

# **Publishing Technical Communications to a Multi- Channel World**

May 2007

## Executive Summary

Despite today's brutal demands on technical communications departments, best in class performers hit their business goals 92% of the time. This report serves as a guide for those departments that desire to achieve similar business performance.

### Best in Class Performance

Four key performance criteria were used to identify the best in class documentation departments. The best in class averaged the following performance in those four business areas.

- Publish or launch product on-time every time (100%)
- Hit original language authoring budgets (99%)
- Hit localization budgets (99%)
- Achieve expected initial publication quality (92%)

### Competitive Maturity Assessment

Survey results show that the firms enjoying best-in-class performance shared several common characteristics such as:

- The best in class are more likely to author communications according to the DITA standard (30% vs. 15%), with a topic-based review process (40% vs. 24%) and with Structured Authoring applications (38% vs. 29%).
- The best in class are more likely to localize communications by leveraging Language Service Providers, (54% vs. 32%) in addition to Content Management and Translation Memory software systems (20% vs. 8%).
- The best in class are also more likely to published web based communications that leverage design data (16% vs. 3%)

### Required Actions

In addition to recommendations in Chapter 3, to achieve higher performance, technical communication departments must:

- Deploy Structured Authoring and the DITA Standard
- Implement a Topic-Based Review Process
- Deploy a Translation Memory System
- Leverage the Language Service Provider Network
- Publish to Web-Based Technical Communications

#### Computer Manufacturer

We are in the process of signing the contract for an integrated content and translation management system. We are converting our first document to DITA.

#### Technical Communication Specialist

#### Code Green Networks

I feel a need for more concise documentation, but my reasons for trying to get my documentation shorter are 1) nobody wants to wade through long/verbose documentation. 2) Translation costs go down the more concise you can get. The first reason is the most important to me.

#### Nancy Hildebrandt, Technical Publications Manager

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## Chapter One: Benchmarking the Best in Class

### Pressure for Concise Technical Communications

Get to the point. That’s what customers are demanding from the technical communications that describe how to produce, service, maintain and use products despite the fact they are increasing in complexity (Table I).

**Table I: Top 5 Pressures for Technical Communications**

Pressures	Response
Increased demand for concise technical communications	53%
Growing complexity of products	46%
Shortened technical communication lifecycle constraints	43%
Increased focus on customer satisfaction	40%
Reduced technical communication budgets and resources	39%

Source: Aberdeen Group, 2007

Despite these demands, executives within these organizations are not willing to break the budget to do it or provide more time to get the job done. In fact, budgets and time to completion targets are being *reduced*. Overall, the story is frighteningly similar one. While products are increasing in complexity, you must be able to do your job on tightened timeframes and smaller budgets.

### Maturity Class Framework

Given today’s difficult business environment, technical communication organizations are trying a wide variety of strategies and tactics to make a difference. However, one’s strategies and tactics are only as good as the results they deliver. To clearly understand which ones impact business performance, Aberdeen categorized survey respondents by measuring four key performance indicators (KPIs):

- % of projects hitting publication or product launch date
- % of projects achieving or beating authoring cost budgets
- % of projects achieving or beating localization cost budgets
- % of projects achieving initial publication quality targets

Figure I summarizes the average performance of the best in class, industry average and laggards across these four KPIs.

#### Competitive Framework Key

The Aberdeen Competitive Framework defines enterprises as falling into one of the three following levels of practices and performance:

*Best in class (20%)* — practices that are the best currently being employed and significantly superior to the industry norm

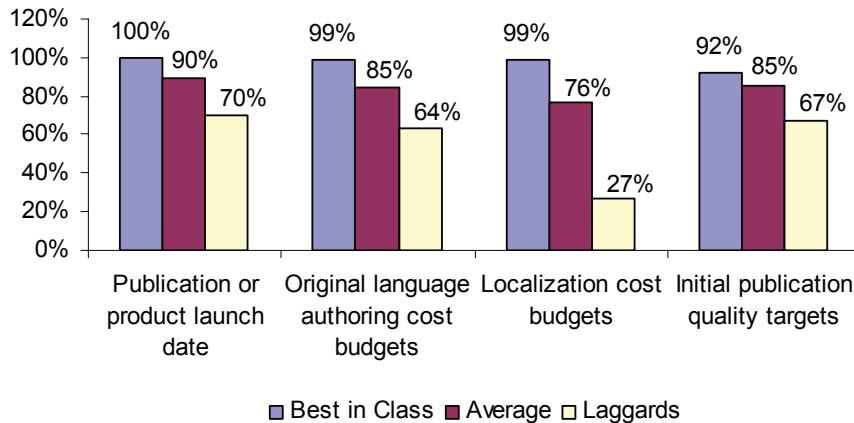
*Industry norm (50%)* — practices that represent the average or norm

