

Operational BI: Getting Real Time About Performance

December 2007



Executive Summary

Companies are trying to improve efficiencies and performance of many day-to-day and real-time activities, such as customer interactions, finance and accounting processes, transportation / shipping, sales activity, manufacturing, inventory management, Business Activity Monitoring (BAM), and marketing. This report provides a roadmap for the strategies and capabilities that Best-in-Class companies are employing to improve operational performance.

Best-in-Class Performance

Aberdeen used five key performance criteria to distinguish the Best-in-Class (BIC) from Industry Average and Laggard organizations:

- Decrease (in days, hours, minutes, seconds) in time-to-information
- Decrease (in days, hours, minutes, seconds) in time-to-decision or action
- Customer satisfaction Composite Index Result (CIR): percentage improvement in customer satisfaction, issue resolution speed, and accuracy
- Percentage improvement in customer retention
- Percentage improvement in system data access and availability for end-users

Competitive Maturity Assessment

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

- The ability to automate the collection of data from high-volume, time-intensive business processes
- The development of a corporate culture and strategic approach to operational BI initiatives
- The automation of report creation, data analysis, and (in some cases) the execution of actions based on business rules and thresholds

Required Actions

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

- Review operational processes, identify KPIs, and determine how they align with department and corporate goals
- Identify opportunities for automation of operational data collection, integration, and creation of reports and analysis
- Support operational BI efforts through the creation of a corporate culture and training of both business and IT end-users

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 have just started our journey. So far, the challenge seems to be defining the metrics we need to measure. We are currently pulling the data together manually and making it visible to the entire company with Excel tables and charts imbedded in slide decks that we share on-line. Eventually, we will need to speed up the process and automate the collection, integration, and delivery of information. I suppose at some point, we will look into technologies that allow for proactive information delivery to staff as opposed to relying on them to seek the information on their own."

~ CEO, Mid-Size Software Firm

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Chapter One: Benchmarking the Best-in-Class

Business Context

Companies are trying to improve efficiencies and performance of many day-to-day and real-time activities, such as customer interactions, finance and accounting processes, transportation / shipping, sales activity, manufacturing, inventory management, Business Activity Monitoring (BAM), and marketing. Aberdeen research conducted for [*Smart Decisions: The Role of Key Performance Indicators*](#), published in September 2007, found that Best-in-Class companies are improving their time-to-decision through the implementation of capabilities, technologies, and services that enable faster delivery of mission-critical information to the people who need it, when they need it, and how they need it. This report reveals the current and planned initiatives that companies are prioritizing to improve operational efficiencies and timeliness of actions.

The "Flavors" of Operational BI

The term "operational BI" has been identified with several terms within various industry and market vernaculars. Some of the terms have been coined to differentiate between the timeframes within which data collection, reporting, and analysis occur. Other terms describe differences in the methods and calculations that take place as data is captured, manipulated, and delivered (Table I).

Fast Facts

- ✓ **41%** of survey respondents report that a "lack of IT resources and bandwidth" is the top barrier preventing operational BI projects from moving forward
- ✓ **33%** of Best-in-Class (BIC) C-level executives surveyed identified "closed-loop BI systems with automated actions" as currently providing operational BI capabilities, compared to 11% of Industry Average companies and 0% of Laggards

Table I: The "Flavors" of Operational BI

Term	Description	Interval
Transactional BI	Analysis and reporting capabilities embedded within transactional systems	Ad-hoc or daily
Real time analytics	Automated analysis generated from business rules and algorithms applied to data as it is captured	Second or sub-second
Near real time analytics	Automated analysis generated from business rules and algorithms applied to data as it is captured	Second to hourly
Operational reporting	Reports automatically generated (and often distributed) based on business rules, algorithms, or raw data as it is captured from transactional or integrated data sources	Any interval
BAM or business process monitoring	Typically refers to the monitoring of systems or process performance and activity - including reporting, analytics, and automated actions based on predetermined targets	Minute, second, or real time
Decision management	Rules-based engines integrated with reporting and analytic applications that are designed to automate actions based on exceptions, thresholds, and other rules	Any interval

Source: Aberdeen Group, December 2007

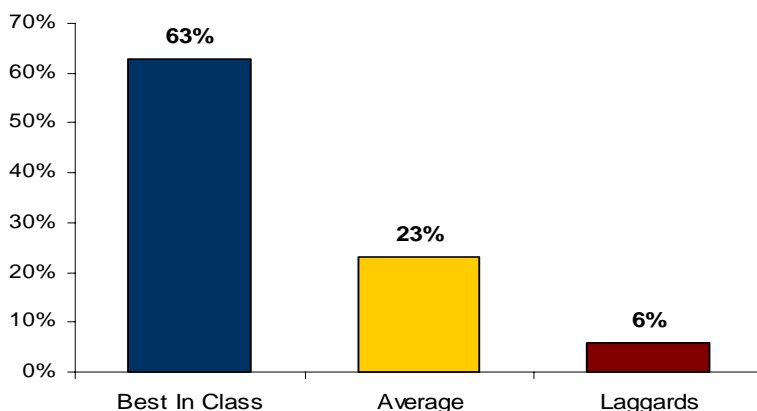
No matter what flavor or definition is used, at the heart of the matter, organizations are beginning to focus their attention on leveraging existing data to enable and optimize daily, hourly, minute-to-minute, or even up-to-the-second actions. While traditional business intelligence solutions continue to address the strategic information needs of decision makers with analysis of historical data, organizations are starting to realize the potential of applying BI technology and approaches to more immediate information. Several new vendors and solutions are marketed and targeted at operational requirements, and are focused on real-time and near-real-time data sources.

Key benefits to end users include the opportunities to:

- **Manage business activities as they occur**, as opposed to waiting for the end of a day, week, or month before gaining access to analytical data and information
- **Improve customer relations** by responding to their needs more rapidly, and heading off harmful events before the customer is aware, or possibly before they happen
- **Increase business efficiency** by providing actionable information to line-level knowledge workers in real-time, and automating manual processes to reduce costly, repetitive report creation tasks

Best-in-Class organizations - the companies achieving the highest performance based on survey metrics have shown that "time-to-decision" (the interval between business activity and action taken) is a key performance metric driving success with operational performance improvement initiatives (Figure 1).

