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The Technical Communicator's Transformation:

Publishing On-Time and On-Quality

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Executive Summary

While topic-based authoring offers significant strategic and tactical benefits, making the transition requires a dramatic shift in the daily operations of a technical communications department. Failing to adequately address these challenges can add an unprecedented layer of complexity that can significantly burden technical communications projects. As such, this report is intended as a guide to topic-based authoring that allows organizations to leverage the maximum benefits this approach can afford their organization.

Best-in-Class Performance

Aberdeen used four key performance criteria to identify Best-in-Class performers, including publication deadlines, source language authoring budgets, localization cost targets, and documentation quality targets. Analysis of these performers highlights their ability:

- Simultaneously meet all four metrics of product documentation performance on an average of 95% of their projects
- Achieve a rate of error in product feature description per page that is one-third that of the Industry Average

Competitive Maturity Assessment

While Industry Average and Laggard organizations struggle to find a way take full advantage of topic-based authoring, the Best-in-Class realize a broad range of benefits. In part, they do this by being:

- Twice as likely as Laggard organizations to run internal training programs to prepare technical communicators to author product documentation in a topic-based manner
- 58% more likely than the Industry Average to defining success criteria of topic-based authoring prior to transitioning

Required Actions

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

- Define success criteria for the implementation of topic-based authoring prior to beginning the transition
- Provide internal training to technical communications staff to enable them to rapidly familiarize themselves with a topic-based approach
- Adapt processes for writing and review to support a topic-based methodology

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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

"As in many other domains, technical writing has been changing quite a bit. Modern documentation development techniques require a balanced blend of technical and communication expertise. This is a big cultural change that implies several difficulties but it's a key point for us in the next generation of technical documentations. We need to move from a linear approach to a modular, topic-based approach. Small and agile manuals, developed with task / action oriented and minimalist (the right words, not only less words) approach, modularly structured, and available on multiple media: that's what we need."

~ Technical Publications Manager, Building Security and Safety System Manufacturer

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Chapter One: Benchmarking the Best-in-Class

A topic-based approach to technical communication can be contrasted with the traditional, 'page orientated,' approach. In the latter case, technical communications are created as whole pieces of content, often specific to a particular product line or configuration. In a topic-based approach, the content is created in distinct sections that can be mixed and matched to make a chapter or entire book. Structured authoring supports topic-based methodologies through software, usually a SGML or XML architecture, automating what is commonly a manual process. This level of consistency and control, along with the emergence of the flexible Darwin Information Typing Architecture (DITA) has put topic-based authoring in the reach of a broad set of technical communicators.

What Makes Topic-based Authoring Compelling?

Aberdeen Group's research has identified a correlation between the use of topic-based authoring and the improved performance of technical communications organizations in a variety of areas. Aberdeen's December 2007 *Dynamic Publishing* study found that these leading performers are 60% more likely than Laggard organizations to adopt a structured authoring approach to support the creation of customizable documentation. Aberdeen's April 2008 *Documentation Goes Global* report found that these companies are 56% more likely than the Industry Average to leverage structured authoring to help keep localization costs under control by enabling incremental or streaming localization. Aberdeen's research suggests that it is, in fact, this broad range of benefits that are driving technical communications departments to adopt topic-based authoring (Table 1).

How can topic-based authoring impact so many areas of a technical communications department's performance? The answer is often tied to the improved access to and reusability of content that comes with a topic-based approach. In fact, increasing reuse was reported as the top goal of a topic-based authoring by 83% of respondents.

Table 1: Top Five Pressures Driving Structured Authoring

Pressures	All Respondents
Customer / market demands on communications	50%
Technical communications schedules are shortening	48%
Publishing into an increasing number of languages	41%
Technical communications budgets are shrinking	25%
Regulatory compliance issues	7%

Aberdeen Group, October 2008

Fast Facts

Largely the top factors driving organizations to adopt a structured approach to authoring are: customer expectations (50%) and shortening technical communications schedules (48%). With this in mind, it is important to observe that the Best-in-Class leverage structured authoring in a way that allows them to:

- √ Meet not just publication deadlines but budget and document quality targets on an average of 95% of their technical communications projects
- √ Report one-third the number of errors in of product feature descriptions per page as the Industry Average

The above pressures often relate to and affect one another. Taken as a whole, they describe an environment where technical communications are asked to produce more with fewer resources available. What makes topic-based authoring compelling to organizations is its ability to address exactly this situation, specifically through an enhanced ability to reuse content.

How? The components or processes technical communicators describe are usually similar or the same across product lines and configurations. In an unstructured approach to documentation, these repeated sections are buried in large documents, making it difficult to find content to repurpose. This means that sections are often rewritten; expending time, effort, and money that can be used more productively and creating inconsistencies and often errors across documents. Increasing the reuse of content across technical communications allows organizations to avoid this rework, which can help to alleviate these pressures in a variety of ways.

Improving Quality and Enabling Personalization

The top pressure driving topic-based authoring, reported by 50% of survey respondents, is customer or market demands on communications. These demands can fall within two broad categories: a demand for more personalized documentation (for more concise documentation specific to an individual product configuration or delivered in more accessible web or mobile formats) and demand for higher quality documentation (with fewer errors or greater consistency across technical communications).

In fact, the top goal for topic-based authoring initiatives is improving the consistency of content across communications, reported by 70% of respondents. Copy errors in product documentation can often create a poor impression in the customer's mind. Far more serious are errors in either descriptions of product features or instructions, which can potentially result in mistaken and negative opinions of product quality. Locating and consolidating similar passages helps to remove inconsistencies with uniform passages. Additionally, less new content to write allows authors to focus on the clarity and accuracy of passages, rather than hurrying to complete them. The impact of topic-based authoring on quality alone can be staggering. Aberdeen found that companies following an unstructured authoring approach report about twice as many copy errors and 34% more content errors in descriptions of product features per page than those that take a topic-based approach.

