

ERP in the Midmarket 2009

Managing the Complexities of a Distributed Environment

August 2009

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Executive Summary

The turbulent economy of 2008 emphasized the mid-size company's need to focus on cost reductions. That focus continues into 2009 as companies with annual revenues between \$50 million and \$1 billion face other challenges as well. Gone are the days when only large, multi-billion dollar companies were globally distributed. Faced with increasing complexity, Best-in-Class mid-size companies look to Enterprise Resource Planning (ERP) solutions to drive more value by standardizing, streamlining, and automating business processes while providing the visibility they need to make well-informed decisions quickly and efficiently.

Best-in-Class Performance

Aberdeen used four key performance criteria to distinguish Best-in-Class companies. Top performers achieved impressive results from ERP implementations, including:

- 17% reduction in operating costs
- 17% reduction in administrative costs
- Eliminated or redeployed 13 full time employees
- Are able to close a month in 3.9 days

Competitive Maturity Assessment

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

- 70% have a standardized implementation of ERP across a potentially distributed enterprise
- 79% use cross-functional teams including IT and line of business to become involved in the selection and implementation of ERP
- 64% enable decision-makers to selectively drill down to successive levels of detail until reaching the underlying transactions
- 92% measure time to benefit

Required Actions

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

- Select and implement dashboards, portals or other inquiry and reporting tools that will allow drill down into transactions from summary data
- Standardize the ERP implementation across the enterprise
- Implement workflow and event management technologies to enhance mechanisms to notify decision makers of exceptions

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.

Company Size Definition

This benchmark report highlights the performance and capabilities of mid-size companies. Aberdeen's defines company size based on annual revenues:

- √ Small: under \$50 million
- √ Midsize: \$50 million to \$1 billion
- √ Large: over \$1 billion

"We recently acquired a company with complementary products, giving us access to new markets. Of course, the number of ERP packages within our company grew as result. We plan to move the new company over to our system within 12 months."

~ Dennis Derrah, Manager, IT Applications, Cascade Microtech

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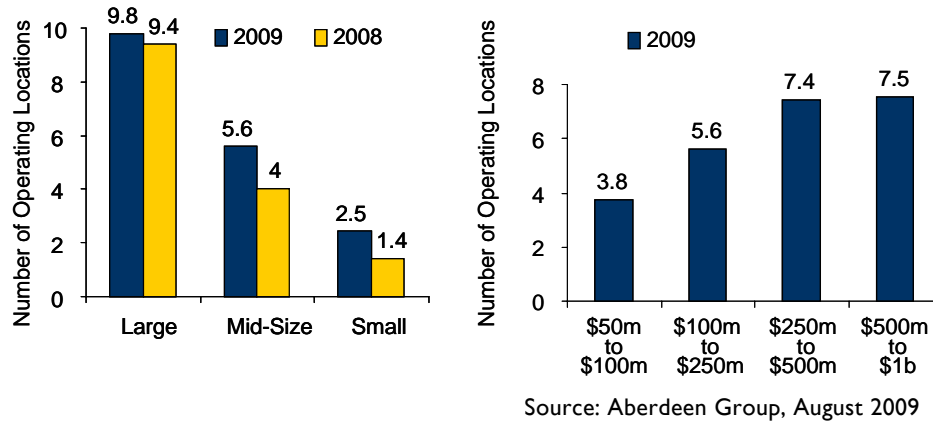
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Chapter One: Benchmarking the Best-in-Class

Business Context

Increased global competition combined with rising costs place continued pressure on mid-size companies to optimize resources, meet tighter delivery schedules for products and services, and improve overall responsiveness. Aberdeen's annual ERP survey of over 300 companies with revenues between \$50 million and \$1 billion found these businesses are becoming more distributed, with the average number of operating locations supported by ERP growing year over year by 39%, from 4 to 5.6 (Figure 1).

Figure 1: Environments Grow in Size and Complexity



Breaking the midmarket into bands of finer granularity, we see the number of operating locations increasing steadily up to the \$250 million threshold and then hitting a plateau as companies scale to \$1 billion. For growing companies in the lower end of the midmarket, this signals a hotbed of change complete with opportunities as well as challenges.

While the need to reduce costs continues for the second year in a row to be the top business driver influencing ERP strategies, we find increasingly distributed environments causing the pressures associated with interoperability between operating locations escalating (Figure 2). While still only number two behind costs in mid-size companies, these interoperability issues share the top spot in large enterprises and represent a harbinger of the pressures mid-size companies will face if they continue to grow.

The proliferation of operating locations results from a variety of economic factors. Aberdeen's October 2008 [The Shifting Sands of Globalization Strategies](#) report found the top three business drivers of globalization efforts were:

- The introduction of low cost competition forcing companies to reduce their own costs (38%)

Fast Facts

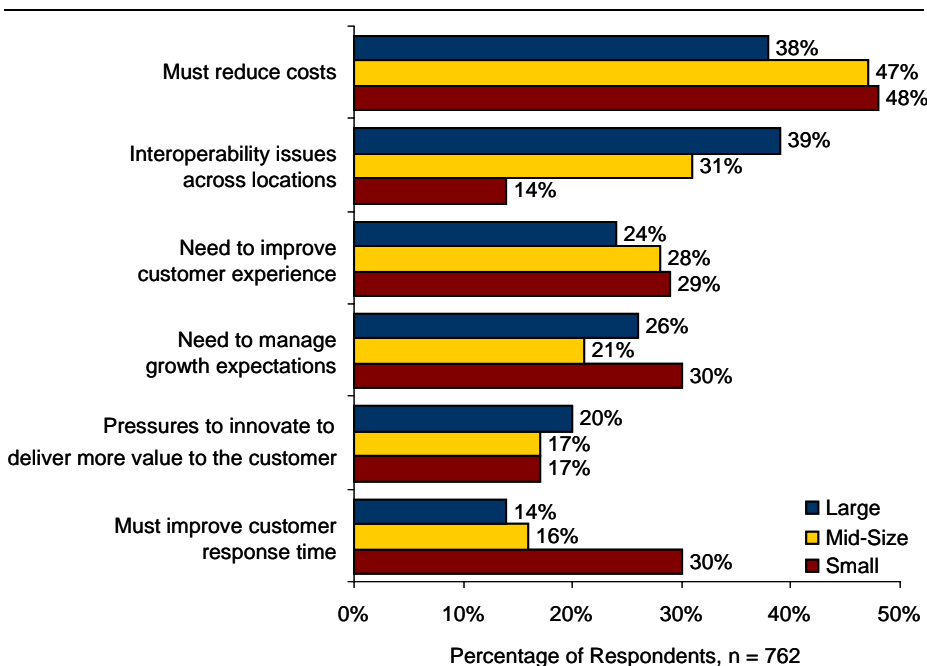
- ✓ The average number of operating locations supported by ERP grew year over year by 39%, from 4 to 5.6
- ✓ The Best-in-Class achieved their results on ERP implementations 23% faster than all other companies
- ✓ 53% of the Best-in-Class have full visibility into the status of all processes from quote to cash, a significant year over year improvement (40% of Best-in-Class had this capability last year); all other companies showed virtually no improvement
- ✓ 69% of mid-size companies have implemented ERP, leaving the remaining 31% vulnerable as the complexity of the business scales with growth

