



*A Business Whitepaper*

## Calculating the Value of DITA to Your Organization

A new standard has gained grass-roots support and is now catching executive attention for the value it delivers to the organization. This standard is driving greater revenue opportunities, increased product introduction rates, and higher customer satisfaction. Astoria Software is a leading adopter of DITA, and now delivers a DITA-based solution that enables its customers to access new global markets faster than with comparable non-DITA solutions. Astoria customers report savings as high as 80 percent on translation costs while reducing other documentation costs by 50 percent, thereby driving an overall decrease in time-to-market for new and existing products in new markets. In addition, Astoria customers using DITA report improved levels of customer care even after moving more interactions to cheaper self-service options. Furthermore, field personnel are resolving more service calls on the first visit.

To calculate the value of DITA to your organization, use the research and conclusions in this document as a guide, and then contact Astoria Software to schedule a free ROI analysis. DITA (short for [Darwin Information Typing Architecture](#)) richly deserves the attention it is receiving.

Contact: 66 Bovet Road, Suite 280, San Mateo, CA 94402 USA Phone: 650-347-7477 [www.AstoriaSoftware.com](http://www.AstoriaSoftware.com)

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## Introduction

Recent surveys of top executives consistently list three key priorities: sustained top-line growth, new product innovation and customer care. DITA, a new information standard, measurably improves performance against all three objectives.

DITA (short for [Darwin Information Typing Architecture](#)) standardizes how product information is organized, managed and published. With the Astoria DITA-based solution, companies sharply reduce the time it takes to deliver products and services to new markets. They increase new product innovation through support for concurrent development and improve customer care revenue by creating consistent documentation across multiple support mechanisms. Overall, Astoria's customers—both at the grass-roots level and in the executive suite—report dramatic, measurable benefits to the whole organization, all attributable to the seemingly simple innovation of combining DITA with Astoria.

Executives measured on one or more of the three key priorities also face the tripartite challenge of volume, velocity, and variability, or more simply, “the 3Vs”. The 3Vs manifest themselves as follows:

Business Challenge	Definition
Volume	Products are more complex, with greater compliance requirements and shorter development cycles.
Velocity	The faster products get to market the higher their lifetime revenue and market-share potential.
Variability	Variation is increasing in products, language and partnerships to support new global markets.

In response to these challenges, executives naturally re-tool their product creation processes, expending significant effort and resources to streamline both product design and manufacturing. Product documentation processes, however, are not addressed as well. This condition is brought into sharp relief by the impact of “the 3Vs” on unprepared organizations; business executives witness ever-expanding internal “bottleneck” scenarios that ultimately allow competitors to steal market share and capture new revenue. DITA by itself is a new approach to product documentation that

helps technical writers capture product information more efficiently. But it is the combination of Astoria and DITA that enables senior executives to mitigate the impact of “the 3Vs”, allowing them to accelerate new product and service ideas without causing a product documentation chokepoint.

At first glance it may seem that the cost and contribution of product documentation is insignificant compared to the rest of a typical operation. Research conducted by InfoTrends/CAP Ventures shows that this is simply not true. The authors describe product documentation as permeating virtually all aspects of an organization, from business development to customer service, from engineering to sales. A key finding of their report reads as follows:

“Enterprise companies are spending twice as much on document costs than they think.... The study found companies believed they were spending three percent of revenue on document costs, whereas the actual figure was six percent....”<sup>1</sup>

Astoria’s embrace of DITA is an innovation in product documentation aimed directly at the executive in the corner office. Here are two examples.

#### *Time-to-Market*

- DITA alone: An author writes a topic and an explanation of that topic.
- Astoria + DITA: Engineers recoup 50 percent of review time through built-in collaboration, and time-to-documentation is shortened by a 40-percent increase in authoring efficiency.
- Business result: A product is introduced to the market much faster, adding weeks and months to the revenue-generating capacity of the initiative.

#### *Translation Costs*

- DITA alone: An author re-writes a topic or concept that had already been translated into a foreign language.

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<sup>1</sup> InfoTrends/CAP Ventures, reported in CRN, October 10, 2005.