The other side of this pressure, demand for personalized documentation, is related to a broader enterprise focus on meeting customer demand. 'Mass personalization' trends in product development are leading to more product configurations and more customized products. Rather than attempt to create large, 'catch-all' documentation to match all of these configurations, many companies are trying to apply this concept to product documentation as well. This places pressure on technical communicators to find ways to create customized documentation and publish technical communications to a greater number of distribution channels.

"We have to comply with ISO regulations, so consistency is important for our documentation. The advantage is that I always know content will always be right when I'm building the document. Some of our customers want manuals that are specific to their needs. I can create DITA maps that make it easier to customize these manuals for them."

~ Kevin Gawne
Senior Technical Writer
Virtek Vision International

Fitting technical communications to individual needs helps improve customer satisfaction and can have an often overlooked impact on top line revenue growth. However, this does not mean that any favors are being granted to technical communicators, who must find the means to improve personalization without making sacrifices to publication deadlines or budgets. In this case, a topic-based authoring approach is about making content available for reuse in a variety of distribution channels or even for automated assembly according to individual customer needs. In this way, topic-based authoring can help organizations improve customer responsiveness while minimizing the impact this has on the operations of the department.

Relieving the Bind of Time and Money

Customer demand on technical communications is followed closely by shortening technical communications schedules (48%). High priority is given to meeting publication deadlines in technical communications, and shrinking timeframes gives authoring less time to simply complete writing tasks. This crunch is often imposed on technical communicators by external sources. In order to get to market ahead of their competitors, many companies are attempting to compress product development schedules by pulling back product launch dates. However, product development can be unpredictable, and when products miss design release targets launch dates are rarely adjusted. Instead, the burden of meeting these dates is often passed on to the later stages, including product documentation. Often the mad dash to meet these deadlines can have consequences on the quality of documentation as well as project costs.

The matter is often complicated by shrinking budgets, which were reported as a top pressure by 25% of respondents and can further limit the options available to technical communicators. Technical publications departments are often considered a cost center, which means organizations are reluctant to devote additional resources to these departments. The opposite is more often the case. In an unstable economic environment, in particular technical communications can be attractive area to trim costs.

The advantage of reuse in this area is straightforward. Swapping in content that has already been written allows technical communicators to essentially start with a portion of the project already completed. As already noted, this saves on the extraneous costs and effort of continually rewriting the same sections, but it also gives technical communicators room to do more with less. In particular, the time saved by reusing rather than rewriting content can allow technical communications departments to focus more attention on the quality of documents or finding ways to meet customer needs. The ultimate benefit of this can often be improved customer satisfaction and even improved brand image, which has benefits for the entire enterprise, not just technical communications.

"As a TechComm manager, the obvious benefit to me is that I already have 50% of the documentation written for a new product that we haven't even started on yet. I don't have the luxury of adding new writers for every new product. We have less writers now than we did six years ago, and many more products to cover. So I have to look for and take advantage of any efficiency and productivity gains that I can find. I have a great staff, but we would not be able to accomplish all that we can do today in an unstructured authoring environment."

~ Gary Etzel
Manager, Technical Communications
Advantica, Inc.

Easing the Burden of Localization

As companies attempt to grow in new markets across the globe, they must be able to provide product documentation in a greater number of languages, often as a prerequisite of entry. Timelines are often short here as well. Few organizations want to lose share in a new market to a competitor that got there first because product documentation was still being translated. A high focus on customer expectations can complicate the matter further as it means organizations must be mindful of cultural and regional variations, even if the language itself doesn't change, which often means that translation isn't enough, technical communications must also be localized to meet local expectations.

"The most obvious benefit we see is reduction in translation time and cost. Having structured topics makes it easy to identify new or modified material, so we aren't translating the same thing over and over, only the new stuff."

~ Lead Technical Writer
Software Provider

Topic-based authoring can have an impact on these efforts through an approach known as incremental localization. An incremental approach takes advantage of the modular manner content is created in topic-based authoring to begin translation and localization projects earlier using smaller segments of content. This can provide the opportunity to translate content simultaneously while other portions of the same publication are still being created. This can help speed market entry tremendously. Additionally, the ability to identify redundant or reusable content can help save on translation and localization costs, as a repeated section only needs to be translated once.

Obstacles in the Migration to Topic-based Authoring

While the benefits can be significant, adopting a topic-based approach can involve changes in how authors write, manage, and even think about technical communications. To provide a clear picture of these challenges, Aberdeen identified the top five challenges reported by organizations that made the transition as well as the degree to which these challenges are anticipated by those that have not (Table 2). After comparing these findings, Aberdeen conducts a series of interviews with study participants to confirm our conclusions. Interestingly, we found that topic-based authoring is a case where anticipation and reality largely correspond.

Table 2: Top Five Challenges Implementing Topic-based Authoring

Implement Challenges of Topic-based Authoring	Using Topic-based Authoring	Not Using Topic-based Authoring
Managing and converting legacy unstructured content	39%	37%
Cultural resistance to change	29%	37%
Productivity loss during the transition	25%	27%
Adoption of a 'topic-based' approach to authoring content	20%	21%
Integrating with related software solutions	19%	6%

Aberdeen Group, October 2008

The top challenge reported by both groups is managing legacy unstructured content. The central goal of topic-based authoring can often be reuse, but that doesn't necessarily provide the means to leverage the content that is still contained in unstructured documents. This can leave organizations wondering how to make legacy content available to reuse. The migration to topic-based authoring also introduces the challenge of managing content that is trapped within documents while simultaneously adapting to new, topic-based method of organizing content.

Reluctance to adopt new or unfamiliar processes or tools is a common obstacle of any major change within an organization, and is the second most often reported challenge. Organizations often must struggle with unwillingness to adopt new methods, particularly when staff perceive that current methods are sufficient or that the benefits of the new approach will not be worth the change. Interestingly, those that have not transitioned yet see cultural resistance as a significant obstacle. However, organizations that actually go through the transition didn't see it as large of a challenge. This suggests that concern about cultural resistance isn't as difficult as expected.