*Laggards (30%)* — practices that are significantly behind the average of the industry

#### Fast Facts

- √ Customer and executive pressures are forcing technical communicators to author publications that are more concise and describe more complex products on shorter schedules and tighter budgets.
- √ Best in class performers hit their schedule, budgeting and quality targets on a 92% or better average.
- √ Best in class performers have implemented text and design content reuse. Having achieved that, they are not focusing on publishing to multiple channels and customizing them to customer’s products.

**Figure 1: Best in Class Hit Targets on an 92% Average or Better**



Source: Aberdeen Group, 2007

Interestingly, the performance gaps between the best in class' and laggard's ability to hit *publication or product launch dates*, *original language authoring cost budgets* and *initial publication quality targets* is relatively small. While the best in class are 30% more likely to hit all of these targets, that gap pales in comparison to the gap in the ability for best in class and laggards to hit *localization cost budgets*. This highlights the fact that, from a bottom line costs perspective, keeping those costs in check while taking a product global is the most significant challenge for companies today.

### Strategies of the Best in Class Performers

With a wide variety of options to pursue, the laggards seem to be following the strategies that the best in class have already implemented, just at a lagging pace (Figure 2).

- **Reusing Text and Design Content** – Overall, research findings show that laggards are slightly more likely to pursue these two reuse strategies. This comes as no surprise as findings from [The Next Generation Product Documentation Benchmark Report](#) showed this is a passé strategy for them.
- **Multi-Channel Publishing and Customization** – Best in class performers are, however, focusing on the next step. They are more likely to publish technical communications through multiple channels in an effort to cater to technology savvy customers. Furthermore, they are striving to develop technical communications that specifically match their customer's product configuration to gain customer intimacy.

#### Computer Manufacturer

More complexity in our docs, some the result of having to support Vista. Added product features. Translating into more languages. No budget increase to handle the additional work, it just keeps growing.

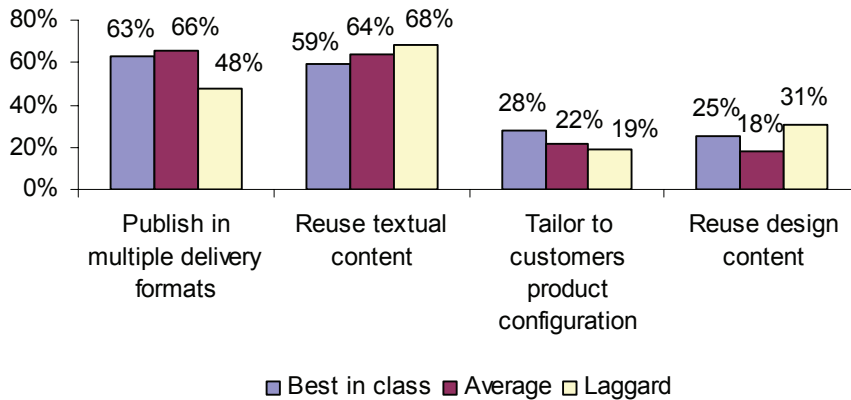
**Technical Communication Specialist**

#### Electronics Hardware Manufacturer

The demands for better, more to the point and operationally useful documentation is continually increasing. I believe that the trend toward shorter and shorter product cycles peaked in the late 1990s, slowed down in the first years of the 21st century, and the trend is now reversed. There is a tendency towards more professional, classical product life-cycle management, and economic pressure to have products in the market long enough to benefit from the milk cow phase of mature products.