- The opportunity to exploit new markets (34%)
- Rising energy costs (30%)

These factors combine to produce a significant influence on the locations where companies operate and from which products and services are delivered.

Growth and customer service, the top business drivers impacting ERP strategies in mid-size companies in 2006 and 2007 before the economy took a nose dive, have now taken a back seat to cost and interoperability considerations.

Figure 2: Top Two Business Drivers Impacting ERP Strategies



Source: Aberdeen Group, August 2009

“The number of ERP operating locations for us has started to decrease over the past year. We are attempting to consolidate these facilities to save on estate costs. The reason for this is to ensure that we spend the public purse wisely. There are a number of efficiency projects taking place to reduce our spending. Furthermore, our budgets have been cut this financial year, so the pressure this year not to spend our budget unwisely is greater than ever.”

~ Manager, Procurement,
Midsize European Government
Agency

The Maturity Class Framework

Aberdeen used four key performance criteria to distinguish the Best-in-Class from Industry Average and Laggard organizations (Table I). Given the escalating priority of cost containment and the resultant need to do more and produce more, often with fewer resources, Aberdeen selected metrics that are indicators of improved efficiencies in order to gauge the effectiveness of the ERP implementation. Reductions in cost and headcount shown in Table I were not measured year over year, but instead as savings achieved as a result of the implementation of ERP. On average these results were reached in just over two years' time (25 months) with top performers producing better results in 23% less time than those not Best-in-Class (all others - including Industry Average and Laggards combined).

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

Definition of Maturity Class	Mean Class Performance
Best-in-Class: Top 20% of aggregate performance scorers	<ul style="list-style-type: none"> ▪ 17% reduction in operating costs ▪ 17% reduction in administrative costs ▪ 3.9 days to close a month ▪ Reduced (or redeployed) headcount by 13 employees
Industry Average: Middle 50% of aggregate performance scorers	<ul style="list-style-type: none"> ▪ 7% reduction in operating costs ▪ 6% reduction in administrative costs ▪ 4.7 days to close a month ▪ Reduced (or redeployed) headcount by 3 employees
Laggard: Bottom 30% of aggregate performance scorers	<ul style="list-style-type: none"> ▪ 2% increase in operating costs ▪ 3% increase in administrative costs ▪ 9.3 days to close a month ▪ Increased headcount by 1 employee

Source: Aberdeen Group, August 2009

The Best-in-Class PACE Model

To achieve these significant benefits from an ERP solution, a combination of strategic actions, organizational capabilities, and enabling technologies are required. These can be summarized as shown in Table 2.

Table 2: The Best-in-Class PACE Framework

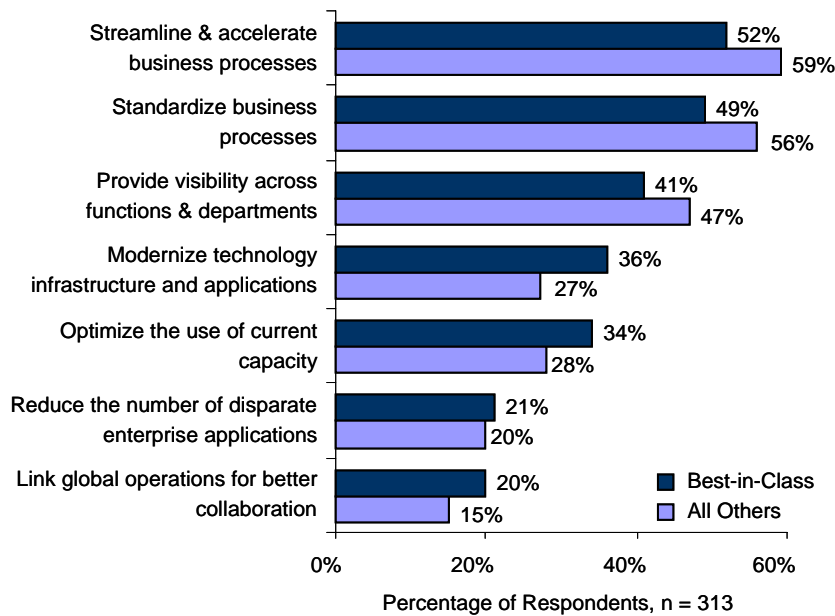
Pressures	Actions	Capabilities	Enablers
<ul style="list-style-type: none"> ▪ Reduce costs 	<ul style="list-style-type: none"> ▪ Streamline and accelerate business processes ▪ Standardize business processes 	<ul style="list-style-type: none"> ▪ Standardized implementation across a (most probably distributed) enterprise ▪ ERP implementation has the continued commitment and attention of senior management throughout selection, implementation and beyond (in support of upgrades and extension) ▪ From summary data, decision-makers can selectively drill down to successive levels of detail until reaching the underlying transactions ▪ Measure time to benefit 	<ul style="list-style-type: none"> ▪ Integrated ERP modules: General Ledger, Accounts Payable, Accounts Receivable, Fixed Asset Management, MRP, Shop Floor Control, Purchasing, Inventory Control, After Market Service, ECM, CRP, DRP, MPS, Forecasting / Demand Planning, Human Resources, Order Management, Project Management, EAM, Supplier collaboration / scheduling, Sales and marketing, product configurator, Payroll ▪ Workflow automation / Business Process Management ▪ Event Management (triggers and alerts) ▪ Internet access to ERP ▪ Business Intelligence and Analytics

Source: Aberdeen Group, August 2009

Best-in-Class Strategies

The top strategies for ERP implementations are reflective of both the need for improved efficiencies (leading to reduced costs) as well as the needs resulting from distributed environments. As the number of operating locations grows, so does complexity, leading to the need for tools to assist in standardizing across those locations. Standardization also facilitates streamlining and acceleration of business processes, so the top two strategic actions shown in Figure 3 indeed go hand in hand.