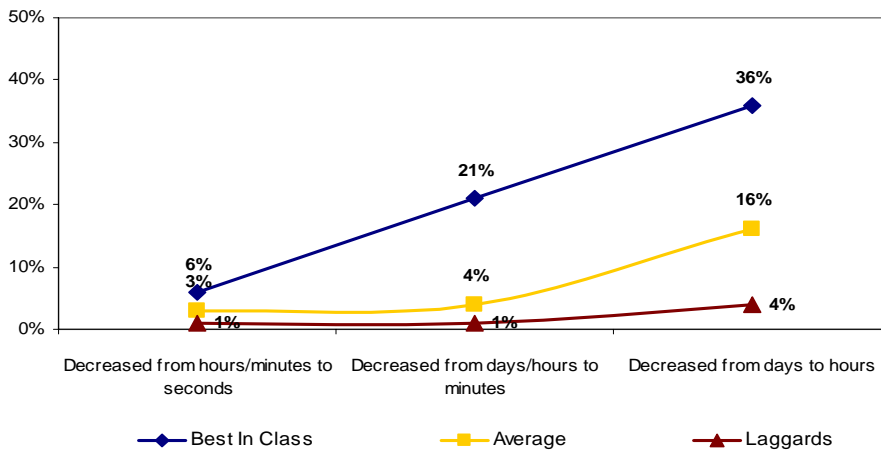
Figure 1: Best-in-Class KPI - Percentage of Companies Experiencing Improvement in Time-to-Decision within the Past 12 Months



Source: Aberdeen Group, December 2007

Aberdeen's research survey included additional granularity about the degree to which organizations have achieved improvement in time-to-decision. Figure 2 illustrates the gap that exists between Best-in-Class companies and Industry Average and Laggard organizations. While most companies have not achieved second-to-second timeframes, Best-in-Class companies have improved their time-to-decision from days-to-hours and from hours-to-minutes.

Figure 2: Best-in-Class KPI - Percentage of Companies Reporting Decrease in Time-to-Decision / Action within the Past 12 months



Source: Aberdeen Group, December 2007

The Maturity Class Framework

Aberdeen used five key performance criteria to distinguish the Best-in-Class from Industry Average and Laggard organizations:

Time-to-Decision Performance:

- Decrease (in days, hours, minutes, seconds) in time-to-information – measured as the time between business activity and delivery of information to decision-makers over the past 12 months
- Decrease (in days, hours, minutes, seconds) in time-to-decision – measured as the time between business activity and decision/action taken over the past 12 months

Customer Satisfaction / Response Performance:

- Customer satisfaction Composite Index Result (CIR): combined percentage improvement in customer satisfaction, issue resolution speed, and issue resolution accuracy in past 12 months
- Percentage of improvement in customer retention during past 12 months

Operational Process Performance:

- Percentage of improvement in system up-time / data access and availability for end-users over the past 12 months

Table 2: Companies with Top Performance Earn Best-in-Class Status

Definition of Maturity Class	Mean Class Performance
<p>Best-in-Class: Top 20% of aggregate performance scorers</p>	<ul style="list-style-type: none"> ▪ 7% decrease in time-to-information – measured as the time between business activity and delivery of information to decision-makers, over the past 12 months ▪ 5% decrease in time-to-decision – measured as the time between business activity and decision / action taken, over the past 12 months ▪ 20% improvement in customer satisfaction, issue resolution speed, and issue resolution accuracy in past 12 months ▪ 12% improvement in customer retention during past 12 months ▪ 13% improvement in system up-time / data access and availability for end-users over the past 12 months
<p>Industry Average: Middle 50% of aggregate performance scorers</p>	<ul style="list-style-type: none"> ▪ 1% decrease in time-to-information – measured as the time between business activity and delivery of information to decision-makers over the past 12 months ▪ 0% decrease in time-to-decision – measured as the time between business activity and decision / action taken, over the past 12 months ▪ 12% improvement in customer satisfaction, issue resolution speed, and issue resolution accuracy in past 12 months ▪ 12% improvement in customer retention during past 12 months ▪ 11% improvement in system up-time / data access and availability for end-users over the past 12 months
<p>Laggard: Bottom 30% of aggregate performance scorers</p>	<ul style="list-style-type: none"> ▪ 2% increase in time-to-information – measured as the time between business activity and delivery of information to decision-makers over the past 12 months ▪ 3% increase in time-to-decision – measured as the time between business activity and decision / action taken over the past 12 months ▪ 13% improvement in customer satisfaction, issue resolution speed, and issue resolution accuracy in past 12 months ▪ 1% improvement in customer retention during past 12 months ▪ 5% improvement in system up-time / data access and availability for end-users over the past 12 months

Source: Aberdeen Group, December 2007

The Best-in-Class PACE Model

The predominant pressure driving companies to implement new (or change existing) strategies around operational business intelligence is the improvement of operational efficiencies. This encompasses the desire to alleviate both economic and intangible costs associated with labor and time-intensive actions that occur on a daily, hourly, or moment-to-moment basis. The use of BI and performance management technologies combined with underlying data integration and professional consulting and training services is enabling organizations to develop strategies and capabilities to alleviate this pressure.