Productivity loss during the transition and the difficulty of adopting a new approach to authoring are reported about as often by both groups.

The one largely unexpected challenge of migrating to a topic-based approach to authoring is the integration of related software solutions. Content frequently needs to be accessed outside of the technical communications department, for use in web content not specifically related to product documentation, for example. Website content, however, is often managed in a different system, outside of the technical communications department. The same is true of localization content. Usually, an organization's globalization management system is separate from their content management system. Topic-based authoring can often add a variety of software applications that support writing and publication. However, there are few full solution suites available that provide all of these capabilities. Often technical communication departments customize or create homegrown components to fit their needs. Integrating all of this in a way that doesn't hamper the authoring process can be difficult, particularly when it comes as a surprise.

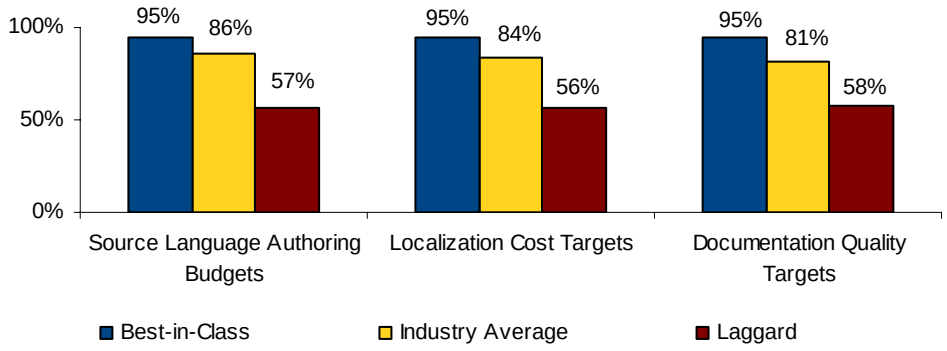
The Maturity Class Framework

Whether anticipated or not, an organization's ability to confront and overcome these challenges will determine how effectively they will be able to leverage topic-based authoring to improve product documentation. Aberdeen Group surveyed over 360 technical communications departments between September and October 2008 in order to identify how technical communications departments can most effectively overcome these challenges. Participating companies were benchmarked according to four key performance criteria. These criteria evaluated the number of documentation projects that meet the following targets:

- Publication due dates
- Source language authoring budgets
- Localization cost targets
- Documentation quality targets

Using these metrics, Aberdeen categorized respondents into the top 20% of performers (Best-in-Class), the middle 50% (Industry Average) and the bottom 30% (Laggard). Figure 1 displays the performance gaps that define each category.

Figure 1: The Maturity Class Framework



Source: Aberdeen Group, October 2008

"Efficiency comes naturally from content reuse. Some of the things I see as advantages coming from that are time savings, higher quality in content output, and cost savings. We have a lot of baseline product – this would be a perfect for content reuse. We could really shave it down, which also makes it easy for translation services. We're already moving in this direction."

~ Senior Technical Author
Semiconductor Manufacturer

The high level of priority given to shortening documentation schedules is reflected in the performance of technical communications departments across the maturity class framework, all of whom meet a significant majority of their publication deadlines. Specifically, the Best-in-Class meet an average of 95% of publication due dates, while the Industry Average meet 92%. Even Laggards, organizations reporting the bottom of performance framework, meet an average of 72% of their publication targets. Meeting documentation deadlines is often not optional, and organizations will do whatever is necessary to keep to them, which can cause them to let other concerns fall by the wayside, which can be seen among both the Industry Average and, more dramatically, among Laggard organizations.

The Best-in-Class are unique in that they meet deadlines without making sacrifices to budgets or document quality. Instead, they meet each of these metrics on an average 95% of their projects. This is suggestive of these organizations' ability to meet the full range of pressures, including the need for improved consistency and quality across publications. The quality of technical communications is the area where the Industry Average fall the furthest behind the Best-in-Class.

To put the difference between these two performance classes into perspective: earlier, we reported that companies following an unstructured

authoring approach report 34% more content errors in descriptions of product features per page than those that author technical communications in a topic-based manner. Industry Average performers indicate over three times as many errors in the description of product features per page as the Best-in-Class.

The Best-in-Class PACE Model

Realizing the full spectrum of benefits that can be realized from a topic-based authoring approach requires attention to more than just project deadlines. In order to attain their consistently high level of performance, the Best-in-Class take a broader perspective and leverage a combination of strategic actions, organizational capabilities, and enabling technologies that can be summarized as shown in Table 3.

Table 3: The Best-in-Class PACE Framework

Pressures	Actions	Capabilities	Enablers
▪ Customer / market demands on communications ▪ Technical communications schedules are shortening	▪ Firm vision of final goals ▪ Approach implemented in multiple, incremental projects ▪ Pilot program followed by phased rollout to subsets of users	▪ Staff attend internal training on topic-based authoring methodology ▪ Success criteria of topic-based authoring approach defined prior to transition ▪ Authoring and review processes support a topic-based approach ▪ Topic-based content is centrally managed ▪ Best practices for authoring captured and defined	▪ Structured authoring application ▪ Darwin Information Typing Architecture (DITA) standard ▪ 'Out of the box' Document Type Definitions (DTD) with some customization

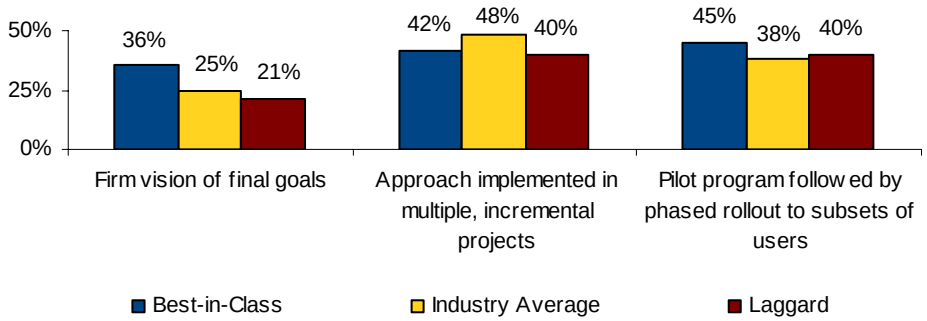
Source: Aberdeen Group, October 2008

Best-in-Class Strategies

While the Best-in-Class follow a well-defined path through the implementation and use of a topic-based approach to authoring technical communications, it is not a path that is particularly differentiated at a strategic level (Figure 2). In fact, organizations largely report the same top implementation strategies regardless of performance level.