Figure 3: Top Strategic Actions



Source: Aberdeen Group, August 2009

Although these are "top two" for all maturity classes of our competitive framework, note that the priority of these actions are a bit (12%) higher in those that are not Best-in-Class. This does not indicate less of a need for standardization, speed or efficiency in top performing companies; in fact just the contrary as we will see in Chapter Two. Best-in-Class companies are simply further along in achieving the objectives of these actions.

Providing visibility across functions and departments dropped from the top strategic action last year to number three this year. Unfortunately, Aberdeen finds this is not because this need has been largely satisfied. Indeed, only the Best-in-Class significantly improved in providing full visibility into the status of all processes from quote to cash (40% had this capability last year compared to 53% this year). The remaining 80% of survey respondents made virtually no progress year over year in achieving this capability (30% last year compared to 31% this year.) Therefore, we would caution midmarket companies to not lose sight of this important objective nor ERP's role in providing this level of visibility.

"While inventory accuracy is critical in our make-to-order business, in the past we had employed many on-line and off-line tools to determine our best inventory levels. This complex process ensured we'd have the right product for our customers, but often resulted in carrying a slightly higher inventory level than desired. Long run times caused us to schedule MRP [Material Requirements Planning] to be run over the weekend, which, combined with lack of real time updates to inventory, resulted in the need for inventory buffers just to meet incoming orders. Since updating to a modern, large-scale ERP solution, we are now able to run global MRP in 15 minutes, have reduced inventory by 10%, and have improved our inventory turns."

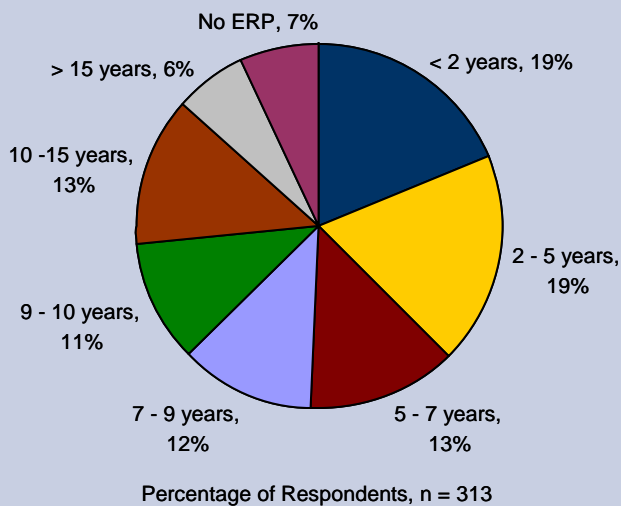
~ Keith Hogie, Director of IT, Milestone AV Technologies

In addition, given the increase in the average number of operating locations, Aberdeen was disappointed to see the strategic action of linking global operations for better collaboration indicated as a "top two" strategic action in only 20% of Best-in-Class and 15% of all others. However this only reinforces the need for standardization. Without standard business processes, data, and metrics defined, ERP can have limited impact on the coordination and collaboration across locations. Yet with standards defined and implemented, ERP can be a powerful enabler of both.

Aberdeen Insights — Strategy

The average age of an ERP implementation amongst our survey respondents from mid-size companies is 6.9 years. Figure 4 shows how our survey population's ERP implementations fall into various age / maturity brackets.

Figure 4: Maturity of ERP Implementations



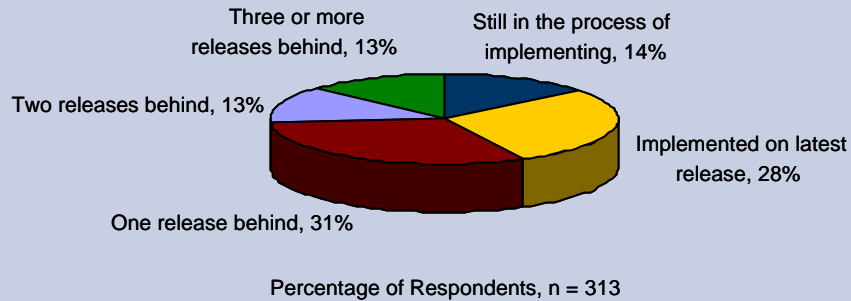
Source: Aberdeen Group, August 2009

The age of the implementation alone is neither good nor bad and suggests nothing other than the maturity of the implementation. An older ERP implementation that is several versions behind the latest release or one that is based on old and outdated technology can severely limit a company's ability to operate and interoperate efficiently. However, a more mature implementation that has kept up to date on newer technology and the latest product innovations could indeed provide a competitive advantage.

continued

Aberdeen Insights — Strategy

Figure 5: Release Status in the Midmarket



Source: Aberdeen Group, August 2009

The 26% of mid-size companies that operate two or more releases behind (Figure 5) run the highest risk of falling behind in terms of innovation, but even those on the latest release of a product based on old and outdated technology are at risk as well.

Figure 4 also indicates that 93% of survey respondents have an ERP solution. However, Aberdeen would caution the reader not to assume this means 93% of all mid-size companies have ERP. This number is inflated because of the topic of our survey and benchmark, drawing those with ERP implementations and those perhaps considering taking the plunge or even currently evaluating ERP solutions. Indeed the actual adoption of ERP is far lower than this, placing those with ERP implementations in a more select category.

In a survey of over 1,607 executives from 36 countries, *The 2009 Aberdeen Report*, a comprehensive study of the state of the market, found overall only 69% of mid-size companies had implemented ERP. As important as the recommendations of this report may be to companies with ERP that are looking to gain the most value from implementations, they are even more important for those yet to implement ERP.