**Marius van Handel,  
 Senior Technical Writer**

**Figure 2: Top Strategies across Competitive Framework**



Source: Aberdeen Group, 2007

**Best in Class PACE Model**

Any strategy can be pursued with a number of tactics each with a varying effect on the key performance metrics cited above. By understanding the practices of the best in class documentation departments, one can adopt tactics that have already been successfully used to impact business performance. Successful application of these tactics requires a combination of organization capabilities, processes and enabling technologies that can be summarized as follows:

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

Pressures	Actions	Capabilities	Enablers
<ul style="list-style-type: none"> <li>Increased demand for concise and customized documentation</li> </ul>	<ul style="list-style-type: none"> <li>Publish in multiple delivery formats</li> <li>Reuse textual content</li> <li>Tailor technical communications to customer's product configuration</li> </ul>	<ul style="list-style-type: none"> <li>Author technical communications following the DITA standard</li> <li>Migrate from a document to topic revision process</li> <li>VP or executive responsible for the technical communications department</li> <li>Outsource localization to translation "supply chain"</li> <li>Use user surveys to measure communication's success</li> <li>Track number of support calls as measure of communication's success</li> </ul>	<ul style="list-style-type: none"> <li>Use structured authoring applications to create technical communications</li> <li>Capture images from CAD for technical illustrations</li> <li>Creation of web based technical communications with 3D designs</li> <li>Use the combination of content management and translation memory to reuse existing localized content</li> </ul>

Source: Aberdeen Group, 2007

**Docstream**

Time to market is an important issue. From my point of view this is increasing the demand for concise documentation

**Ole Kristian Rønningen,**  
 Managing director

**Electronic Equipment Manufacturer**

My management pushes for faster production times. We also have outsourced and offshored much of the headcount. Speed has been a larger pressure than quality. This leads to tremendous amounts of required rework though.

### Aberdeen Insights – Part 1

First and foremost, what was once known as the documentation department is undergoing dramatic change. Those that were once called authors are now called technical communicators, creating an entirely new profession. Paper printed documents and manuals are being replaced with electronically published technical communications that increasingly incorporate interactive multi-media.

From a business perspective, the newly formed profession of technical communicators is not being welcomed gently. Customers are demanding more concise communication on how to produce, service, maintain and use products that are only increasing in complexity. Despite this fact, executives are shortening schedules and tightening budgets.

Yet some companies are not only surviving under these harsh constraints, they are excelling. Best in class performers are hitting their schedule, budget and quality targets on a 92% or better average. Laggards on the other hand hit these same targets on a 70% or worse average. In fact, they only hit their localization cost budgets on a 27% average.

From a strategy perspective, laggards are following the past actions of the best in class by now pursuing text and design reuse. The best in class have built on top of the concepts of structured authoring to publishing technical communications through multiple channels and even customize them to customer's product configurations.

## Chapter Two: Benchmarking Requirements for Success

As noted earlier, 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 shares process, organizational, knowledge management and technology characteristics (Table 3).

**Table 3: Competitive Framework**

	Characteristics	Best in class	Industry average	Laggard
<b>Process</b>	Author technical communications following the DITA standard	30%	27%	15%
	Migrate from a document revision to topic revision process	40%	35%	24%
<b>Organization</b>	VP or Executive responsible for the documentation department	17%	9%	11%
	Outsource localization to network of Language Service Providers (LSPs)	54%	40%	32%
<b>Performance Measurement</b>	Utilize user surveys as measure of communication's success	44%	65%	68%
	Track number of support calls as measure of communication's success	67%	60%	55%
<b>Technology</b>	Use structured technical communication authoring applications	38%	38%	29%
	Capture images from CAD for technical illustrations	13%	35%	34%
	Publish to web-based technical communications with embedded 3D design data	16%	10%	3%
	Use both content management and translation memory systems	19%	16%	11%

Source: Aberdeen Group, 2007

### Fast Facts

- √ Best in class performers follow the DITA standard
- √ Best in class use a topic-based review process
- √ Best in class leverage the Language Service Provider network
- √ Laggards utilize user surveys as the basis for technical communications success
- √ Best in class track the number of support calls as a measure of success
- √ Best in class have deployed structured authoring applications
- √ Laggards capture images from CAD for technical communications
- √ Best in class publish to web-based technical communications based on design data
- √ Best in class have implemented translation memory systems



## Organizational Capabilities and Technology Enablers

These process, organizational, knowledge management characteristics and technology enablers come together to form a working solution that translates to competitive advantage.