The Best-in-Class and their competitors all report an incremental or phased approach in how topic-based authoring is spread among projects and staff. Taking a tiered approach to process change with test cases is often recommended to organizations as a best practice. It is an approach that allows organizations to learn from early missteps as the new process is spread across departments and projects, minimizing the impact that the change has on productivity and performance. While this may be a best practice for change, it does not appear to be a practice that results in the maximum benefits of a topic-based authoring methodology.

Figure 2: Transition Strategies - Vision, Implementation, and Rollout



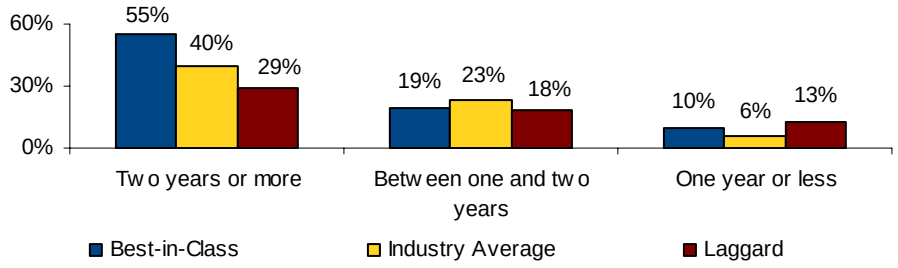
Source: Aberdeen Group, October 2008

Two things appear to make a major difference in the value an organization sees. One is the definition of a firm final state vision for the transition to topic-based authoring. It is more common for companies to possess an evolving vision of final goals. However, there is a subset of the Best-in-Class that maintain a firm vision throughout the migration process. While only 36% of these performers report this approach, it does appear to make a difference.

What appears to make a far greater impact on the success of topic-based authoring is maturity. Over half of the Best-in-Class have pursued a topic-based authoring strategy for more than two years, which is 38% more than the Industry Average and 90% more than Laggards (Figure 3).

Further, the Best-in-Class have more individuals within their technical communications departments that have made the transition. Thirty-six percent (36%) of these performers report that they have individuals on staff who have been through three or more implementations of topic-based authoring. This can be compared to 18% of the Industry Average and 11% of Laggards. However, it is not just their experience with topic-based authoring that gives the Best-in-Class their edge. The capacity to learn from these experiences provides a considerable advantage, as will be seen in Chapter Two.

Figure 3: The Maturity of Topic-based Authoring



Source: Aberdeen Group, October 2008

Those organizations that have not made the migration to a topic-based authoring approach have a tremendous opportunity to learn from the experiences of the Best-in-Class and avoid the tripping points that previous adopters have encountered and maximizing the benefit that topic-based authoring can provide without having devoted the same amount of time.

Aberdeen Insights — Strategy

Why is time of such importance to technical communicators? In general, it's not about anything specific to the organization itself, but something that is imposed from external sources. There is perpetual pressure on product development organizations to compress design cycles as much as possible in order bring innovative products to market ahead of the competition. While design release dates might slip, the final product launch dates often don't. That means the time in which technical communications organizations can do their work is often shorter, often with a 'whatever it takes to make it happen' attitude.

This can put tremendous burdens on technical communicators and little options to resolve them beyond finding the means to create product documentation more quickly. This situation is driving a large number of companies to adopt topic-based authoring and the resulting capacity to reuse content. However, adopting this approach to authoring product documentation only in order to meet shrinking schedules takes a narrow view. By contrast, the Best-in-Class leverage topic-based authoring in a way that impacts their ability to better respond to customer expectations, meet documentation budgets, and project schedules simultaneously. It is this difference in perspective that impacts how these leaders implement a topic-based authoring approach, as well as the benefits they derive from it.

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

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Chapter Two:
Benchmarking Requirements for Success

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 key attributes that support the implementation and use of a topic-based authoring methodology in four areas:

- Preparation for the transition
- The processes that are used to author content
- The creation and formatting of published technical communications
- The organization and management of content

These characteristics (identified in Table 4 through Table 8) serve as a guideline for best practices, and correlate directly with Best-in-Class performance.

Minimizing the Pain of Transition

Two of the top challenges of making the migration to topic-based authoring are cultural resistance and the difficulty learning to author in what is often a foreign manner. The Best-in-Class alleviate both issues by preparing more fully for the impact that change they are about to make in authoring processes (Table 4).

Table 4: The Competitive Framework - Preparing for Implementation

	Best-in-Class	Industry Average	Laggard
Planning and Preparation	Documentation staff attended internal training on topic-based authoring methodologies		
	81%	66%	40%
	Internal expert / champion identified		
	81%	63%	63%
	IT staff involved in planning process		
	48%	32%	26%
	Success criteria of topic-based authoring approach defined prior to transition		
	42%	27%	24%

Source: Aberdeen Group, October 2008

Ramping Up Stakeholders

Topic-based authoring can involve a steep learning curve, particularly for writers who are accustomed to a document-based approach. At the

Fast Facts

Rather than force a structured authoring approach to fit their standing processes, the Best-in-Class adapt their technical communications departments to take the greatest advantage of a structured authoring approach, including:

- √ Formally defining authoring and review processes to support a 'topic-based' approach
- √ Capturing and communicating best practices for structured authoring
- √ Converting legacy unstructured documents to structured content
- √ Centrally managing structured text content
- √ Setting a range of success criteria for structured authoring prior to implementation

simplest level, topic-based authoring asks authors to create content out of context, as distinct units. Additionally, the technical aspects of tagging and structuring content are far more familiar to software programmers and coders than most technical communicators. The Best-in-Class recognize this and ensure that their technical communicators are adequately trained on the new methodology. Specifically, these leaders are 23% more likely than the Industry Average and twice as likely as Laggards to hold internal training.