- Astoria + DITA: A fraction of an entire documentation set is sent out automatically for re-translation, and the newly translated material is reintegrated seamlessly with the existing material.
- Business result: Cost-to-translate drops as much as 80 percent, removing a significant barrier to new market entry.

Senior executives have the power to differentiate a whole range of products and services within their respective companies when they invest in both DITA and Astoria. This differentiation is a powerful tool for increasing shareholder value by driving up revenue through new market opportunities and protecting existing revenue derived from satisfied, loyal customers.

## Supporting CEO Priorities

The *Conference Board* recently published a report on top challenges for CEOs in 2006<sup>2</sup>. At or near the head of the list—regardless of region, industry or size—was one overarching priority: Sustained and Steady Top-Line Growth. After years of careful cost cutting to achieve desired profit levels, companies now must find ways to add new revenue to remain successful.

Two other high priorities in this study support top-line growth—Product Innovation and Customer Care. Surveys conducted by IDC<sup>3</sup> and ComputerWorld<sup>4</sup> echo these priorities, and also add Globalization to the list.

Another in-depth report, conducted by the Economist Intelligence Unit<sup>5</sup>, delves into strategies for meeting top- and bottom-line priorities. Top ranking revenue growth strategies are:

- Acquiring new customers (58 percent)
- Developing new products and services (51 percent)
- Entering and developing overseas markets (27 percent)

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<sup>2</sup> CEO Challenge 2006: Top 10 Challenges; The Conference Board, 2006.

<sup>3</sup> "Priorities of CEO in 2006—IDC," The CIO Weblog, January 23, 2006; [http://www.cio-weblog.com/50226711/priorities\\_of\\_ceo\\_in\\_2006\\_idc.php](http://www.cio-weblog.com/50226711/priorities_of_ceo_in_2006_idc.php).

<sup>4</sup> "Top four CEO priorities and the global agenda," Vivek Ratna, ComputerWorld Blogs, March 6, 2006; <http://computerword.com/blogs/node/1928>.

<sup>5</sup> "CEO Briefing: Corporate priorities for 2006 and beyond," A report from the Economist Intelligence Unit, sponsored by UK Trade and Investment, January 2006.

These priorities do not blur the focus on cost-reduction. Indeed, the same report also ranked two key cost-lowering strategies as:

- In-house performance improvement and process innovation initiatives (62 percent)
- Use of IT to automate processes (33 percent)

Managing DITA-based product documentation supports the overarching priority of top-line growth as well as key underlying priorities. This standards-based approach minimizes IT effort while maximizing value. It also matches the desire of most companies to buy technology and lightly customize it (36 percent) rather than heavily customizing (9 percent)<sup>6</sup>. Employing strict management ensures the fastest ROI ramp time.

## DITA and Globalization

Entering new markets is the chief means of growing and sustaining top-line revenue. According to the Economist Intelligence Unit report<sup>7</sup>, companies surveyed expect revenue from global markets to rise by roughly 30 percent over the next three years. Penetrating these new markets effectively requires new product variants, channel partners with in-country expertise, products and services delivered in local languages, and compliance with local regulations.

Virtually every element of the product creation process is affected when an enterprise moves to a new market. Naturally, those elements at the tail end of the process receive the highest levels of scrutiny when unavoidable upstream circumstances squeeze the initiative against an immovable product-launch date. Increasing the pressure, a company may wait to engage the product creation process until an in-country customer is under contract and awaiting delivery. Not surprisingly, the product documentation element is under near-constant pressure, and for many companies it becomes a gating factor in hitting a product launch window.

The following sections reveal how the Astoria DITA-based solution diminishes the impact of globalization on the product documentation process.

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<sup>6</sup> Economist Intelligence Unit.

<sup>7</sup> Economist Intelligence Unit.

### *Languages*

Translation is one of the high hurdles in the race to a new, foreign market with an existing product. Language translation is expensive. Allied Business Intelligence projected total costs for 2005 of \$22.7 billion. Why? First, late-breaking product changes in the engineering process have a ripple effect throughout the organization, culminating in last-minute rework of already-translated material. Without an efficient, automated way to identify already translated content, the product documentation process incurs the added expense of re-translating the whole document set in order to meet time-to-market objectives. There is a marginal reduction in cost if translation memory is in use, but that cannot obviate the effort to identify the new material to translate.