The complexities of a business scale with the size of a company and these complexities grow disproportionately with multiple operating locations and exponentially as they expand in distance beyond international boundaries. ERP is an important infrastructure that will facilitate growth and customer service, while keeping costs visible and in check.

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 and implementation of ERP is a major undertaking for any company. However, using ERP as a template for standardization of business processes, data and performance metrics can have a significant impact on the benefits achieved.

Case Study — Network Equipment Technologies, Inc.

Network Equipment Technologies, Inc. (NET) is a company which provides networking technology products to enterprises and governments throughout the world. Its network and voice exchange solutions enable interoperability and integration with existing networks. Its subsidiary, Quintum, provides VoIP access solutions giving reliability and voice clarity to Internet telephony. NET also provides products that fully integrate different needs in a networking solution.

NET has operating locations around the world in Fremont, California, Dulles, Virginia, England, Australia, France, Dubai, United Arab Emirates (UAE), and Japan which are managed centrally from corporate headquarters in Fremont, California in the US.

Its current ERP implementation resulted from a replacement strategy. Its prior ERP system had been selected by NET, when it had 1,500 employees. "We had purchased all 42 modules but were using less than half. It was very cumbersome to operate since different locations had been set up as separate implementations. We have also downsized to 260 employees and needed to operate quite differently from its original configuration," said Carmel Wynkoop, Director of IT.

NET had implemented its prior ERP solution to reflect multiple transactional companies. Both NET employees and employees of its contract manufacturer recorded transactions in multiple "companies." "It was very cumbersome. Employees had to log in and out of multiple companies; mistakes happened. Transactions would get entered in the wrong company. This made it a logistical and financial nightmare. In addition we had no product configurator so marketing created phantom parts 'impersonating a configurator' and resulting in a proliferation of 37,000 parts in the part master," said Wynkoop.

Faced with these troubles with its ERP solutions, NET made the strategic decision to replace its ERP solution about three years ago. The transition process took one year and produced significant savings. She continued, "Today we operate from a single transactional company and the different entities are flagged so that we can report them separately but roll them all up for a consolidated view."

continued

Fast Facts

- √ 70% of the Best-in-Class have a standardized implementation of ERP across the enterprise
- √ 92% of the Best-in-Class measure time to benefit of their ERP implementations
- √ 87% of all midsize companies surveyed operate from two or more locations
- √ 85% of Best-in-Class senior management have a continued commitment to selection, implementation, and maintenance of ERP
- √ The Best-in-Class are 52% more likely than all other companies to enable drill-downs from summary data through subsequent levels of detail

Case Study — Network Equipment Technologies, Inc.

A portion of those savings resulted from a reduction in staff. The prior implementation was supported by an IT staff of 10. The current ERP implementation is now supported with an IT staff of three. Another contributor to savings was in streamlining and simplification. NET went from 37,000 parts to 4,000 parts in ERP as a result of the implementation and the use of a product configurator. Adding the Quintum data in boosted that number up to 8,000, but still left it less than 25% of the original part master.

“In the end, after netting out the cost of the new software and implementation, we produced a total savings to date of \$100,000 as well as many non-monetary benefits. It was like getting the new solution for free and adding in a \$100,000 bonus. Changing our ERP solution was one of the best decisions we made,” Wynkoop concluded.

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 standardization of business processes and ERP implementations); (2) **organization** (continued commitment across functions and departments); (3) **knowledge management** (contextualizing data and exposing it to key stakeholders); (4) **technology** (scope of ERP deployment and accessibility); and (5) **performance management** (the ability to measure benefits). These characteristics (identified in Table 3) serve as a guideline for best practices, and correlate directly with Best-in-Class performance across the key metrics.

Table 3: The Competitive Framework

	Best-in-Class	Average	Laggards
Process	Standardized implementation of ERP across a potentially distributed enterprise		
	70%	53%	49%
	Implemented on the latest release of ERP		
	43%	23%	15%
Organization	ERP implementation has the continued commitment and attention of senior management throughout selection, implementation and beyond (in support of upgrades and extension)		
	85%	70%	66%
	Cross functional team including IT and line of business are involved in the selection and implementation of ERP		
	79%	68%	63%

“Our multiple instances of ERP were the result of a few factors. Past practices were to implement multiple instances for business process reasons, but recently we have seen those reasons being taken away. What was usually cited as a necessity was really only a local preference or a reflected past practice. Our past culture was that multiple systems (plant specific or divisional) were simply the norm. As the result of successful pilot projects in the Americas and France, (and to a lesser extent in other regions), we have proven that a regional-global approach works and we are now working to rapidly consolidate instances. In the past five years, we have gone from nearly 40 ERP instances to around 15 currently. Our target is four.”

~ IT Manager, Global Automotive Supplier

	Best-in-Class	Average	Laggards
Knowledge	From summary data, decision-makers can selectively drill down to successive levels of detail until reaching the underlying transactions		
	64%	44%	31%
	Decision-makers are notified in real time as exceptions occur and can react immediately		
	49%	30%	18%
Technology	ERP modules currently implemented:		
	<ul style="list-style-type: none"> ▪ 11.9 modules implemented¹ ▪ 78% of functionality available deployed ▪ 40.4% weighted average ERP usage² 	<ul style="list-style-type: none"> ▪ 10.6 modules implemented¹ ▪ 73% of functionality available deployed ▪ 33.4% weighted average ERP usage² 	<ul style="list-style-type: none"> ▪ 9.7 modules implemented¹ ▪ 72% of functionality available deployed ▪ 30.9% weighted average ERP usage²
	Measure time to benefit		
Performance	92%	59%	46%

Calculation of Weighted Average

Survey respondents were presented with a list of modules and asked to check off those implemented. A list of 26 generic modules was used:

- √ 17 of which were applicable to all companies
- √ 7 were presented only to manufacturers
- √ 2 were presented only to service providers

As a result, manufacturers could check off a total of 24 modules, while service providers could select from 19. Therefore, in order to calculate the weighted average of ERP usage, Aberdeen first calculated an un-weighted average by dividing the number of modules used by 24 (manufacturers) or by 19 (service providers.) In both cases, the un-weighted average was then multiplied by the percentage of functionality (available in those modules) that was actually deployed.

