginning to see the value in outsourcing the BI and IT skills associated with reporting and analytics and are also building a greater sense of trust in third-party handling of sensitive corporate information.

**Figure 6b: Best-in-Class Technology Enablers – a shift toward emerging technologies and services**



Source: Aberdeen Group, July 2007

**Aberdeen Insights – Technology**

While **16%** of organizations are currently accessing BI capability through a 3<sup>rd</sup>-party (SaaS, Hosted-BI, On-Demand, Appliance, etc), **Best-in-Class organizations** are **twice as likely** to steer their technology investments in this direction in the future. This supports the messaging from established and new BI vendors who are offering SaaS, hosted, appliance and other “On-Demand” solutions: the promise of lower up-front costs, a decreased user learning curve, and the outsourcing of data integration and quality issues.

## Chapter Three: Required Actions

Whether a company is trying to move its performance with the delivery of actionable information 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:

### Laggard Steps to Success

- **Adopt a method for measuring BI project costs and ROI.** Laggard companies are three times as likely to be lacking in this capability as Best-in-Class organizations. Often times, the proposed BI project requires complex data integration and PhD-level analytics capabilities that are beyond the resources available. Assess whether the ends justify the means, and determine the best way to source necessary capabilities. Questions to ask at the beginning of every BI project include:
  - Do you need a full-blown BI system with an on-site implementation?
  - What are the hidden costs? How long will the implementation take?
  - What internal IT and line-of-business resources are necessary for a successful project?
  - What are the end-user training requirements and do your users have the technical and business skills to be successful?
  - Are there third-party software and services providers that possess domain and industry expertise that can provide a solution that will meet your needs?

This leads directly to the next step...

- **Define the BI and IT skill sets necessary to meet your goals.** Laggards (13%) are more than three-times as likely as Best-in-Class organizations (48%) to be deficient in this area. According to the users we have interviewed, the fastest path to project failure is the tendency to do too much too soon. The IT (developer/admin) and BI (business user) skill sets necessary may be lacking, and the ability to attract and hire the right mix of skills may take longer than the business has to wait. While a project-based or departmental solution may be within the realm of skills and capabilities that exist in-house, an enterprise solution may require external assistance.
- **Determine the data sources and time-frames within which information is required.** All too often, organizations enter into BI projects without taking this step and the results are often catastrophic. As several respondents described when interviewed, the issue centers on the availability of large sets of data within a limited processing and preparation window. If the data necessary to answer business questions cannot be extracted, integrated,

### Fast Facts

- Best-in-class companies have implemented BI enterprise-wide (41%), while Average (30%) and laggards (27%) have tended more towards departmental and project-based implementations.
- 68% of Best-in-Class companies have seen improvement in user satisfaction with BI application access in the past two years. Industry Average (39%) and laggards (30%) are far behind.

processed and delivered to business users within a decision-window, then project viability must be re-assessed. Sometimes this can be solved by upgrading existing hardware, but then the cost and ROI need to be re-evaluated (see first bullet above). Laggards reported the largest gap between the availability of actionable information and actual business activity. **60%** of laggards responded that information is made available within a week or longer.

## Industry Average Steps to Success

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- **Institutionalize a BI culture.** While Average organizations identify the adoption of a BI Center of Excellence as a top strategy, they are behind the Best-in-Class with current adoption efforts. Once an organization has dealt with some of the “BI basics” (as listed in the Laggard recommendations above), it is time to start thinking about enterprise-wide BI adoption. This requires that:
  - Information is Actionable – relevance is tied to business goals;
  - Information is Timely – information must be delivered within a time-frame that provides opportunity to act
  - Information is Accessible – knowledge workers and decision-makers must be able to grasp the meaning of the information and take advantage of the BI tools without a high requirement for arcane technical skills.
- **Establish a BI Center of Excellence.** This is an independent internal organization that represents all departments. Additionally, a formal training program is important to consider, and is often one of the first actions that a Center of Excellence takes. While BI vendors all offer training services, our respondents reported that it may be advantageous to take a “train-the-trainer” approach. Through this method, a training curriculum can be developed that is tied directly to your company data and analysis, and not to canned demonstration data that vendor trainers often use. Some vendors also offer customized training, but be aware that their trainers may not know your business nearly as well as internal trainer will.
- **Determine an appropriate content/knowledge management strategy.** The desire to integrate data from all sources is the number-one pressure facing Industry Average companies. Current and planned information sources must be assessed and a determination made regarding data access methods for BI applications. There are several approaches available today, ranging from batch-loaded data warehouses to real-time query-based data access. There is no single approach that is right for all information requirements. This is an area where external help may prove valuable. If your organization does not have the data integration expertise, seek an expert with domain and industry knowledge to assist you in your integration efforts.