- **Process: Best in class twice as likely to use DITA standard** – The Darwin Information Typing Architecture (DITA) is an XML-based architecture for authoring, producing, and delivering technical information. This standard allows technical communicators to author small and self-contained topics that can be reused in a variety of different deliverables. The best in class are more likely to follow this specific standard to author technical communications and then publish them through multiple channels such as electronic documents, interactive web pages, mobile device as well as other formats. Overall, the best in class are twice as likely as laggards to use the DITA standard.
- **Process: Best in class 66% more likely to use topic based reviews** – One of the main advantages to authoring technical communications in a structured way is the implied change to review processes. When technical communications were authored in an unstructured way, the entire document would be circulated to subject matter experts and management for review. Often, these subject matter experts only needed to review a few paragraphs in a very long document. Finding the exact information that needed review wasn't necessarily clear. Naturally, time delays were a part of any review process. When authoring technical communications in a structured way, like use of the DITA standard, individual topics are authored independent of any other topic. As a result, the topic can be reviewed independently of any other topic. This presents subject matter experts with a dramatically simplified and focused task compared to unstructured documents.
- **Organization: Best in class leverage executive oversight** – As with any initiative, a set of executive eyes tracking progress typically increases the chances of success. Best in class are more likely to have the company leadership (President, CEO or COO) or a Vice President acting in an oversight manner for the technical communications department.
- **Organization: Best in class 69% more likely to leverage a network of Language Service Providers (LSPs)** – There's no doubt, of all the challenges to author technical communications, consistently hitting localization budgets is one of the toughest. A contributor to this issue is the fact that keeping translators on the company staff is considerably expensive while the work is intermittent. Instead, many companies develop contracts with Language Service Providers (LSPs) who then outsource to independent translators. Best in class performers are 69% more likely to be dedicated to this localization supply chain as opposed to have full time or contract employees or some mix of these options. This is consistent with earlier

### Docstream

We have started some pilot projects for DITA. The customers are increasingly aware of DITA, and I think this is going to be adopted by many product documentation companies.

We use structured authoring tools for writing in structured formats like XML. This is the only way to automate publishing.

**Ole Kristian Rønningen,**  
Managing Director

### Electronics Hardware Manufacturer

Clearly, we must move to reuse in two areas: reuse of information across documents for different purposes, and reuse of the same information for different customizations (for OEMs, flavors of product, etc.). We are aware that we are currently extremely hindered by our corporate documentation infrastructure and that a move to DITA-based XML technology is inevitable. There is some resistance from traditional technical writers who appear to be afraid of making the transition from having complete control over document design to being information analyzers using predefined and cast-in-concrete semantic tags.

**Marius van Handel,**  
Senior Technical Writer

findings as shown in the [Companies Outsourcing Multi-lingual Documentation Four Times More Likely to Hit Translation Cost Targets](#) brief.

- **Performance Measurement: Track Support Calls, Not User Surveys** – The ultimate purpose of technical communications is to help the end user to produce, manufacture, service, maintain or use the product. The old adage, what gets measured gets done, is true in this case. Without quantifiable data to use as a measure for improvement, how can one be sure that the technical communications are successfully completing its purpose? With a variety of measures being tracked, the best in class and laggards are markedly watching different metrics. The best in class are more likely to track number of support calls while laggards are more likely to perform user surveys.
- **Technology: Best in class one-third more likely to use structured technical communication applications** – While research findings show that authoring technical communications in a structured manner, like with the DITA standard, is more likely to be followed by the best in class, acquiring the technology to support the effort is not as easy as it sounds. While general text authoring applications may allow for the authoring of independent text topics, they lack the ability to create a document assembly that aggregates the topics in the correct order. Structured technical communication applications, usually XML based, enable exactly that as well as track the configuration of the document assembly. Overall, the best in class are one-third more likely to use this type of technology to author technical communications and then published to multiple channels.
- **Technology: Best in class five times more like to publish web-based communications** – Instead of simply switching from page based paper documentation to page based electronic documentation, some companies are revolutionizing their technical communications by leveraging web technologies along with design data. The result is a web-based application that uses text and animations and preset views embedded into design data to communicate. A side benefit is that the increased communication via graphics and reduced reliance on text leads to lowered localization costs. If a picture is worth a thousand words, then is an animation in the right context worth a million? Regardless, while this is an emergent use of web technologies and design data the engineering department is producing anyway, the best in class are five times as likely to use web-based technical communications.
- **Technology: Best in class 42% more likely to use content management and translation memory systems** – Without a doubt, keeping localization costs under budget is one of the prime challenges to technical communication departments. A means to get those costs under control is to understand what content has already been localized and this can be reused without new translation. As a first step, content of any moderate complexity must first be managed before it can be reused even in its original language. Once that is in place, translation memory systems can notify users when they are authoring

#### Docstream

To reuse information we have to migrate the users to structured documentation. This is the hardest part to get the user to understand.