1. The number of modules is based on a set of 24 generic modules for manufacturers and 19 modules for service providers (see Table 4)
2. Calculated as: average number of modules / (24 or 19) X percent of functionality used
Source: Aberdeen Group, August 2009

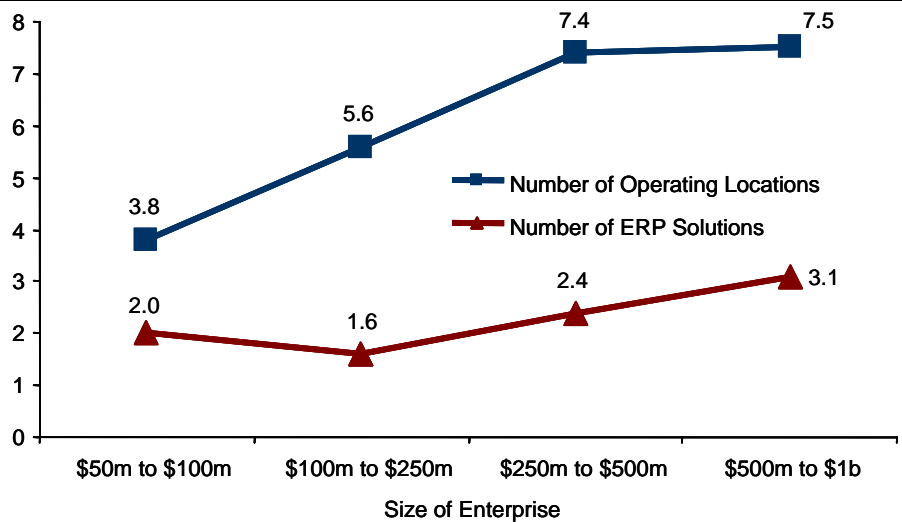
Capabilities and Enablers

Based on the findings of the competitive framework and interviews with end users, Aberdeen’s analysis of the Best-in-Class demonstrates that standardization across operating locations correlates to Best-in-Class performance. Using ERP as a vehicle for standardizing processes, data, and metrics is a viable approach to promoting efficiencies, collaboration, and interoperability.

Process

The process of implementing and maintaining ERP can have a profound effect on both localized and distributed efficiencies. The majority (70%) of Best-in-Class ERP implementations have been standardized. Two different factors come into play in standardizing ERP implementations, the number of different operating locations and the number of disparate ERP solutions that have been implemented. Eighty-seven percent (87%) of all mid-size companies surveyed operate from two or more locations making a single ERP supporting a single location the exception rather than the rule. While the number of different operating locations scales in a linear fashion as the size of the enterprise grows across the entire midmarket, the number of ERP solutions in play is not as consistent (Figure 6).

Figure 6: ERP Across the Distributed Enterprise



Source: Aberdeen Group, August 2009

One might expect that having a single ERP solution leads naturally to a standardized implementation across different locations, but this is not necessarily the case. Companies with one ERP solution are indeed more likely to have a standardized implementation than those with more than one, but not by a large margin. Thirty-two percent (32%) of companies with a single ERP have not standardized ERP implementations, yet an additional 26% are planning to.

Conversely, one might think it impossible to standardize ERP implementations across multiple ERP solutions. This is not the case since 70% of Best-in-Class mid-size companies have standardized ERP, and only 62% of them have a single ERP solution. While standardizing across disparate applications is not the norm, it is possible. Standardizing ERP implies a combination of standard workflows, standard metrics and a standard approach to master data including parts, suppliers, customers and general ledger charts of account. Standardizing need not mean a single numbering scheme or a single common set of master data, but requires at least a means of mapping data from one ERP to another. The most obvious requirement is the need to roll multiple accounts into a consolidated general ledger.

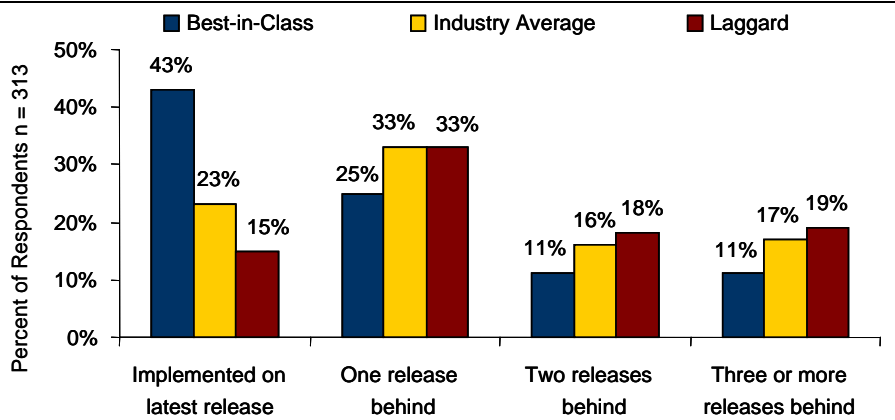
However, where multiple ERP solutions have been inherited through mergers and acquisitions, this level of standardization is difficult, if not impossible to accomplish since often the inherited ERP will be fully implemented. Changing part (inventory) codes or account numbers post-implementation is extremely difficult and may require re-implementation. Yet with newer object-based technologies and Service Oriented Architectures (SOA) the integration of processes and data is simplified, providing additional incentive for companies running legacy applications based on outdated technologies to move into the world of flexible, modern architectures.

“Two years ago, we eliminated an ERP system at our Mexican subsidiary. There were a number of reasons including the fact that they are a much smaller organization and were using an unsupported ERP platform. Also, we report consolidated financials to our corporate parent. All in all, it made sense to give them access to our ERP platform and have them adopt our business processes.”

~ Tom Woodman, Manager,
Enterprise Applications, KUKA
Systems Corporation

This brings us to the other process capability noted in Table 3, the ability to stay current on new releases. Figure 7 demonstrates that Best-in-Class midmarket ERP implementations are far more likely to be running on the latest release of the software available.

Figure 7: The Best-in-Class are 87% More Likely to be on the Latest Release



Source: Aberdeen Group, August 2009

“We have two very different business models. One is a job shop; the other is retail / distribution. We felt each needed the ERP solution that was the best fit for each. In one of those businesses, we decided to replace our existing solution, a very customized legacy system. We are a growing organization and it had reached the limits of what it could do for us without a technology refresh. We are now five months into the implementation. We chose the current application for its fit and its strong BI capabilities.”