Second, it is common practice for companies to adopt a just-in-time production method to translated material; i.e., to withhold investment in translation until a customer is under contract or a formal channel is established. As soon as one of these events occurs, there is tremendous pressure to produce translated product documentation.

The Astoria DITA-based solution overcomes both of these obstacles. First, with content organized within a DITA-based structure, it is simple to identify the elements that require translation or re-translation. Second, with Astoria's automated links to external translation services, the elements are submitted for translation as needed, thereby accommodating the just-in-time business model that is prevalent in global organizations. The overall contribution of DITA and Astoria to the bottom line is as much as an 80-percent reduction in translation costs.

### *Product Variants*

"Global market" does not mean "one size fits all." Indeed, a product that is successful in one market usually requires some level of adjustment to meet local requirements in a new market. When viewed from the corner office, these adjustments may seem small and manageable. But studies show<sup>8</sup> that making these "small" adjustments in product documentation can easily drive up the overall cost of producing the product.

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<sup>8</sup> InfoTrends/CAP Ventures.

The solution to this problem is in leveraging the fact that the documentation for a product variant has a great deal of content in common—potentially 75 percent or greater—with the original product. With the Astoria DITA-based solution, this overlap is more easily identified and efficiently managed than with any other offering in the market. For example:

- With Astoria and DITA, changing one passage in the original product document automatically updates that passage in the documentation for each product variant.
- With Astoria and DITA, a single menu selection shows which elements of product documentation are shared with other documents, and vice versa.
- With Astoria and DITA, the audit trail accounts for every operation on every element.

*New Channels*

A channel partner’s knowledge of the local market makes the difference between red-hot demand and tepid interest. The Astoria DITA-based solution manages and assembles documentation for any number of channel partners based on their local needs and preferences. All of the ease-of-use in managing documentation for product variants applies to managing product documentation for channel partners.

*Regulations*

There are two challenges endemic to product documentation within a regulated market: 1) format and content compliance and 2) auditable change record. DITA provides all of the structure necessary to ensure format compliance, and it allows “specializations” that accommodate references and procedures unique to specific regulatory environments. With Astoria’s DITA-based solution there is an audit trail of the content—automatically generated and updated—that ensures provable compliance with established regulations.

**The Value of DITA and Astoria in Globalization**

Benefit	Value
Product documentation process managed with Astoria DITA-based tools	Save up to 80 percent of translation costs

Benefit	Value
Lower translation costs	Access to new revenue sources in foreign-language markets
Product documentation adapted to channel preferences	Gain leverage over competitors in the sales channel

## DITA and Product Innovation

Chief executives view product innovation as the second of three top-of-mind challenges for 2006<sup>9</sup>. Market research by the Economist Intelligence Unit reveals that 51 percent of chief executives look at developing new products and services as the engine for new revenue growth. Furthermore, 62 percent of those same executives surveyed expect in-house performance improvement and process innovation initiatives to drive cost reductions to the bottom line<sup>10</sup>. The following sections demonstrate that Astoria and DITA deliver on both revenue growth and cost reduction objectives.

### *Efficient Documentation of Product Variants*

When the strategy for product innovation is to adjust the features of an existing product, a deceptively simple method for creating documentation for that variant is to copy and change the original product documentation as needed. Unfortunately, the overall “improvements” in time-to-market with this approach are illusory; there remains an ever-increasing documentation maintenance expense for “search and replace” as baseline products and their respective variants evolve over time. Executives become frustrated when they add additional resources to the process, but output levels do not improve at the expected rate.

The Astoria/DITA solution employs a superior method that keeps creation and maintenance costs to a minimum. The key concept is that “documents” are really collections of related topics made up of descriptions and references to supporting information, all of which are managed independently as Astoria SmartElements™. Any SmartElement—a DITA topic, paragraph, sentence or even a word—can be reused

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<sup>9</sup> The Conference Board.