Table 3: The Best-in-Class PACE Framework

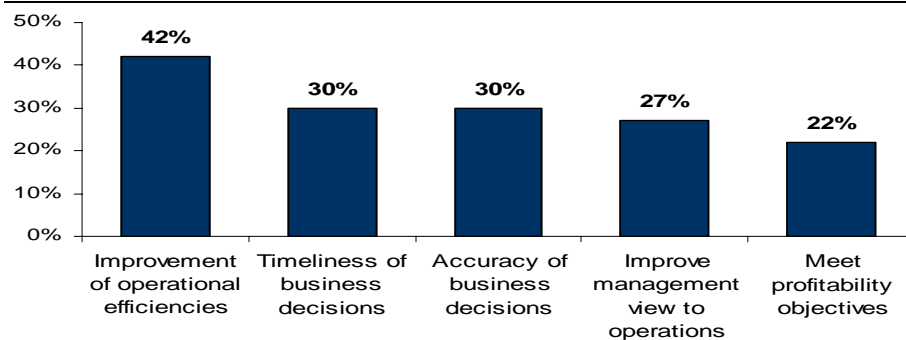
Pressures	Actions	Capabilities	Enablers
<ul style="list-style-type: none"> Improvement of operational efficiencies 	<ul style="list-style-type: none"> Align operational KPIs with strategic business goals Establish visibility to key business processes for operational users Create an on-going process for operational performance review and re-alignment 	<ul style="list-style-type: none"> Measure and track operational performance against departmental goals Measure and track operational performance against corporate goals Regular communications to establish corporate culture around operational performance Automation of operational data collection and integration Automation of report creation based on changes in operational data Role-based delivery of information to push actionable information to appropriate staff 	<ul style="list-style-type: none"> Operational forecasting BI dashboards and scorecards Stand-alone BI reporting and analytic applications Incident / exception / case management Training services Automated alert reporting / notification IT / systems integrator consulting services Dynamic internal data integration (i.e. data warehouse combined with transactional data) Management consulting services Dynamic web / external data integration (i.e. web site data combined with email or Web 2.0 information) BI embedded within enterprise applications (ERP, CRM, MES, etc.) Business Activity Monitoring (BAM) tools Closed-loop BI systems with automated actions BI embedded within BPM environments Business Rules Management Systems

Source: Aberdeen Group, December 2007

Best-in-Class Strategies

While the improvement of operational efficiencies is the top pressure driving organizations, companies are also prioritizing the timeliness and accuracy of business decisions, and the improvement of management's view to operations. These selections indicate that operational BI has a lot to do with internal processes, and less to do with external business pressures.

Figure 3: Top Five Pressures Driving Companies to Develop Operational BI Capabilities

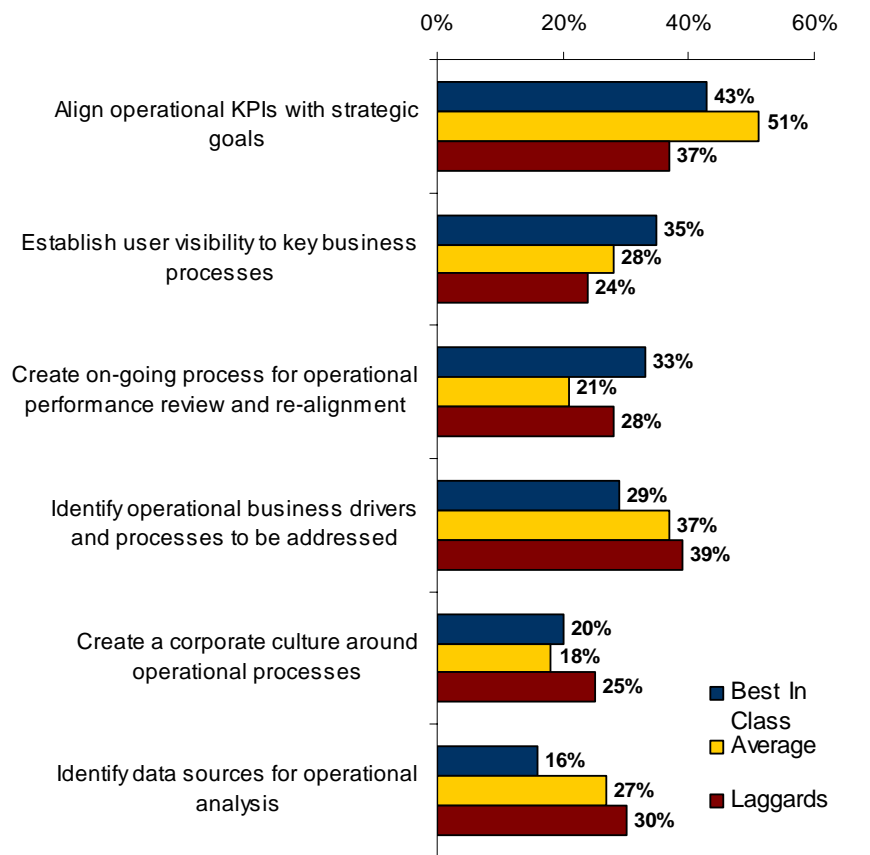


Source: Aberdeen Group, December 2007

In order to address the top pressures, companies are implementing several key strategic initiatives (Figure 4). Best-in-Class and Industry Average companies agree that alignment of KPIs with strategic goals is a key first

step. Best-in-Class organizations depart from the rest of the field when it comes to establishing end-user visibility, and creating an on-going process for review and re-alignment of operational processes. The benefits of continually reviewing and realigning KPIs based on operational performance can be seen in the performance advantages realized by Best-in-Class companies, as described in Chapter Two.