This is a strategy that the Best-in-Class augment by identifying an internal expert or champion. This is an individual who can support staff members who struggle with the transition to the new methods and often one who fosters enthusiasm for the new process in his or her coworkers. This individual can supplement training efforts informally and often in an ongoing manner, after training programs are completed. Additionally, the individuals that benefit most from topic-based authoring are often outside of the technical communications department. Identifying these individuals as champions helps build support for the transition and build visibility to the benefits topic-based authoring can provide across the enterprise.

While the Best-in-Class begin with those whose jobs are most directly affected by topic-based authoring, they also recognize that the change in authoring methodology has an impact on the corporate IT infrastructure as well. As a result, they are more likely to involve IT staff in the planning process prior to the transition. This helps these leaders adapt information systems and provide the technical support for changes in data management and new software tool implementation that can go alone with the transition. This step also enables companies to address the challenge of integrating all of the software solutions related to topic-based authoring.

"The single-source documentation development systems are often confused with IT web platform and document repository databases. We found that IT support and cooperation is required for providing the best technical infrastructure and preventing obstacles related to management's fears of platforms overlapping."

~ Technical Publications Manager, Building Security and Safety System Manufacturer

Case Study - The Impact of Planning

Effective planning and preparation can often help an organization avoid many of the obstacles that are confronted in a change in authoring processes. This is a case exemplified by the careful planning of a technical communications group within a large manufacturer of computer equipment. After recognizing a need for a topic-based approach to authoring, they began with a thorough review of their own internal capabilities to identify the areas where they can benefit most. A technical communicator in this organization stresses the importance of this preparatory step, "It's very important to make sure you make a return on investment. You need to be aware of the resources available in house, because sometimes, you might already have the tools needed in this process."

With this philosophy in mind, the organization began to contact external experts and thought leaders as well as investigate solution providers to gain a clear understanding of how they could leverage topic-based authoring to their maximum benefit. At the same time, they worked to

continued

Case Study - The Impact of Planning

gain support from upper management as well as their internal IT department to help coordinate the transition from a technical perspective. In the end, they identified two areas where topic-based authoring could have the most impact: a convoluted content management process and ballooning translation costs.

Identifying these goals from the beginning allowed the organization to outline a clear path for their transition. As a result, they were able to realize the benefits they targeted while minimizing the disruptions the transition had on their technical communicators. The team member reports, "We saw a slight drop in authoring efficiency, but once technical communicators adopted the new mindset of reuse, repurpose, and republish; their capabilities were enhanced."

Expect More from Topic-based Authoring…Get More

It is as important to understand what you expect to gain from a topic-based authoring approach as it is to ensure that stakeholders are prepared to make the transition. The Best-in-Class ensure that they have identified specific success criteria for the transition before they begin. This helps them tie the process to a detailed path and a concrete goal.

That said what stands out as particularly differentiating of Best-in-Class performance is the early explicit articulation of not just a goal for topic-based authoring, but many (Table 5).

Table 5: Success Criteria Tracked by the Best-in-Class

Success Criteria	Best-in-Class	All Others
Reduction in source language documentation project schedules	39%	26%
Reduction in source language documentation project costs	26%	14%
Reduction in localized language documentation project schedules	39%	23%
Reduction in localized language documentation project costs	36%	27%
Reduction in errors in source language product documentation	36%	23%
Increase in volume of publication channels used (web, mobile, etc.)	42%	26%

Source: Aberdeen Group, October 2008

Not surprisingly, the success criteria the Best-in-Class identify largely correspond to the pressures that are driving them to make the transition. This includes not just improvements to localization and source language project schedules, but the impact that the transition is having on these budgets as well. These organizations also track the impact topic-based authoring is having on their ability to address customer demands by

identifying reductions in errors and increases in publication channels as success criteria as well.

Why is it important to track so many variables? First and foremost, it encourages the Best-in-Class to strive to achieve more from the transition. Tracking success according to one measure motivates staff to satisfy only that criterion. Measuring success according to more areas motivates staff to accomplish more. The impact of a broader definition of success is directly reflected in the consistently high level of performance reported by the Best-in-Class across disparate factors. By contrast, organizations that prioritize one or two criteria only see an impact on those metrics.

Making the Most of Topic-based Authoring

Realizing all of the benefits topic-based authoring can provide involves more than an effective planning program. It requires a conscientious and directed shift in how technical communications departments operate. The Best-in-Class are adapting topic-based authoring, rather than forcing a new methodology to meet accepted processes (Table 6).

Table 6: The Competitive Framework - Authoring

	Best-in-Class	Industry Average	Laggard
Authoring	Writing process formally defined to support topic-based authoring		
	58%	51%	40%
	Review processes support topic-based review rather than on chapter or page basis		
	42%	38%	21%
	Best practices for authoring captured and defined		
	71%	45%	42%
	81% structured authoring application	**70%** structured authoring application	**47%** structured authoring application

Source: Aberdeen Group, October 2008

Adopting and Developing Topic-based Processes

Standard work processes are often adopted within technical communications departments to maintain a consistent methodology and style. Many aspects of processes that fit an unstructured approach don't apply to a topic-based approach. Old methods can complicate the process, while new steps must often be adopted. The Best-in-Class address this change by redefining standard processes to better fit a topic-based approach to both authoring and review.

In particular, a topic-based review processes allows organizations to edit and approve content as its being created, rather than waiting for it to be

"We are getting away from the more formal writing (like introductory paragraphs in our stepped procedures) and sticking to the basics; the information that the user needs to get the job done, without a bunch of useless verbiage that ends up cluttering things and putting people with foreign primary languages at a disadvantage."