**Ole Kristian Rønningen,**  
Managing director

#### Code Green Networks

I felt it was extremely important to get started on DITA before my startup had much legacy documentation to convert, as that is the painful part. I still have not found the perfect set of tools to use for DITA, but at least the content is structured and tagged correctly, and conversion to an XML authoring tool can now be automated.

**Nancy Hildebrandt,**  
Technical  
Publications Manager

#### Computer Manufacturer

We do not have the volume necessary to sustain in-house translators. We plan to simplify that supply chain by owning the Translation memory and having our outsourced translators work directly in our database.

**Technical Communication  
Specialist**

new content that is similar to content that has already been authored and localized. As a result, user awareness of opportunities for reuse is increased. Furthermore, some solutions enable the collaboration and outsourcing of the new content that needs to be localized out to the network of Language Service Providers. While this technology builds on the structured authoring approach, it is another step towards getting those budgets under control. Technical communication departments use content management and technology memory for this purpose.

#### Software Developer

We have undertaken a migration to XML using DITA architecture to prepare for multi-channel delivery of content. This was a hefty investment in time and effort on our part and we are expecting pay-offs in the near future. These pay-offs will be around reuse of content (same information in Help, release information, FAQs, Training, etc.).

### Aberdeen Insights – Part 2

When considering the characteristics of the best in class compared to the laggards, three distinct trends bubble to the top: structured authoring, localization and emerging delivery channels.

From a structured authoring perspective, the best in class are making process changes with the support of technology. Specifically, they are following the DITA standard in an effort to author their technical communications in a structured way. In addition to enabling varying document assembly for delivery through multiple channels, it also enables topic based reviews introducing new efficiencies for subject matter experts and management. Lastly, they are adopting structured technical communications authoring applications to support these process changes. These tactics support the ability to more consistently hit publication and product launch dates, original language authoring budgets as well as quality.

From a localization perspective, the best in class are making organization as well as technology changes. They are leveraging a “localization supply chain” composed of Language Service Providers (LSP) and independent translators. In support, the best in class are turning towards translation memory systems to increase content reuse as well as manage outsourcing to the LSP. The effect? These changes help the best in class hit their localization cost budget, an often missed target for most companies.

Lastly, the best in class are leveraging new technologies while also leveraging existing design content from engineering to publish web-based technical communications. This new means of communication allows for text reduction, and this lowered localization costs, while often producing a higher quality deliverable for the end user.

## Chapter Three: Required Actions

Despite the fact that technical communication departments must describe products of increasing complexity more concisely on smaller budgets and shorter schedules, many are finding new ways to work that yield greater efficiencies and save costs. The best in class performers are employing specific tactics for competitive gains. Whether a technical communication department is trying to move its performance from “Laggard” to “Industry Average,” or “Industry Average” to “Best in Class,” the following actions will help spur the necessary performance improvements:

### 1. **Deploy Structured Authoring and the DITA Standard**

To publish technical communications more easily through multiple channels, pursue a single sourcing strategy by following the DITA standard and deploying a Structured Authoring application.

### 2. **Implement a Topic Based Review Process**

Once you have a structured authoring environment in place, you can then implement a topic-based review process that allows subject matter experts and managers to review only what is necessary instead of entire documents.

### 3. **Deploy a Translation Memory System**

To increase the amount of translated content you reuse and decrease your overall localization budget, implement a Translation Memory system. This system will notify you of localization reuse opportunities so you can make conscious decisions instead of missing the possibilities.

### 4. **Leverage the Language Service Provider Network**

Instead of directly employing translators, leverage a network of Language Service Providers to make your localization bandwidth agile and flexible while keeping your localization budgets in check.

### 5. **Measure Success by Tracking Support Calls**

The best in class were more likely to track the success of technical communications by tracking the number of support calls logged against a product or its communications. Measure this volume to understand how much of an impact your communications make.

### 6. **Publish to Web-Based Technical Communications**

A number of best in class performers are leveraging web technologies and design data from the engineering department to deliver an emerging type of technical communications. With less text and more graphics to communicate, these deliverables have much less associated localization costs and get the point across with greater success.

#### Electronics Hardware Manufacturer

We are slowly moving to the DITA paradigms of information typing, independent of the technology that we use. We tend to look more at topics and their structure from a DITA standpoint, and are currently continuing to learn about DITA paradigms

**Marius van Handel,**  
Senior Technical Writer

#### Software Developer

We have used DITA outputs to create smaller outputs, that is, our output included only topics that relate to a specific subject area. These smaller chunks were handed off for review. This process made managing the reviews much easier.