Figure 4: Strategies Prioritized for Alleviating Business Pressures



Source: Aberdeen Group, December 2007

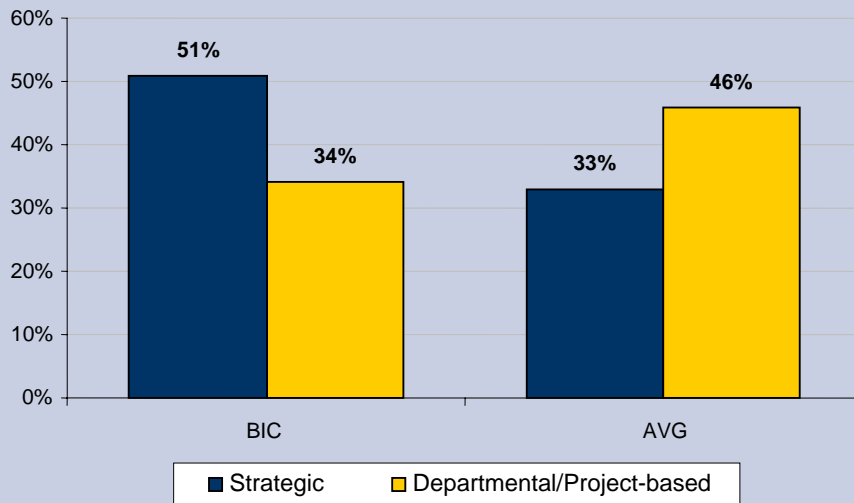
“We are currently starting an Enterprise Information Management (EIM) initiative for all operations. In terms of BI capabilities, we have one of everything today, including several traditional BI systems that were brought in as best-of-breed solutions to address specific departmental projects. This has been driven by end-user groups within the organization who purchase silver bullet solutions for individual problems at the operational level. I continually find-out about all of the little projects that have started without my knowledge, while I’m simultaneously trying to rein them in and formulate an enterprise strategy. An enterprise-wide approach will need to happen sooner rather than later as competitors are also beginning to become aware of the problem of stove-piped BI and the necessity to achieve enterprise-wide operational BI capabilities.”

~ Senior Enterprise Architect,
Large U.S. Airline

Aberdeen Insights - Strategy

Traditional BI initiatives are driven at a department or project level, no matter what level of maturity a company has achieved, as cited in Aberdeen's September 2007 research brief, [Enterprise BI - Comparing the BI Giants](#). Operational BI, however, is more apt to start as a strategic enterprise initiative among Best-in-Class companies (Figure 5).

Figure 5: Level at which Operational BI Capabilities are Deployed



Source: Aberdeen Group, December 2007

A strategic enterprise-level view of operational information alleviates some of the barriers organizations face as they attempt to create logical views of information that are integrated from multiple data sources across a diverse set of departmental systems.

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

Chapter Two: Benchmarking Requirements for Success

The selection of operational BI solutions and integration with business process and business rules management systems plays a crucial role in the ability to turn these strategies into profit.

Case Study: Mid Tier On-line Retailer

At the beginning of 2004, this on-line retailer of consumer electronics and specialty products was struggling to manage marketing spend and determine which activities and product package offers were driving profitability, and which were bleeding the organization of its diminishing marketing budget. New campaigns were being launched on a daily basis, and during the holiday season, the frequency increased to multiple campaigns per day. The company's Director of Database Marketing began to search for ways to obtain more frequent updates on campaign performance in order to improve efficiency of marketing spend and activity.

"It's not so much about the amount of money we were spending on campaigns. Web-based marketing can actually be fairly inexpensive in terms of out-of-pocket cost. The real issue was the amount of time and human resources we were expending. Without changing our behavior, we were not going to be able to improve performance. Without access to real-time data about campaign performance, our behavior was not going to change."

That is when the marketing team began to search for real-time campaign management capabilities. What they found was an operational BI solution that incorporated a combination of capabilities that the organization identified as being critical for success:

- Access to campaign response information within the same day (or less) from site visits
- Aggregated view of site activity sorted by campaign
- Sell-through data for each campaign by product and selling price
- Automated price / offer adjustment based on incremental step approach and on-hand inventory levels

Since implementing the solution, and developing the business rule calculations that drive automated actions, the company has seen positive results.

continued

Fast Facts

- √ **75%** of end users at Best-in-Class companies receive actionable information *within a day or less* from actual business activity; compared to 55% of Industry Average companies, and 33% of Laggards
- √ **42%** of end users at Best-in-Class companies receive actionable information *within an hour or less* from actual business activity; compared to 20% of Industry Average companies, and 12% of Laggards

Case Study: Mid Tier On-line Retailer

“We have grown rapidly over the past few years, and have surpassed our competition in net new sales. Our most important advantage is the ability to have immediate access to sales and web activity information, and relate it back to the on-line promotional campaigns that are launched on a daily basis. When I came on-board, we were not able to see results and determine any change in our course of action for days or sometimes weeks after a promotional campaign was launched. Now, we can see the results within minutes. This has allowed us to automate some of the changes we can make. Visitors to our site experience these actions as they navigate from a promotional email or banner ad to our site. The offers we highlight are driven by the immediate analysis of user actions. This allows us to analyze performance on a much tighter timeline, and optimize promotions as the campaign draws response.”

Competitive Assessment

The aggregated performance of surveyed companies determined whether they 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 ability to detect and respond to changing conditions without placing additional burdens on the organization); (2) **organization** (corporate focus and collaboration among stakeholders); (3) **knowledge management** (contextualizing data and exposing it to key stakeholders); (4) **performance management** (the ability of the organization to measure the benefits of technology deployment and use the results to improve key processes further); and (5) **technology** (the selection of appropriate tools and intelligent deployment of those tools).

These characteristics (identified in Table 4) serve as a guideline for best practices, and correlate directly with Best-in-Class performance across the key metrics. The numbers shown indicate the percentage of companies within each ranking that currently possess each capability.

Table 4: The Competitive Framework

	Best-in-Class	Average	Laggards
Process Management	Automation of operational data collection and integration		
	58%	48%	41%
	Automation of report creation based on changes in operational data		
	43%	28%	16%
	Automated analysis of operational data for real-time decisions and actions		
	29%	14%	7%

	Best-in-Class	Average	Laggards
Organizational Management	Regular communications to establish corporate culture around operational performance		
	58%	39%	36%
	Role-based delivery of information to push actionable information to appropriate staff		
	37%	21%	13%
Performance Management	Measure and track operational performance against departmental goals		
	67%	50%	40%
	Measure and track operational performance against corporate goals		
	63%	49%	37%
	Detection of performance changes based on business rules		
	34%	19%	11%
Data/Knowledge Management	Training program to develop necessary IT and user BI skills		
	33%	21%	21%
	BI center of excellence or competency center		
	28%	15%	11%
Technology Enablers	Operational forecasting		
	53%	45%	40%
	BI dashboards and scorecards		
	52%	42%	33%
	Stand-alone BI reporting and analytic applications		
	50%	40%	33%
	Incident / exception / case management		
	42%	36%	36%
	Automated alert reporting / notification		
	40%	30%	26%
	Dynamic web / external data integration		
	35%	27%	17%
	BI embedded within enterprise applications (ERP, CRM, MES, etc.)		
31%	23%	15%	
Business Activity Monitoring (BAM) tools			
28%	15%	15%	