~ Senior Technical Author
Semiconductor Manufacturer

formatted for publishing. This enables earlier detection of errors and makes content available for use earlier, which can potentially enable an organization to reuse content in advance of its originally intended use. It also means that when a passage is selected for reuse, it does not require additional review. While the Industry Average follow closely behind the Best-in-Class here, Laggards fall considerably behind, which should serve to caution organizations preparing to make the transition to topic-based authoring.

Another key element to the Best-in-Class's ability to realize a wider range of benefits from topic-based authoring is the capture and definition of best practices for authoring. This helps these companies drive continuing improvement from topic-based authoring. When these organizations find something that works, they make sure it is spread through the technical communications department. In fact, these leaders are 58% more likely than the Industry Average to capture best practices for topic-based authoring. Without this step, the length of time that the Best-in-Class have been pursuing a topic-based authoring approach would not have as significant an impact on the performance of these organizations.

Changing the Authoring Environment

When making the transition to topic-based authoring, the Best-in-Class are not content to simply change processes. These leaders also adopt new tools that better support and reflect the change in writing methodologies. Rather than attempt to create structured content in document-based word processors, these leaders take advantage of tools designed for authoring in a structured style, automating and enabling the definition of content elements and metadata along side the content itself. The Best-in-Class are 87% more likely than Laggards to use these specialized tools for topic-based authoring. Without these, structured authoring can require explicit tagging and coding that is often outside of the skill set of most technical communicators.

"I used an unstructured tool for years before switching to a structured one. Even without the reuse, the efficiency gains were amazing. Our point of view is that all writing is structured – we all have rules we need to follow in both our format and our content. It's just a question of whether those rules are implicit (all in your head) or explicit (able to be enforced by your software). If we can get our software to take care of all the non-writing tasks that writers often find themselves caught up in, then we have more time to concentrate on the content, which at the end of the day is what we are getting paid for."

~ Gary Etzel
Manager, Technical Communications
Advantica, Inc.

Publishing Technical Communications

In an unstructured approach to authoring, the creation of content and the creation and formatting of a final, publishable document are often linked and take place within the same application. A topic-based approach to authoring divorces these two processes. Content is created in isolation and without any formatting. A published technical communication is defined largely through the use of a markup language, such as Standard Generalized Markup Language (SGML) or Extensible Markup Language (XML). Using these languages content 'chunks' can be assembled and formatted to create a book or a chapter according to what is known as a Document Type Definition (DTD). The DTD is the architecture that defines the constraints that are used to structure and format referenced sections of content as a technical communication.

The Best-in-Class recognize the significance of the break between authoring and formatting that occurs when a topic-based approach is adopted. As

such, they create a separate role with ownership of the management of DTDs. The skills required to define a DTD are closer to those required for coding than those required for authoring. By splitting responsibility for these tasks, the Best-in-Class are able to allocate staff resources where they will be of the most use.

"We found that standard templates are easier to use when we entered a new world of tools. However, I feel they will be progressively replaced by customized solutions as a new company culture and sufficient technical skills allow us to develop better solutions."

~ Technical Publications Manager, Building Security and Safety System Manufacturer

Table 7: The Competitive Framework - The Document Type Definition

	Best-in-Class	Industry Average	Laggard
DTD	Customized 'out of the box' Document Type Definition (DTD)		
	67%	51%	33%
	Darwin Information Typing Architecture (DITA) standard used		
	52%	38%	21%
	Specialist role identified for management of DTDs		
	39%	27%	13%

Source: Aberdeen Group, October 2008

DTDs can vary widely based on the needs of different organizations and industries, which can lead many organizations to tailor their own to their own particular needs. However, this isn't necessarily the most effective approach. Technical communicators that are tasked with defining DTDs can result in a considerable drain on productivity with little value. In fact, Aberdeen found that 46% of Laggard organizations are more likely to try to build their own DTDs. Instead, the Best-in-Class take advantage of 'out of the box' DTDs provided by structured authoring solution vendors. Rather than create a DTD from scratch, the Best-in-Class customize 'out of the box' DTDs to the specific needs of their products and organization. This can save them considerable time and effort expended in work that's already been accomplished.

"I use the DITA open tool kit. I can generate something pretty close to our standard documentation with the DITA tool kit. I can't afford to have a lot of changes in the process, and by adopting DITA, I'm able to automate much of it. I also know that going forward my customizations can be easily adopted should new versions of DITA come out."

~ Kevin Gawne
Senior Technical Writer
Virtek Vision International

Specifically, the Best-in-Class are more likely to define DTD using the Darwin Information Typing Architecture (DITA) standard. DITA is a defined XML-based architecture for content delivery. DITA is the most popular standard reported by respondents across performance categories, but it is also considerably differentiating. The Best-in-Class are over twice as likely as Laggard organizations to adopt DITA. While there are a variety of authoring standards available to an organization, many of these, such as J2008 or S1000D, have been developed in order to meet very specific needs within particular industries. Depending on the industry, many of these are mandated by compliance with regulation. DITA stands out as standard created with the flexibility of its application in mind. It is also highly customizable, which means that it can tailored to very specific needs. This also makes it a perfect fit for the path the Best-in-Class take.

In fact, regulation appears to have little to do with the adoption of DITA. While some organizations are required to adopt DITA, only 7% of survey respondents indicated that regulatory compliance drove their adoption of topic-based authoring. Thirty-five percent (35%) of respondents and more than half of the Best-in-Class have adopted DITA, suggesting that the adoption of DITA is more often voluntary and differentiating.

DITA can provide a robust toolkit for organizations getting started with topic-based authoring. However, DITA isn't necessarily best suited to the needs of every company. There are a variety of standards designed for more specific purposes that may be a better fit for certain industries. Aerospace or defense companies, for example, may find that DITA requires a great deal of customization, while a standard such as S1000D is readymade for their needs. Other organizations may find that any standard creates too many constraints on how they leverage and reuse content. Again, thorough planning is a key step to successfully migrating to a topic-based approach. It is important to identify exactly what needs to accomplished and ensure that the standard or option selected is the best fit.