### Aberdeen Insights – Part 3

How can technical communication departments, already under schedule and costs pressures, find time and budget to adopt people, process, performance measurement and technology changes? It's best to take a phased approach with the right strategic plan.

As most of the characteristics of the best in class build off authoring communications in the original language, it makes sense to start there. That means it starts with structured authoring. A major question many who are going to adopt structure authoring is exactly how should communications be broken down into independent topics? While the answer to that question will vary widely depending on the company's product, it's industry and the publishing channels. From a DITA standard, there are a number of solutions that specifically offer a product that supports DITA.

Once a structured authoring environment has been organized, one can plan on how to take advantage of translation technologies. Connecting the Structured Authoring tool to the Translation Memory system becomes critical when considering the immediate notification, feedback and actions you can take to reuse content that has already been translated. As the next step, one can use the Translation Memory system to connect and manage a set of Language Service Providers much like the tradition supply chain for a manufacturer.

Interestingly enough, authoring web-based technical communications with design data can easily be considered a progression from a structured authoring approach. Many of the authoring tools for web-based technical communications use XML and a structured authoring approach inherently. The major change is that the design data becomes the paper on which text is authored instead of paper-space.

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## Appendix A: Research Methodology

Between November and December 2006, Aberdeen Group examined the documentation industry and the experiences, intentions, and internal processes of more than 332 enterprises.

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

Responding enterprises included the following:

- **Job title/function:** The research sample included respondents with the following job titles: documentation staff (44%), documentation managers (33%), internal consultants (4%), documentation directors (5%), and senior management (CEO, COO, CFO) (7%).
- **Industry:** The research sample included respondents predominantly from technology industries. High-technology/software industries were represented by 39% of respondents, followed by computer equipment and peripherals, which accounted for 10% of the sample. Industrial equipment and telecommunication equipment manufacturers totaled 7% of respondents. Other sectors responding included aerospace and defense, telecommunications services, medical devices, automotive, and publishing media.
- **Geography:** Nearly all study respondents were from North America, accounting for 70% of respondents. Remaining respondents were from Europe at 20% and the Asia-Pacific region at 8%.
- **Company size:** About 33% of respondents were from large enterprises (annual revenues above US\$1 billion); 27% were from midsize enterprises (annual revenues between \$50 million and \$1 billion); and 39% of respondents were from small businesses (annual revenues of \$50 million or less).

**Table 4: PACE Framework**

**PACE Key**

Aberdeen applies a methodology to benchmark research that evaluates the business pressures, actions, capabilities, and enablers (PACE) that indicate corporate behavior in specific business processes. These terms are defined as follows:

*Pressures* — external forces that impact an organization’s market position, competitiveness, or business operations (e.g., economic, political and regulatory, technology, changing customer preferences, competitive)

*Actions* — the strategic approaches that an organization takes in response to industry pressures (e.g., align the corporate business model to leverage industry opportunities, such as product/service strategy, target markets, financial strategy, go-to-market, and sales strategy)

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

*Enablers* — the key functionality of technology solutions required to support the organization’s enabling business practices (e.g., development platform, applications, network connectivity, user interface, training and support, partner interfaces, data cleansing, and management)

Source: Aberdeen Group, 2007

**Table 5: Competitive Framework**

**Competitive Framework Key**

The Aberdeen Competitive Framework defines enterprises as falling into one of the three following levels of FIELD SERVICES practices and performance:

*Best in class (20%)* — Retail RFID practices that are the best currently being employed and significantly superior to the industry norm, and result in the top industry performance.

*Industry norm (50%)* — Retail RFID practices that represent the average or norm, and result in average industry performance.

*Laggards (30%)* — Retail RFID practices that are significantly behind the average of the industry, and result in below average performance

Source: Aberdeen Group, 2007

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

**PACE and Competitive Framework How They Interact**

Aberdeen research indicates that companies that identify the most impactful pressures and take the most transformational and effective actions are most likely to achieve superior performance. The level of competitive performance that a company achieves is strongly determined by the PACE choices that they make and how well they execute.

Source: Aberdeen Group, 2007

## Appendix B: Related Aberdeen Research

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

- [\*Profitable Product Development for SME's Benchmark Report\*](#), March 2007
- [\*The Design Reuse Benchmark Report\*](#), March 2007
- [\*The Simulation-Driven Design Benchmark Report\*](#), October 2006
- [\*The Multi-CAD Design Chain Benchmark Report\*](#), December 2006

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

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