Source: Aberdeen Group, December 2007

Capabilities and Enablers

Based on the findings of the Competitive Framework and interviews with end users, Aberdeen’s analysis of the Best-in-Class reveals that companies in this category have developed capabilities at levels far above Industry Average and Laggard companies. Specifically, as revealed in Chapter One, Best-in-Class companies have achieved significantly faster time-to-decision capabilities. Rapid decision / action is supported by the findings in the Competitive Framework that illustrate the importance of automating the delivery of tailored information for individual consumption, managing training and education to build knowledge resources, and understanding the performance metrics that drive process efficiency and improvement. The following provides factual context and a roadmap for how to achieve Best-in-Class performance.

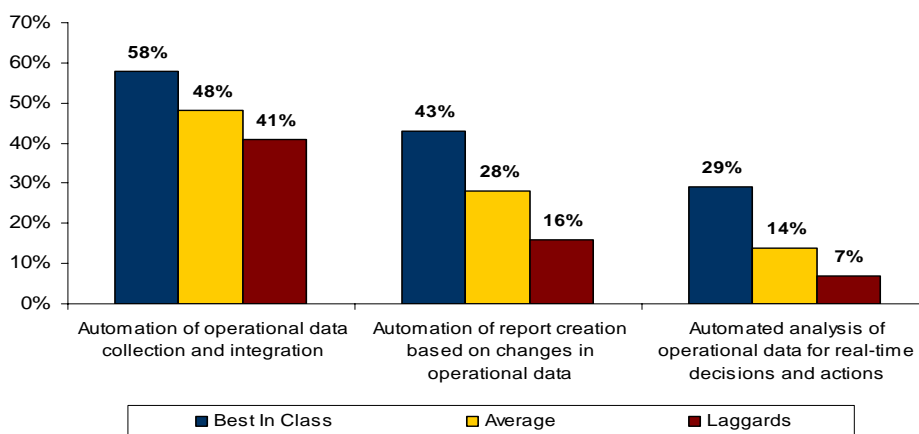
Process - Let the Data do the Work

Best-in-Class companies are more likely to automate their operational data processing and analysis activities. By letting the data do the work, Best-in-Class organizations are able to arrive at key insights faster, deliver critical information to the right people at the right time, and in 29% of cases, produce analysis required for rapid decisions and actions. Many of the companies interviewed are starting to automate actions based on changing operational data. This capability is becoming prevalent within financial services organizations where fluctuations in currency, stock valuations, and key index metrics happen at second and sub-second intervals. Manufacturers are also beginning to deploy technologies that automatically analyze production, yield, waste, and quality control metrics.

“We track different production lines within different units to determine where performance thresholds are being met or where we are falling short. We are still struggling to make sure the data is right. Managers on the shop floor will not accept the data unless it is 100% accurate. They know right away if we are comparing apples and oranges.”

~ Sr. Analyst, Large U.S. Manufacturing Company

Figure 6: BIC Process Management Capabilities

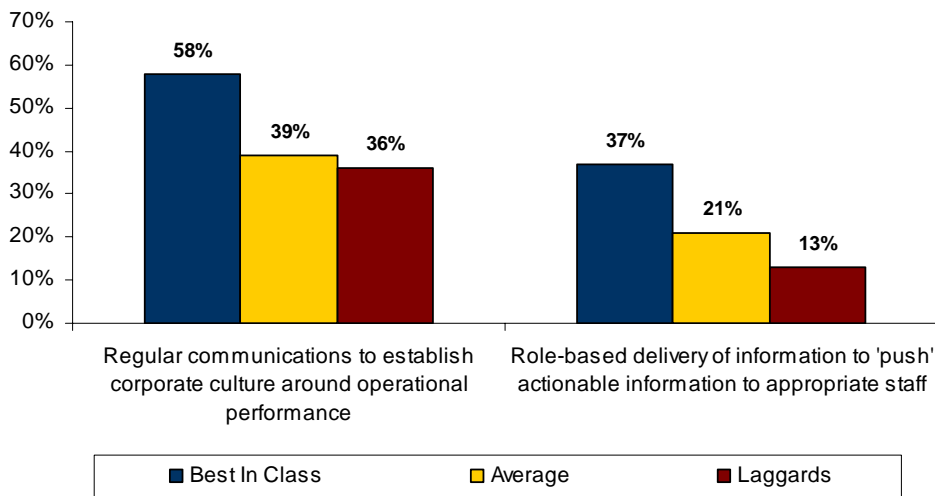


Source: Aberdeen Group, December 2007

Organization

Best-in-Class companies are establishing organizational capabilities at both a corporate culture level, and at an individual role-based level. As noted in Aberdeen's July 2007 research *Delivering Actionable Information to the Enterprise*, Best-in-Class companies have consistently shown a greater tendency to build and support a cultural approach toward information delivery and its affect on company performance. As illustrated in Figure 7, Best-in-Class companies are outperforming Industry Average and Laggard organizations with the establishment of both cultural awareness and individual involvement in operational performance. This also supports the leading Best-in-Class strategy - aligning operational KPIs with strategic goals - revealed in Chapter One.