Organizing and Maintaining Content for Reuse

When technical communications are written and managed in chapter or book-length formats, it can still be a challenge to keep track of all the files and to enforce version control. In a single-sourced approach, the information in these files is broken up into much smaller, topic-specific 'chunks.' Often this can mean an explosion in the number of content files that must be managed and coordinated in order to publish a technical communication (Table 8).

Table 8: The Competitive Framework - Managing Content

	Best-in-Class	Industry Average	Laggard
Managing Content	Specialist role for management of product documentation content		
	32%	18%	13%
	Structured text content is centrally managed		
	70%	59%	50%
	Unstructured legacy documentation converted to structured content		
	61%	41%	26%

Source: Aberdeen Group, October 2008

The Best-in-Class help address this issue in two ways. One, they dedicate a specialized role to the management of product documentation content with no other responsibilities. They are over twice as likely as Laggards to do this. Centralizing responsibility for the management of content with a single individual helps provide consistency for how content is managed, keeping

content up-to-date and easy to locate for reuse. It is particularly important that this role performs no other function, as the explosion of files can mean that there are much more, much smaller things to coordinate.

The Best-in-Class support this role by centrally managing structured text content. As with a dedicated role, central access to content is critical to enabling that content to be reused effectively. Particularly, if content is going to be made available to authors working on a range of different projects that content needs to be in a place where it can be centrally managed and controlled. The difference that central access can make is significant. Seventy percent (70%) of the Best-in-Class centrally manage structured text content, while Laggards are split evenly between management in a central location and the use of multiple databases or individual file folders, which is reported by 47% of these companies.

The problem of content doesn't just include the amount of files that are introduced by the new method. It also includes how to continue to leverage previously unused content. At a fundamental level, legacy unstructured content constitutes a critical challenge of topic-based authoring. Not only is managing and converting this content the top challenge of migrating a topic-based authoring (39%), it encompasses exactly the problem that topic-based authoring is intended to solve. The Best-in-Class are more likely than their competitors to convert unstructured documents into structured content files. This helps these organizations to address the top challenge of migrating to topic-based authoring: leveraging legacy unstructured content.

"How we manage legacy documentation depends on whether or not we'll need it. Some of our legacy content won't be converted because the products are not going be available that much longer, or they aren't changing that much to make it cost effective. Some material will be converted because those products will be moving on. With other material, we are taking more of a 'wait and see' approach."

~ Sigrid Schoepel
Senior Manager, Nuclear Medicine Technical Publications
Philips Medical Systems

Aberdeen Insights — Technology

Authoring technical communications in a topic-based manner allows an organization to build a library of reusable content that is potentially applicable not just for the technical communications department, but across the enterprise. However, it can't magically make an organization's existing body of knowledge accessible. When an organization makes the migration to topic-based authoring, it is not because they want to be able to one day leverage the content they write going forward. They want to access the information that is buried within the documents that have already been created.

The Best-in-Class are as much as 2.3-times as likely as Laggards to convert legacy unstructured documents into reusable structured content. However, there is no specific approach to conversion that stands out as a Best-in-Class practice. In fact, the Best-in-Class are no more likely than their competitors to convert unstructured content all at once, as it is needed, on their own, or with the support of a third party conversion service. This can also depend on the differing needs of different companies. Some possess large libraries of documents with information that is still applicable. Others might possess fewer products or

continued

Aberdeen Insights — Technology

configurations, or simply may not need to reuse as much legacy content. While a conversion service may be required by the first group, other organizations may be better served by converting content as it is needed. What's important is ensuring that what needs to be converted is converted. After all, once unstructured content is structured, the challenge of managing it disappears.

Chapter Three: Required Actions

A topic-based authoring approach can provide the opportunity to effectively leverage an organization's existing library of content in ways that can enable them to improve the consistency of product documentation as well as help technical communicators meet shrinking publication deadlines. When leveraged effectively, topic-based authoring has the potential to simultaneously improve an organization's ability to meet source language and localization budgets, quality targets, as well as release communications to a greater number of publication channels.

The following recommendations are intended to help organizations about to make the migration to a topic-based authoring make the transition in a way that enables them to maximize the value of the approach. It is also intended to help organizations currently leveraging topic-based authoring to identify the steps they need to take to improve the benefits they see from the approach.

Laggard Steps to Success

- **Ensure that technical communicators are adequately trained in topic-based authoring.** Authoring content for single sourcing requires a significant change in perspective for authors accustomed to authoring content in a document-specific format. The Best-in-Class are twice as likely as Laggard organizations to help authors through this change with the internal training programs.
- **Adapt processes to support a topic-based approach.** Organizations that adopt a topic-based approach to content author while still following authoring and review processes that match a document centered methodology can obstruct the opportunity to take full advantage of topic-based authoring. The Best-in-Class recognize this and are 45% more likely than Laggards to redefine writing processes to support topic-based authoring. Perhaps more importantly, they are twice as likely to redefine review processes to support a topic-based approach.
- **Leverage specialized authoring applications.** In a similar vein, writing topic-based content in an authoring tool designed for creating full documents can counteract the benefits of topic-based authoring. The Best-in-Class implement specialized applications that allow technical communicators to create content in an environment designed for single sourcing.
- **Avoid a 'do it yourself' mentality when it comes to the DTD.** Given the highly specific needs and requirements of every organization and every industry, creating homegrown DTDs may be an attractive option. However, devoting the efforts of technical communicators to defining these can cause delays in the migration

Fast Facts

The approach taken by the Best-in-Class is singular in that it is comprehensive in some respects and stripped down in others. It can be difficult for organizations to identify the steps they need to take to improve the benefits they leverage from structured authoring. In these cases, it is important to recognize that the Best-in-Class are:

- √ Twice as likely as Laggards to provide technical communicators with internal training programs
- √ Twice as likely as Laggards to change authoring and review processes to support a topic-based approach
- √ 58% more likely than the Industry Average to identify and capture best practices for structured authoring
- √ 49% more likely than the Industry Average to convert unstructured documents into reusable structured content

to topic-based authoring and hamper productivity by distracting technical communicators from their main function: creating content. The Best-in-Class are over twice as likely as Laggards to leverage 'out of the box' DTDs that they then tweak to meet their needs. This allows authors to focus on creating structured content rather than defining documents.