~ Chief Information Officer /
VP IT, Midsize Distribution Industry

However, simply being on the latest release does not guarantee success, particularly if it is the latest release of a legacy product that is no longer being significantly enhanced. ERP replacement was once thought to be analogous to brain surgery. You didn't do it unless the patient was dying. Today, however, perhaps brain surgery is no longer the most appropriate analogy. Consider it instead like joint replacement. A knee or hip replacement used to have a projected lifespan of 10 years. Today the prognosis is far longer and many patients submit to the procedure with the hope they will never have to do it again. When knees, hips, and businesses are operating smoothly and efficiently, it needn't be a consideration. If there is recurring pain and limited movement, the disruption to your (business) life and the recovery process may well be worth while if it helps you perform to the level you aspire.

Organization

Management commitment to ERP is a widely acknowledged requirement for a successful implementation. Seldom today is this level of investment made without the appropriate executive attention. Without it, particularly in today's recessionary economy, an ERP evaluation and selection would never get off the ground and the implementation project would not be sanctioned without it. Yet there is still the risk that management attention will wane once the project is launched. Successful implementations require the dedicated attention of a project leader and possibly an entire team made up of the people the business can least afford to be pulled away from their "real" jobs. Therefore once initial milestones are reached, there is always the temptation to pull these valuable resources off the project and send them back to their original roles.

And yet, Aberdeen contends that an ERP implementation is never complete. There are always additional benefits to be derived from added features and functionality, whether originally available and deferred in initial implementations, or resulting from innovations developed by the ERP solution provider. And then of course, businesses themselves grow and evolve and present new challenges for ERP implementations. Therefore it is critical that management attention is sustained post-implementation to assure upgrades, innovation and extension of ERP continues.

Knowledge Management

Users of ERP systems often extract data by running either pre-defined reports or a standard query against data within the system. While this is certainly an advance over earlier days when a batch update needed to be run overnight – or worse, over the weekend – before information could be aggregated and retrieved, it is still not enough. Best-in-Class companies are taking advantage of advanced features, delivered by way of portals and dashboards in order to enable end-users to drill into the data and go beyond existing static reports in order to get at the root causes for performance anomalies in the business. The Best-in-Class are 52% more likely than all other companies to enable drill-downs from summary data through subsequent levels of detail to selectively access underlying data, ultimately drilling down to the transactions that make up the system of record of the business. In doing so, they are able to investigate and determine both fiscal and operational root causes of exceptions and identify an audit trail within the data.

Additionally, 49% of Best-in-Class companies are also automating alerts that inform management when anomalies and exceptions occur. Decision-makers in Best-in-Class companies are 63% more likely than Industry Average and 172% more likely than Laggard companies to be notified in real time as exceptions occur and can react immediately. Workflow technologies and event management are two underlying technologies that can facilitate this type of exception management. Over the past three years, adoption of workflow embedded within ERP has grown in our top performers, with 39% now utilizing this advanced feature of ERP, and all others lagging at 22%. Adoption of event management technologies are still quite rare, yet top performers are more than twice as likely as all others to deploy these technologies as a module of ERP (13% versus 6%), thereby securing a competitive advantage with faster response times and problem resolution.

Technology

Adoption of workflow technologies and event management are just two of a generic list of 26 modules of ERP used to calculate ERP usage (see the sidebar next to Table 3 for an explanation of ERP usage calculations). Since the needs of service providers will differ from those of manufacturers and distributors, a slightly modified list was used for each. Many of these modules listed in Table 4 are core to any ERP worthy of being called ERP. These include basics such as general ledger, accounts payable, accounts

receivable, purchasing, inventory control and order management. As in past years, the Best-in-Class take fuller advantage of ERP, with a higher module count, combined with more extensive use of the functionality available, resulting in a higher weighted average.

Table 4: Adoption of ERP Modules

ERP Modules for All Industries	Best-in-Class	All Others
General Ledger	95%	93%
Accounts Payable	97%	94%
Accounts Receivable	95%	92%
Fixed Asset Management	52%	38%
Forecasting / Demand Planning	69%	47%
Human Resources	23%	17%
Order Management	89%	78%
Project Management	41%	28%
Purchasing	90%	91%
Inventory Control	92%	84%
After Market Service	20%	14%
Supplier Collaboration / Scheduling	30%	19%
Event Management	13%	6%
Workflow Technologies	39%	21%
Sales and Marketing	52%	40%
Product Configurator	30%	26%
Payroll	16%	18%
ERP Modules for Manufacturing Industries Only	Best-in-Class	All Others
Material Requirement Planning	78%	72%
Capacity Requirements Planning	20%	17%
Distribution Requirements Planning	18%	21%
Master Production Scheduling	33%	29%
Shop Floor Control	57%	54%
Enterprise Asset Management	12%	6%
Engineering Change Management	39%	29%
ERP Modules for Service Industries Only	Best-in-Class	All Others
Workforce Scheduling	50%	17%
Job or Project Costing	70%	46%

Source: Aberdeen Group, August 2009

For the most basic accounting functions, the Best-in-Class are slightly more likely to have implemented these modules. As we moved beyond the core

basics we see the gap widen between Best-in-Class and all others with two exceptions:

- Purchasing, which for all others appears to be the next highest priority after the basic accounting functions have been addressed. For manufacturers, the automation of purchasing (of direct materials) and inventory control must go hand-in-hand in order to gain the full benefits from both, but in a pure service environment where purchases are largely or exclusively indirect materials, purchasing can indeed lead the implementation of inventory control, if in fact it is a critical module at all.
- Payroll, which according to the *Aberdeen Report 2009* is the single function most likely to be outsourced.

Aberdeen also includes some modules such as project management, after market service, and product configurators that are not required by all companies and are not necessarily offered by all ERP solution providers. Workflow and event management are advanced features not typically found in older legacy ERP products and we have already noted the low adoption rates, even with Best-in-Class leading the way.

Performance Management

Managing the performance of an ERP implementation can mean many things to different companies and to different job roles within an enterprise. The Information Technology (IT) staff is often likely to measure performance in cost and time to implement. Managers overseeing specific Line of Business (LOB) functions are more likely to measure performance based on ERP's ability to streamline and automate those functions which may have previously been manual or supported by paper or spreadsheets. Aberdeen has always measured the performance of ERP in its ability to deliver quantifiable business benefits. These include specific cost reductions as well as schedule improvements (Table 5). While the vast majority of the Best-in-Class measure each of these metrics, on average 31% of Laggards do not and as many as 42% "don't know" these performance results, an indication that ERP is not providing the visibility needed to maximize performance.