Figure 7: BIC Organizational Management Capabilities

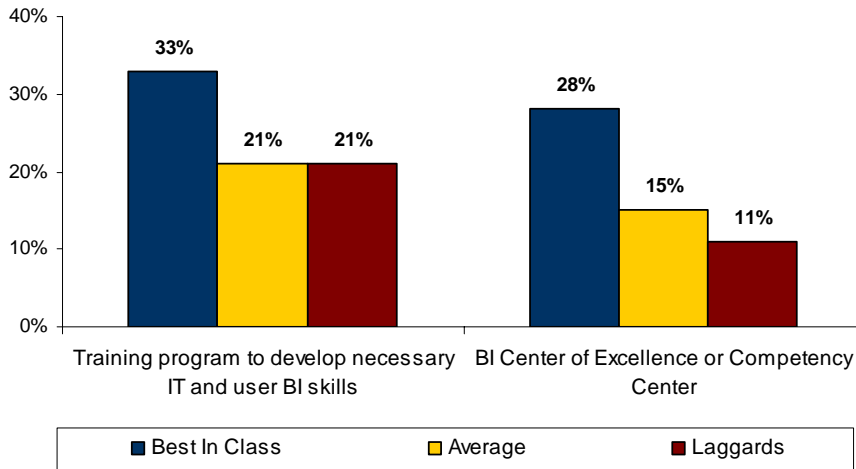


Source: Aberdeen Group, December 2007

Knowledge Management

Building a corporate culture at a high level is not enough to achieve Best-in-Class performance. Best-in-Class companies have also supported this culture with knowledge management activities that provide end-users with the training and resources necessary to attain success. This includes the establishment of a BI center of excellence (or competency center) to continuously steer BI strategies in the right direction, ensure involvement of all affected business units, and drive the creation of training programs designed to meet specific end-user needs (Figure 8).

Figure 8: BIC Knowledge Management Capabilities

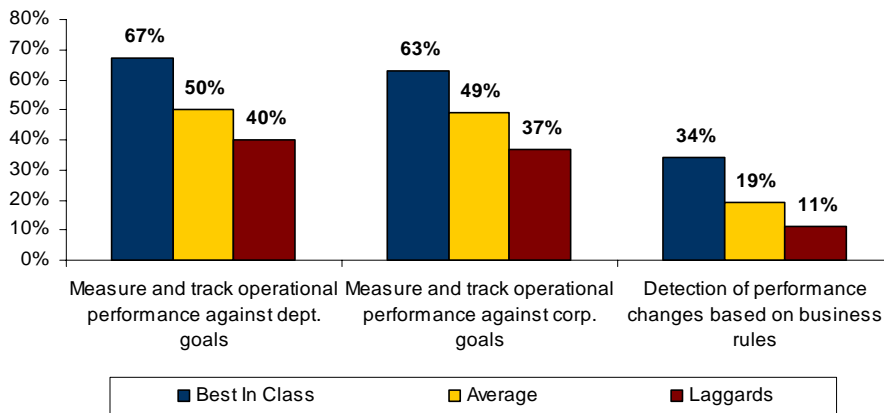


Source: Aberdeen Group, December 2007

Performance Management

Operational BI initiatives offer the ability to detect performance changes automatically, and therefore take corrective action before real harm is done. This is particularly important in customer-facing activity. Companies that can detect and act upon performance changes (such as customer satisfaction and response time) are therefore able to identify and solve problems, often before the customer is aware of them (Figure 9).

Figure 9: BIC Performance Management Capabilities

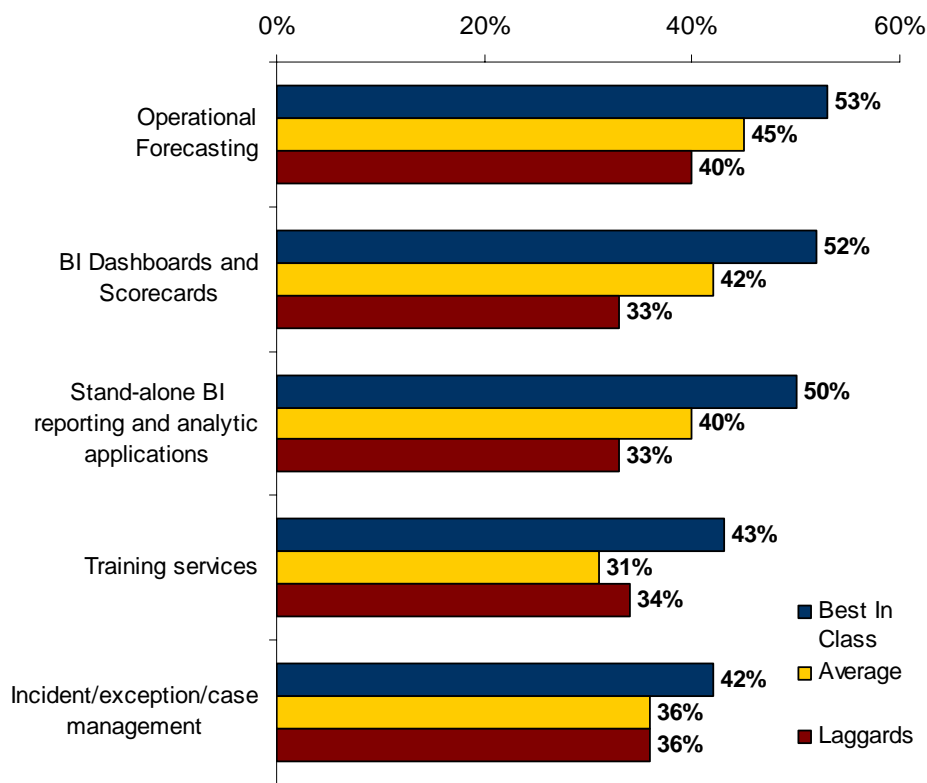


Source: Aberdeen Group, December 2007

Technology

When asked about the nature of the operational BI technology and service enablers currently in use, Best-in-Class companies reported a significant advantage within several categories (Figure 10). Of the top five enabling technologies and services, operational forecasting was rated highest. This is important in understanding how Best-in-Class companies are approaching operational BI projects. It is not just the access, calculation, and delivery of data that is important. The ability to forecast operational performance pertains to collecting operational data and using it to predict short term results. For example, as described in the case study earlier, marketers are learning to forecast operational results of on-line campaigns by utilizing real-time and near real-time data as it becomes available from current campaign activity.