<sup>10</sup> Economist Intelligence Unit.

throughout the collection, and Astoria automatically updates the reused content when changes occur. This makes it easy to identify, track, reference and revise over time. The expense to maintain product-variant documentation is greatly reduced as a result and the need to remember or manually track reuse is eliminated.

### *Collaborative Product Revision Cycles*

When the product documentation process is based on inferior collaboration technology, Engineering reviews become an impediment to the *entire product creation process*. As a work-around, there quickly arises “formalized review sessions” where product innovation devolves into a serialized exchange of updates and revisions between authors and engineers. Next, a process control bureaucracy ensures that there is an audit trail of the formal review process. Ultimately, senior management observes a team of furiously busy people that are frustrated over the lack of innovation within the organization. The problem begins with the wrong collaboration technology.

Astoria’s DITA-based technology actually *enables* product innovation. When product documentation is organized within a DITA structure, Astoria software allows Engineers to review one topic (or even a SmartElement) while the authors are working on another topic (or SmartElement). The need for formal review sessions evaporates since updates and review are exchanged in parallel. The stifling bureaucracy of process control cannot take root. What does grow is a product creation process that operates more efficiently due to the ease with which Astoria manages the DITA-based product documentation. With Astoria and DITA in place, creating and maintaining product documentation involves parties from many disciplines and in disparate locations in a continuous, collaborative process within a highly innovative organization.

### *Concurrent Product Development*

In a recent Aberdeen Group survey of more than 125 companies from around the world, over half of all manufacturing respondents said that shrinking product development times was the largest obstacle to increased profitability<sup>11</sup>. A favored approach to compacting release schedules is the continuous, overlapping release

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<sup>11</sup> “Product Lifecycle Management: Balancing Innovation with Profitable Growth,” EDS, December 19, 2005.

process. As one version of a product moves toward release, the next version is already in development. Naturally, all components of the product creation process must participate in the continuous, overlapping release process, and Product Documentation is no different. The challenge for the product documentation and market preparation processes is keeping track of the features that apply to a specific product release. This tracking problem is even more complicated when multiple target languages apply to distinct product releases.

Astoria's DITA-based solution diminishes the effects of the continuous, overlapping release process on the overall organization with two key advances:

- Separation of the content creation process from the product documentation release process, enabling multiple releases to be in work at the same time.
- Automation of the collection, re-use, filtering and assembly of content, enabling authors to define and build a release document at a moment's notice.

With these two advances, the product documentation process can deliver specific content associated with each product release from a single source. With a single, automated operation, approved content is assembled into a specific product documentation release at any point in time.

### The Value of DITA and Astoria in Product Innovation

Benefit	Value
Improvements in the review process	A 60-percent productivity improvement within the review process
	A 50-percent reduction in COGS attributed to the Product Documentation process

## DITA and Customer Care

There is a strong link between effective customer care and future revenue growth. According to the National Quality Research Center at The University of Michigan's Ross School of Business, one point on the American Customer Satisfaction Index (ACSI)<sup>12</sup> is

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<sup>12</sup> The American Customer Satisfaction Index is based on thousands of customer interviews culled from more than 200 companies. Taken together, the surveyed companies have an average market capitalization of \$27 billion.

worth almost \$1 billion for the average company in the index, which translates into a three-percent increase in market value<sup>13</sup>. Market value increases because customer satisfaction is a key indicator of expected future satisfaction; and as expectations go up, consumers become more inclined to increase their spending.<sup>14</sup> For example, Dr. Claes Fornell, whose research produces the ACSI, has shown that the ACSI from a given period of time is predictive of the change in earnings for the following period. The data show that as satisfaction scores decline, customers become more reluctant to buy unless prices are reduced. Similarly, as satisfaction scores improve, customers are more inclined to buy again and are less sensitive to price increases.<sup>15</sup> Dr. Fornell's research supports the conclusion that satisfied customers are more profitable for a company than unsatisfied customers. Clearly then, investment in customer care is an investment in future revenue growth.