"We have gained a lot in the reporting area. We now have a BI solution that dovetails very nicely into our ERP system. The integration of ERP and BI in our solution has been a large step forward for our executive team because of the improved level of business reporting and easily retrievable KPIs. We had some reporting before that could take a manager two to four hours a week producing reports for his (or her) director, where now they can generate some of those in five to 10 minutes. We are continuously working with the business owners to determine what reports we can provide to make their daily jobs more efficient."

~ Keith Hogie, Director of IT, Milestone AV Technologies

Table 5: Top Performers Produce Quantifiable Results

Definition of Maturity Class	Mean Class Results
<p>Best-in-Class: Top 20% of aggregate performance scorers</p>	<ul style="list-style-type: none"> ▪ 17% reduction in operating costs ▪ 17% reduction in administrative costs ▪ 15% reduction in inventory (manufacturing) ▪ 18% improvement in complete and on-time delivery ▪ 16% improvement in manufacturing schedule compliance (manufacturing) ▪ Reduced (or redeployed) headcount by 13 employees ▪ 92% measure time to benefit

Definition of Maturity Class	Mean Class Results
<p>Industry Average: Middle 50% of aggregate performance scorers</p>	<ul style="list-style-type: none"> ▪ 7% reduction in operating costs ▪ 6% reduction in administrative costs ▪ 10% reduction in inventory (manufacturing) ▪ 10% improvement in complete and on-time delivery ▪ 14% improvement in manufacturing schedule compliance (manufacturing) ▪ Reduced (or redeployed) headcount by 3 employees ▪ 59% measure time to benefit
<p>Laggard: Bottom 30% of aggregate performance scorers</p>	<ul style="list-style-type: none"> ▪ 2% increase in operating costs ▪ 3% increase in administrative costs ▪ 6% reduction in inventory (manufacturing) ▪ 6% improvement in complete and on-time delivery ▪ 5% improvement in manufacturing schedule compliance (manufacturing) ▪ Increased headcount by 1 employee ▪ 46% measure time to benefit

Source: Aberdeen Group, August 2009

When monitored and managed closely, the cost savings and schedule improvements produced by average ERP implementations are significant and even Laggard organizations can enhance business processes and visibility in order to improve the percentage of orders delivered complete and on-time while driving down inventory. In a world of rising costs, Laggard ERP implementations are able to at least contain these cost increases to small single digits. These increases could easily have escalated to double digits without the use of ERP. By making a sustained commitment to ERP implementations, taking better advantage of ERP functionality and collaborating across a distributed environment, the results from Best-in-Class ERP implementations speak for themselves.

Aberdeen Insights — Technology

What matters most to companies evaluating ERP solutions? Aberdeen analyzed this question from a variety of different perspectives. Have priorities shifted year over year? Do manufacturers view the importance of various selection criteria differently than those in service related industries? Does size of company really matter? In short, the answer is "No" to all of the above. The sequence of priorities was the same regardless of how we analyzed the data. Figure 8 could equally be comparing any two of the perspectives listed above.

continued

Aberdeen Insights — Technology

Table 6: ERP Selection Criteria (1 to 5 scale*)

Selection Criteria	2009	2008
Functionality	4.8	4.7
Ease of use	4.5	4.5
Total cost of ownership	4.2	4.3
Ease and speed of implementation	4.1	4.2
Ability to tailor functionality without programming	4.1	4.2
Integration capabilities	4.0	4.2
Software license price	3.8	3.9
Implementation templates and best practices	3.6	3.8
Industry specific solution	3.5	3.8

*Respondents were asked to rate the selection criteria on a scale of 1 to 5, where 1 is lowest and 5 is highest
 Source: Aberdeen Group, August 2009

As we have observed for the past several years, functionality tops the list with ease of use a close second. Gone are the days when ERP users are willing to spend significant amounts of time out of the office in training classes or even reading the instruction manual. The latest breed of ERP users wants more and better features and functions and they want to be able to load them up and use them immediately with little or no delay. This need only escalates as implementations, upgrades and innovation is implemented across a distributed enterprise. Cost factors, including the costs associated with ease and speed of implementation and the cost of creating and maintaining customizations also weigh heavily in ERP decisions.

“In selecting an ERP solution we looked for the best fit, a solution which would not need significant customization. In selecting our ERP solution, we anticipated needing eight customizations and six interfaces to associated systems, but the extent of customization actually wound up being less. The other reason for selecting our ERP solution was because the company really seemed to know our business and we were able to communicate effectively with less difficulty than anticipated with other vendors.”

~ Chief Information Officer /
 VP IT, Midsize Distribution Industry

Chapter Three: Required Actions

Whether a company is trying to move its performance in ERP 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

- **Establish specific goals for obtaining business benefits from ERP and measure against these objectives.** Many ERP implementations fall short of Best-in-Class status because performance metrics are not established. In many cases ERP is viewed as a necessary infrastructure and therefore companies place more emphasis on time to implement and cost than on specific business goals and objectives. On average 31% of Laggards don't measure the most basic of cost savings and schedule improvements that can prove the value of ERP cost justify continued investment.
- **Continue to make an organizational commitment to ERP beyond the initial implementation.** Senior management commitment is necessary for any ERP implementation to be successful. While 66% of Laggards claim that the ERP implementation has the continued commitment and attention of senior management throughout selection, implementation, and beyond (in support of upgrades and extension), Laggards trail the Best-in-Class significantly in both their ability to keep up with new releases (only 15% are on the most current version) and also lag in the number of modules and the extent of functionality deployed.
- **Leverage this commitment to keep current on the latest releases while also broadening and deepening the use of ERP.** Aberdeen is of the firm belief that an ERP implementation is never "done." Businesses continue to evolve and therefore the requirements evolve as well. At the same time, ERP solution providers continue to innovate. Without the continued commitment of management, companies run the risk of letting maintenance dollars go to waste.