## Best-in-Class Steps to Success

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- **Beware information overload.** **86%** of Best-in-Class companies reported an increase in the number of data sources included within BI applications.

While this can be a good thing, in terms of providing more relevant, actionable information to all stakeholders, it can also present a double-edged sword. This is where Best-in-Class organizations should utilize their BI Centers of Excellence. A regular committee review of current BI applications, and a determination of whether or the data elements included in them is really necessary for optimal decision-making, will help to keep information overload in check.

- **Move toward a self-service BI environment.** While Best-in-Class companies reported the highest level of self-service capability (**39%**), a significant number (**33%**) reported that their users still require IT assistance. Measurement of the Best-in-Class performance metrics shows that the greater the self-service capability achieved, the better the performance metrics become. As users are more and more capable of accessing and using BI applications on their own, the overall cost and burden on the organization decreases.

#### Aberdeen Insights – Summary

Enterprise-wide delivery of actionable information is the “nirvana” that Business Intelligence has promised since its inception. While this has not been achieved fully, new technologies, methodologies and organizational approaches are bringing the possibility of “information access for all” closer to reality. Aberdeen research indicates that there are still significant hurdles to cross, strategies to adopt, and technologies and services that enable positive outcomes.

Best-in-Class organizations are focusing their efforts on building the BI skill sets (business users) and data integration capabilities they need to deliver actionable information to the enterprise. The strategies they employ revolve around the establishment of training programs and cultural changes that move BI forward from a departmental or project-based activity, to an enterprise-wide business practice. The traditional methods for information delivery are rapidly being left behind for new approaches that promise greater efficiency, faster implementation, and lower overall cost.

Aberdeen will continue to monitor the state of Business Intelligence as it continues to grow and change its role within all types of companies.

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## Appendix A: Research Methodology

Between June and July 2007, Aberdeen Group examined the delivery of actionable information to the enterprise, the experiences, and investment intentions of more than 240 enterprises.

Respondents completed an online survey that included questions designed to determine the following:

- The degree to which BI is deployed within the organization
- The effectiveness of existing BI implementations
- Current and planned use of BI to assist in the delivery of actionable information to the enterprise
- The benefits, if any, that have been derived from BI initiatives

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

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

Responding enterprises included the following:

- **Job function:** The research sample included respondents with the following job roles: Information Technology (53%); Operations (26%); Sales and Marketing staff (11%); Senior Management (10%)
- **Industry:** The research sample included respondents from several industries. High technology/software was the largest group, making up 20% of the sample. Finance/banking accounted for 11% of respondents, Public Sector (9%), Insurance/real estate/legal (8%) and Education (8%). Additional responses were spread across respondents within twenty-nine additional industry sectors.
- **Geography:** The majority of respondents (66%) were from North America. Remaining respondents were from the Asia-Pacific region (15%), and Europe (14%), and ROW (5%).
- **Company size:** About 30% of respondents were from large enterprises (annual revenues above US\$1 billion); 35% were from midsize enterprises (annual revenues between \$50 million and \$1 billion); and 35% of respondents were from small businesses (annual revenues of \$50 million or less).

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

**Table 4: PACE Framework**

PACE Key
<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, July 2007

**Table 5: Maturity Framework**

Maturity Framework Key
<p>The Aberdeen Maturity Framework defines enterprises as falling into one of the following three levels of practices and performance:</p> <p><b>Best in class (20%)</b> — BI practices that are the best currently being employed and significantly superior to the industry norm, and result in the top industry performance.</p> <p><b>Industry norm (50%)</b> — BI practices that represent the average or norm, and result in average industry performance.</p> <p><b>Laggards (30%)</b> — BI 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, July 2007

**Table 6: Relationship between PACE and  
Competitive Framework**

**PACE and Competitive Framework How They Interact**

Aberdeen research indicates that companies that identify the most impactful 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.

Source: Aberdeen Group, July 2007

## Appendix B: Related Aberdeen Research

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

- [Business Intelligence in Retail Merchandising: Harnessing Advanced Data Management to Address Today's Merchandising Challenges](#), September 2006
- [Business Intelligence in Retail Customer Management: Bringing Information Together to Build the Accurate Customer Profile](#), December 2006
- [The 2007 Aberdeen Report](#), May 2007
- ["On-Demand" Is Not Far Behind BI on the Technology Wish List](#), June 2007
- [Are Performance Management Applications Only for Large Companies?](#) June 2007
- [Analytics University: Part 1](#), July 2007
- [Analytics University: Part 2](#), July 2007

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

Author: David Hatch, Research Director, Business Intelligence ([david.hatch@aberdeen.com](mailto:david.hatch@aberdeen.com))

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15325 SE 30th Place, Suite 300, Bellevue, Washington 98007  
425-460-1000

[sales@seatab.com](mailto:sales@seatab.com)

[www.seatab.com](http://www.seatab.com)