Industry Average Steps to Success

- **Define success criteria prior to the transition.** Defining specific goals for topic-based authoring can help technical communications departments get the benefits out of topic-based authoring that were driving them to make transition in the first place. The Best-in-Class are 55% more likely than the Industry Average to define the success criteria of topic-based authoring prior to making the transition, which helps them get more benefit from it, particularly when it comes to improving document quality in addition to just meeting deadlines.
- **Capture best practices for topic-based authoring.** The Best-in-Class continue to find ways to perfect their use of topic-based authoring by identifying and communicating best practices to the technical communications department. This also helps these leaders make the most of their experience and realize a fuller set of benefits from topic-based authoring as they master it.
- **Covert legacy documents to structured content.** The top challenge technical communications departments encounter making the migration to topic-based authoring is managing legacy documents, reported by 39% of respondents. The Best-in-Class are 49% more likely than the Industry Average to convert these documents into structured content, which frees the content to be reused more effectively, which is the point of going to topic-based authoring.

"Team members who were still basing content on older methodologies had a harder and more frustrating transition to the new tool. It is important to have a common language about your content creation so that you all understand exactly what one another is talking about. I would also say that it is important to have your style standards in place and designate individuals (based on interest) who can specialize in the specific tasks related to structured authoring, such as creating templates, setting up output standards, and more."

~ Technical Publications Manager
Commercial Software Development Company

Best-in-Class Steps to Success

- **Specialist role for management of product documentation content.** Topic-based authoring often involves a hefty increase in the amount of content files that need to be managed. To make matters worse, that content is often far more specific than what was once stored in a document. Keeping track of all these files can be a challenge that the Best-in-Class address by centrally managing content. A subset of the Best-in-Class also dedicate a role to help coordinate the management. In fact, these performers are 77% more likely than the Industry Average to do so.
- **Measure more.** Best-in-Class performers are 55% more likely than the Industry Average to define the success criteria of topic-based authoring prior to making the transition. They are also more

likely than their competitors to track a broader range of success criteria; including the impact that topic-based authoring has on schedules, budgets, and their ability to meet customer expectations. Reviewing what they've missed and adding more measures can help them identify where they still have the opportunity to benefit from topic-based authoring.

Aberdeen Insights — Summary

Topic-based authoring has the potential to enhance the quality and consistency of technical communications while simultaneously improving an organization's ability to keep projects under budget and on time. It can also add a burdensome layer of complexity to product documentation.

The Best-in-Class expect a lot from topic-based authoring but don't invest more effort in the implementation than is necessary. It can be difficult to identify where an organization needs to focus efforts and where it is better served by leveraging the efforts of external parties. As a simple rule: it should be observed that the Best-in-Class invest the greatest amount of effort into transforming processes and empowering technical communicators. At the same time, they put minimal efforts in the technical details of topic-based authoring, such as the DTD. In this way, the Best-in-Class empower their technical communicators to face the most difficult challenges while simultaneously endeavoring to minimize the burden placed on them and better position themselves to reap a range of benefits from topic-based authoring.

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Appendix A: Research Methodology

Between September and October 2008, Aberdeen examined the experiences of over 360 technical communications departments regarding their use of topic-based authoring, their migration strategies, and the tools they use to support the transition and execution of topic-based authoring methods. Aberdeen identifies any respondents within the organizations in order to isolate any redundant or duplicated data. Aberdeen supplements survey results with interviews with select survey respondents, gathering additional information on their strategies, experiences, and results.

Responding enterprises included the following:

- *Job title / function:* The research sample included respondents with the following job titles: director (8%); technical communications manager (29%); technical communications staff (30%); and senior management (4%).
- *Industry:* The research sample included respondents from technical communications departments across a variety of industry sectors. Those sectors seeing the highest representation include: high tech and software (51%); telecommunications (11%); medical devices (7%); computer equipment and electronics (6%).
- *Geography:* The majority of respondents (81%) were from North America. Remaining respondents were from Europe (10%), the Asia-Pacific region (4%), and other (5%).
- *Company size:* Twenty-seven percent (27%) of respondents were from large enterprises (annual revenues above US $1 billion); 53% were from midsize enterprises (annual revenues between $50 million and $1 billion); and 20% of respondents were from small businesses (annual revenues of $50 million or less).
- *Headcount:* Fourteen percent (14%) of respondents were from small enterprises (headcount between 1 and 99 employees); 39% were from midsize enterprises (headcount between 100 and 999 employees); and 47% of respondents were from small businesses (headcount greater than 1,000 employees).

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

Study Focus

Responding technical communicators and managers completed an online survey that included questions designed to determine the following:

- √ The factors driving them to adopt a structured approach to the creation of product documentation
- √ The benefits, if any, that have been derived from a structured authoring approach
- √ The challenges they face in making the transition to a structured authoring methodology
- √ The capabilities and enablers that they have adopted to overcome these challenges as well as those they adopt to support the effective execution of structured authoring

The study aimed to identify emerging best practices for implementation of a structured authoring methodology, and to provide a framework by which readers could assess their own management capabilities.

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Table 9: The PACE Framework Key

Overview
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, October 2008

Table 10: The Competitive Framework Key

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

Source: Aberdeen Group, October 2008

Table 11: PACE and the Competitive Framework

PACE and the Competitive Framework – How They Interact
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.

Source: Aberdeen Group, October 2008

Appendix B:
Related Aberdeen Research

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

- *Documentation Goes Global* April 2008
- *Dynamic Publishing: Smart Documents Streamline Technical Documentation* December 2007
- *Publishing Technical Communications to a Multi-Channel World* May 2007
- *Next-Generation Product Documentation: Getting Past the 'Throw It over the Wall' Approach* December 2006

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

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