Figure 10: Top Five BIC Technology Capabilities

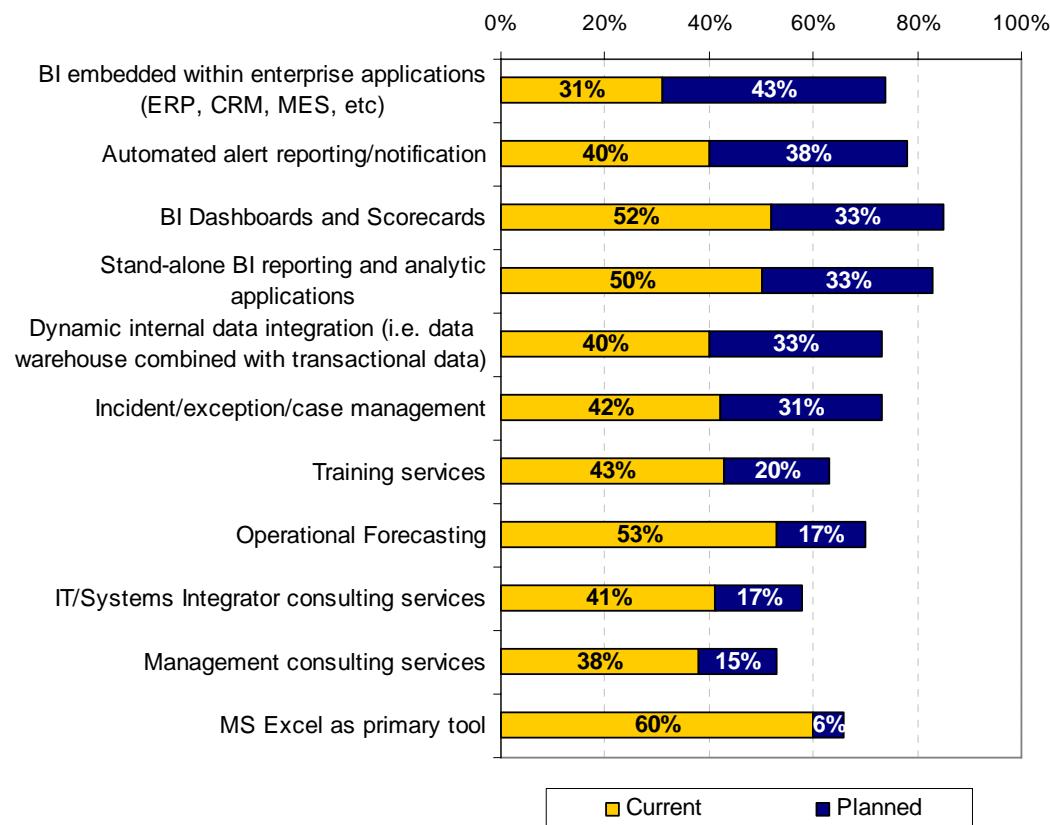


Source: Aberdeen Group, December 2007

Best-in-Class organizations are planning to drop their reliance on static reporting and MS Excel in favor of a broad range of technology enablement. The planned technology investments, such as automated alert reporting and notification, align with planned capability investments. As companies strive to attain a faster time-to-information and time-to-decision (as illustrated in Figure 5), they are therefore also heavily investing in technologies and services that deliver enhanced automation capability (Figure 11). The top

planned technology enabler - BI embedded within enterprise applications - indicates a continuing trend towards reliance on one technology provider for reporting and analytical tools.

Figure 11: BIC Current and Planned Technology Enablers



Source: Aberdeen Group, December 2007

Aberdeen Insights - Technology

Operational BI is not defined as a single reporting or analytics application applied to a specific set of data. It involves the ability to access information affecting the business as the data is created. This can involve one or a multiple set of data sources, and can affect one or many sets of decisions, actions, and people. Organizations that take a strategic approach to operational BI, and the access to relevant data when, how, and where people need it, will be better positioned to achieve Best-in-Class success. This requires the ability to dynamically collect and integrate data and make it available to decision makers for improvement of time-to-decision, or to business rules management systems for automation of actions. There is an added degree of difficulty as data volumes and complexity continues to grow.

Chapter Three: Required Actions

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

Laggard Steps to Success

- **Seek opportunities for data collection and reporting automation.** This is a first step toward operational performance improvement, and decreased time-to-information and time-to-decision. Best-in-Class and Industry Average companies have started to automate reporting, and in some cases, have tied-in delivery to individuals based on the information contained within the reports, and on the business rules and thresholds that drive performance.
- **Target information delivery to as granular a level within your organization as possible.** Operational performance is often tied to the efforts of an individual or single functional area within the organization. For example, customer service representatives are directly tied to customer response time performance. If individuals are able to receive important information about specific customer issues, they can become more proactive in their response, leading to improved customer satisfaction. Best-in-Class organizations are targeting individuals with the automated delivery of operational data.
- **Align operational KPIs to department and corporate goals.** Best-in-Class organizations are tying activity at the individual or department level to the attainment of goals at the department or enterprise level. This leads to organizational performance improvement, and an environment where "all oars are pulling together" towards a common goal. Operational KPIs can be developed within a formal environment, such as a BI center of excellence, or informally as long as the process involves management at all levels.

Industry Average Steps to Success

- **Investigate opportunities for automation of decisions and actions.** The next step, after automation of report creation is achieved, is to seek methods for "letting data do the work." Best-in-Class companies are starting to realize the benefits of establishing business rule management systems to manage performance thresholds, and automatically react to dynamic operational performance. For example, financial institutions are now monitoring transactions such as loan executions and tying performance to rate fluctuations to determine and automate optimal rate adjustments. Manufacturers are tracking yield and production performance and

Fast Facts

- √ **36%** of Laggard organizations report that slow or delayed information updates within source systems have prevented or hampered operational BI efforts; compared to **28%** of Industry Average companies, and just **17%** of Best-in-Class companies
- √ **38%** of Best-in-Class companies report annual data volume growth of **30%** or greater; compared to **15%** of Industry Average and **8%** of Laggard companies

tying results to determining factors such as raw material availability, production line staffing level and training, and quality control issues. This allows companies to make adjustments during a production run rather than waiting until it is completed and losing the opportunity to improve performance and efficiency.