Industry Average Steps to Success

- **Provide transparency to metrics used to measure performance.** While only 10% to 21% of Industry Average companies do not measure the various metrics reported in Chapter Two, double that percentage do measure, but the individual survey respondent doesn't know the result. By sharing the metrics that quantify the business benefits of ERP and sharing the results through direct access to ERP or other methods of communication, the implementation stays alive and continues to accumulate additional benefit. By associating a "time to benefit," ERP users become more

Fast Facts

- √ 31% of Laggards don't measure the most basic of cost savings and schedule improvements
- √ Forty-one percent (41%) of Industry Average and 54% of Laggards do not measure time to benefit
- √ 64% of Best-in-Class companies' decision-makers can drill down to individual transactions
- √ The Best-in-Class are 81% more likely to be able to notify decision-makers of exceptions in order that they may be able to react immediately

sensitive to driving for results. Forty-one percent (41%) of Industry Average companies do not measure time to benefit.

- **Make use of dashboards, portals or other inquiry and reporting tools that will allow drill down into transactions from summary data.** When decision-makers can drill down to individual transactions, they gain greater visibility into the fiscal and operational audit trail and facilitate faster and more responsive decision-making. Less than half (44%) of Industry Average companies claim they have this capability compared to almost two thirds (64%) of Best-in-Class companies.
- **Standardize the ERP implementation across the enterprise.** Industry Average companies are less than 10% more likely than Laggard companies to standardize their ERP implementation across the enterprise, a capability which becomes more critical as the number of operational locations grows along with company size. The level of autonomy and heterogeneity between operating locations will impact the extent of standardization. While standardization is far easier with a single ERP package, and most easily accomplished with a single instance of the software, these are not requirements. Harmonizing charts of accounts, product, customers, and supplier codes will better enable interoperability and consolidated reporting across the enterprise.

“Embedding or tightly coupling BI and ERP allow the users to have a better grasp of the data. Mid-market companies typically don’t have a lot of resources. I know I don’t.”

~ Chief Information Officer /
VP IT, Midsize Distribution
Industry

Best-in-Class Steps to Success

- **Continue to develop and enhance mechanisms to notify decision makers of exceptions.** While the Best-in-Class are 81% more likely to be able to notify decision-makers of exceptions in order that they may be able to react immediately, the majority continue to do so the hard way. Which is more effective? Waiting for an executive to log into a portal and ask, "Are any orders for important customers late?" Or pushing a message to alert the executive as soon as the exception is detected? A variety of tools, sometimes in combination, can alert decision makers to exceptions.
- **Implement workflow technologies and event management as keys to effective exception management.** Many executives today do not understand the power these tools can bring or the impact they can have on operational performance. While Best-in-Class are ahead of the pack, adoption of these technologies is still very low. Each of these technologies provides value to an organization individually. Workflow capabilities help to both automate and streamline business processes, while also enforcing standardization of these processes, something which becomes harder to do as environments become more distributed. Event management can trigger alerts in real time as exceptions occur, escalating them as needed. When these two technologies are combined they have a synergistic effect, alerting decision-makers in real time while suggesting and implementing a "best practice" response.

Aberdeen Insights — Summary

Faced with increasing complexity, Best-in-Class mid-size companies look to ERP solutions to drive more value by standardizing, streamlining, and automating business processes while providing the visibility they need to make well-informed decisions quickly and efficiently. In the quest to reduce costs while maintaining profitability and customer satisfaction, mid-size companies must maximize and standardize their ERP implementations, taking advantage of features and functions as well as supporting technologies, to improve visibility and transparency throughout the enterprise to preserve responsiveness even as environments become increasingly distributed.

Appendix A: Research Methodology

Between April and July 2009, Aberdeen examined the use, the experiences, and the intentions of 313 midsize companies using ERP in a diverse set of enterprises.

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

Responding enterprises included the following:

- *Job title:* The research sample included respondents with the following job titles: CEO / President / Chairman (6%), other C-level (23%), EVP / SVP / Vice President (5%), Director (11%), Manager / General Manager (29%), and other (26%).
- *Department / function:* The research sample included respondents from the following departments or functions: information technology (39%), operations (10%), finance (10%), business process management (8%), logistics / supply chain (8%), and others (25%).
- *Industry:* The research sample included respondents from the following industries: industrial products manufacturing (11%), industrial equipment manufacturing (8%), automotive (7%), food / beverage (6%), IT / consulting services (6%), metals and metal products (6%), aerospace and defense (5%), and others (51%).
- *Geography:* The majority of respondents (65%) were from North America. Remaining respondents were from Europe (21%), the Asia-Pacific region (11%), or elsewhere (3%).
- *Company size:* Thirty-seven percent (37%) of respondents were from companies with annual revenues between \$50 million and \$100 million. Twenty-seven percent (27%) were from companies with annual revenues between \$100 million and \$250 million. Twenty-one percent (21%) were from companies with annual revenues between \$250 million and \$500 million. Fifteen percent (15%) were from companies with annual revenues between \$500 million and \$1 billion.
- *Headcount:* Companies had total employee headcounts described as follows: 100 or less (3%); between 100 and 250 (18%); between 250 and 500 (27%); between 500 and 1,000 (19%); between 1,000 and 2,500 (21%); over 2,500 (12%).

Study Focus

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

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

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

Table 7: 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, August 2009

Table 8: 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, August 2009

Table 9: The 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, August 2009

Appendix B: Related Aberdeen Research

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

- [*ERP in Manufacturing AXIS Report*](#); Q1 2009
- [*ERP in Manufacturing 2009: Expanding Beyond Traditional Boundaries*](#); June 2009
- [*Beyond the Total Cost of ERP Ownership*](#); June 2009
- [*2008 ERP in the Mid-Market*](#); August 2008
- [*The 2008 ERP in Manufacturing Benchmark Report*](#); June 2008
- [*The State of the ERP Market*](#); February 2008
- [*The Outlook for ERP Spending in 2008*](#); January 2008

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

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Since 1988, Aberdeen's research has been helping corporations worldwide become Best-in-Class. Having benchmarked the performance of more than 644,000 companies, Aberdeen is uniquely positioned to provide organizations with the facts that matter — the facts that enable companies to get ahead and drive results. That's why our research is relied on by more than 2.2 million readers in over 40 countries, 90% of the Fortune 1,000, and 93% of the Technology 500.

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