The shrewdest investment in customer care is the one most visible to the customer: ensuring the accuracy, completeness, and consistency of all customer-facing information. This leads inevitably to higher quality interactions between customer and company, whether it is through on-line or printed media, or in person-to-person support scenarios. Consider, for example, how Astoria and DITA drive customer loyalty when an organization's support "posture" is a combination of self-help, call center agents and field engineers:

1. Self-help portals always have the latest information available because they are linked directly to the output of Astoria's DITA-based solution. Approval processes ensure the accuracy of the content produced. Issues from the field are incorporated into the self-help portals with no additional delay imposed by the product documentation process because the effort to assemble the information is so small. Customers more easily place their trust in alternate forms of support as they discover the convenience and accuracy of self-help portals.
2. Customer support information is consistent across all channels, making it practical to offer high quality alternatives such as e-mail, chat, text messaging

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<sup>13</sup> "The Science of Satisfaction," Claes Fornell, Harvard Business Review, March 2001.

<sup>14</sup> "Big Surges in Customer Satisfaction", Q1 2006: Utilities; Transportation & Warehousing; Information; Health Care & Social Assistance; Accommodation & Food Services, Claes Fornell, The University of Michigan, May 16, 2006.

<sup>15</sup> "Predictive capabilities", ACSI.

and knowledge-based support mechanisms without risking loss of customer satisfaction. Astoria customers report the ability to offload five percent or more of live calls to self-help systems, reducing cost. At the same time, live agents are able to better address difficult calls, because they have the time and the necessary documentation.

3. Third, field engineers are measurably faster in solving problems. There is an overall improvement in product documentation quality when it is managed within a DITA structure. Furthermore, Astoria assembles and publishes information in a format that is best suited to the field engineer's environment. Together, these two technologies—DITA and Astoria—enable an overall improvement in mean time to repair (MTTR) by driving a lower time to correct diagnosis. An improvement of as little as one percent in MTTR can have a significant positive impact on customer loyalty—and on the bottom line.

### The Value of DITA and Astoria in Customer Care

Benefit	Value
Improved customer satisfaction levels	A 3-percent increase in market value for every 1-percent increase in satisfaction
More accurate information in self-service customer support	Move at least 5 percent of support calls away from live agents
Product documentation that is coordinated across customer support, field service and engineering	Increase in revenue per service employee due to higher number of resolved issues in the first encounter and overall reduction in mean-time-to-repair

## Summary

DITA offers tremendous improvements for the grass-roots user community as well as the organization as a whole. By managing DITA-based documents with Astoria, companies can improve their revenue, new product introduction and customer care.

Category	Benefit
Revenue Growth and Globalization	Access new revenue sources
	Save as much as 80 percent of translation costs

Category	Benefit
	Gain leverage in the sales channel
Product Innovation	60 percent productivity improvement for reviewers
	Reduce COGS contribution by 50 percent, representing 1.5 percent on average
Customer Care	Increase market value 3 percent
	Move 5 percent of support calls to self-service
	Increase services revenue
	Resolve more service calls on first visit

To calculate the value of DITA to your organization, all you need is a few key pieces of information on the characteristics of your operation. Use this document as a guide, and then contact Astoria Software to schedule a free ROI analysis.

## About Astoria Software

Astoria Software, Inc. is the leading provider of standards-based, dynamic product documentation solutions for advancing business-critical initiatives. Astoria's object-based model enables companies to efficiently re-use and repurpose digital material in support of new revenue initiatives; it drives reductions in cost-of-goods sold; and it heightens levels of customer satisfaction. Astoria has integrated DITA into all aspects of its product line to ensure that product documentation is created, edited, managed and assembled to multiple market specifications without commensurate increase in the costs to create products for those markets. Customers of the Astoria solution enjoy a more rapid return on investment than they do with any other comparable offering. Astoria's customers are some of the most recognized, progressive organizations from around the world, and include: Texas Instruments, Honeywell, Nokia, Siemens Medical Solutions, Lockheed Martin, Milliman Care Guidelines, Northrop Grumman, the US Army, the US Navy and others. Astoria is based in San Mateo, California. You can reach us at [www.astoriasoftware.com](http://www.astoriasoftware.com) or +1.650.357.7477.