- **Focus on training programs for end-users.** Best-in-Class organizations are far more likely to emphasize training as a key enabler for operational BI projects. Aberdeen research (as cited in the July 2007 report [*Delivering Actionable Information to the Enterprise*](#)) has shown that the lack of BI skill sets is a top pressure driving companies to seek alternative methods for delivering actionable information to the enterprise. Don't neglect IT / IS staff as the IT skill sets have also been identified as lacking, particularly with skills required to for data integration and data quality steps.
- **Establish a BI center of excellence or competency center.** Whether training is handled before or as part of this activity, Best-in-Class companies have clearly indicated that the establishment of a BI center of excellence is crucial to the success of BI projects. This involves the inclusion of business and IT management at all levels, and can encompass the definition and creation of KPIs. This drives the ability to align operational KPIs with department and corporate goals within a formal and recognized process that is sanctioned and supported by senior management.

Best-in-Class Steps to Success

- **Look for both internal and external opportunities for operational performance improvement.** Aberdeen research and interviews have revealed that many operational BI projects are focused on internal processes. Some Best-in-Class companies are exploring external transactions and activity, such as supplier management, web-based sales, and third-party service provider performance. Once a corporate culture around operational BI initiatives is established, look to apply capabilities to all environments with high volumes of rapid transactions.
- **Investigate operational system monitoring enablement.** Only 28% of Best-in-Class companies and only 15% of Industry Average and Laggard organizations have deployed BAM). This is a category of operational BI (as described in Table 1) that enables the improvement of system performance and efficiency. While business processes may dominate thinking when it comes to the investigation of operational BI, it is also important to consider the performance of the computing systems involved. For example, if it currently takes an hour to process data needed to deliver information to customer service representatives, a BAM approach may uncover improvement opportunities to shorten the time-to-information by identifying data flow and networking bottlenecks.

Aberdeen Insights - Summary

The approaches to improving operational efficiencies can take on many forms and requires an understanding of the capabilities, as well as the current and planned approaches that Best-in-Class Companies are finding to be most effective. Operational BI comes in many flavors, each with a distinct targeted application and set of business uses. Top performance has been defined across process, customer, and most importantly, time-based metrics. In order to achieve operational performance improvement, companies must think strategically rather than tactically, and select the appropriate methods and toolsets that meet the operational needs of the organization. Most critical may be the identification of high volume, time-intensive operational processes that can be addressed with BI capabilities and enabling technologies.

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Appendix A: Research Methodology

Between October and December 2007, Aberdeen examined the use, the experiences, and the intentions of more than 250 enterprises involved with a diverse set of operational BI activities and projects.

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

Responding enterprises included the following:

- *Job title / function:* The research sample included respondents with the following job titles: IT manager or staff (33%); operations / process manager or staff (17%); senior management (17%); logistics / supply chain manager or staff (16%); sales and marketing manager or staff (12%); and finance manager or staff (5%).
- *Industry:* The research sample included respondents from 33 different industry segments. Manufacturing represented the largest combined segment with 32% of the sample. Other top responding industries included high technology / software (19%); transportation / logistics (11%); food and beverage (9%); and retail (8%).
- *Geography:* The majority of respondents (62%) were from North America. Remaining respondents were from Europe (19%), the Asia-Pacific region (13%) and Middle East, Africa, and South America (6%).
- *Company size:* Thirty-five percent (35%) 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 24% of respondents were from small businesses (annual revenues of \$50 million or less).
- *Headcount:* Forty-five percent (45%) of respondents were from large enterprises (headcount above 2,500 employees); 34% were from midsize enterprises (headcount between 101 and 2,500 employees); and 21% of respondents were from small businesses (headcount equal or less than 100 employees).

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Study Focus

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

- √ The degree to which operational BI is deployed within current operations and the financial implications of the technology
- √ The structure and effectiveness of existing implementations
- √ Current and planned use of operational BI to aid activities across a broad range of business activity and processes
- √ The benefits, if any, that have been derived from operational BI initiatives

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

Table 5: 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>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)</p> <p>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)</p> <p>Capabilities — the business process competencies required to execute corporate strategy (e.g., skilled people, brand, market positioning, viable products / services, ecosystem partners, financing)</p> <p>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)</p>

Source: Aberdeen Group, December 2007

Table 6: 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>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.</p> <p>Industry Average (50%) — Practices that represent the average or norm, and result in average industry performance.</p> <p>Laggards (30%) — Practices that are significantly behind the average of the industry, and result in below average performance.</p>	<p>In the following categories:</p> <p>Process — What is the scope of process standardization? What is the efficiency and effectiveness of this process?</p> <p>Organization — How is your company currently organized to manage and optimize this particular process?</p> <p>Knowledge — What visibility do you have into key data and intelligence required to manage this process?</p> <p>Technology — What level of automation have you used to support this process? How is this automation integrated and aligned?</p> <p>Performance — What do you measure? How frequently? What’s your actual performance?</p>

Source: Aberdeen Group, December 2007

Table 7: The Relationship Between PACE and the Competitive Framework

PACE and the Competitive Framework – How They Interact
<p>Aberdeen research indicates that companies that identify critical business pressures and take the most transformational and effective actions that 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, December 2007

Appendix B: Related Aberdeen Research

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

- [Is the BI Market a Target for ERP Vendors?](#) May, 2007
- [Business Intelligence for All](#) May, 2007
- [“On-Demand” Is Not Far Behind BI on the Technology Wish List](#) June, 2007
- [Data Management 2.0: Making Sense of Unstructured Data](#) July 2007
- [Delivering Actionable Information to the Enterprise: Does On-Demand Solve the Skill Set Shortage?](#) July 2007
- [On-Demand BI: Not Just for SMB](#) August 2007
- [Serving the Underserved: Is On-Demand BI the Answer?](#) August 2007
- [Enterprise BI: Comparing the BI Giants](#) September 2007
- [Smart Decisions: The Role of Key Performance Indicators](#) September, 2007
- [Measuring Marketing Performance: The BI Roadmap to Information Nirvana](#) October 2007

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

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