



## WHITE PAPER

### Planning for DITA Success: How to Set Up the Right Team and the Right Strategy

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Googling DITA (Darwin Information Typing Architecture) unleashes a flurry of accolades. All hail DITA, the future of content! Finally, XML lives up to its promise! This two-part series explores why DITA has created such a buzz in the content management arena, particularly among technical documentation teams—and how you can prepare for long-term DITA success.

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In this Part One, *'Planning for DITA Success: How to Set Up the Right Team and the Right Strategy'*, learn how to rethink your content and your team. Identify the kinds of content re-use that will work best in your organization, and find out how to follow-through: from optimizing technology for best fit, to championing it to the people who will benefit most.



“In the fashion of Darwin, content in the information evolves over time, becoming increasingly refined and relevant to its audience.”

## THE BUSINESS CASE FOR DITA

**Darwin:** Famed British naturalist who originated the theory that different species can develop through specialization of inherited characteristics.

**Information Typing:** Method for organizing topics (concept, task, reference) and content (messages, typed phrases, semantic tables).

**Architecture:** Information technology foundation that expands vertically (new applications) and horizontally (new specializations, types and users).

In the fashion of Darwin, content in the information evolves over time, becoming increasingly refined and relevant to its audience. Given the need for rapid-fire adaption, it is more critical than ever to make content easier to update, review, approve and release. This is how simple text becomes information, and how information receives its marching orders: to organize itself; to make a more strategic contribution; to present itself to the right person, at the right time—as *content*.

Let’s briefly review how DITA, a new technology platform being hailed as the next generation of XML authoring and content management, helps documentation teams to succeed despite increased complexity and volume.

## THE BIRTH OF DITA

IBM, with millions of pages of documentation for its products, has had its own very complex documentation technology since the late 1960s. Recently, a cross-company IBM workgroup came together with a common goal of reinventing this technology—XML-based content creation DTDs—to meet heightened demands and business pressures.

Given IBM’s vast network of companies, employees and markets, the team knew that any technology design effort would have to provide for a wide range of corporate and cultural vocabularies, process models and information structures, not to mention hundreds of products, brands, companies, styles, and delivery channels. The collaborators at IBM had to reconsider the entire authoring-to-delivery process, inspiring an end design that was vastly more than a DTD. It was an entirely new, holistic information architecture that became known as DITA.

DITA enables organizations to deliver content as closely as possible to the point-of-use, making it ideal for applications such as online help systems, websites, FAQs and instructional manuals.

By helping organizations migrate more smoothly to XML and more easily leverage it over the long-term, DITA is revolutionizing the way modern document publishing teams author, manage, and deliver information.

## THE \$69,000 QUESTION: WHAT MAKES DITA BETTER THAN TRADITIONAL XML?

There was a time when computers were intimidating devices that filled rooms and accepted input only through punch cards. The personal computer revolution made computing accessible to everyone by distilling down the most important functions of those mainframes into a form that is more appropriate for the masses. DITA similarly simplifies the deployment of XML by acting as a flexible and configurable ‘template’ that organizations can adopt and specialize.



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DITA has attempted to gather the best concepts deployed in XML systems and put them all into one package, ready for use. Unlike other standardized DTDs and schemas, DITA encapsulates forty years of thinking about reuse of content and inheritance of data models. All best practices, techniques and lessons learned serve as the foundation, atop of which is built a unique system thanks to robust specialization capabilities.

Here is why DITA is at the heart of what makes XML work, particularly over the long-term:

- DITA provides a methodology for easy customization. Streamlined, robust data model development (DTDs or Schemas) makes for precise, efficient specialization.
- Rather than affecting downstream applications and processes, DITA enables faster adaptation as the data model changes. Over the long-term, a DITA-based system provides for exceptionally smooth evolution of both itself and other DITA-aware technology.
- DITA seamlessly leverages multiple, diverse applications. It is a foundation which can be modified in different ways to meet the needs of each application, while maintaining and sharing a unified library of content.
- Although DTDs can create dynamic content, they do not dynamically merge and assemble separate modules. DITA is a ‘topic-oriented’ DTD that was designed for assembly, which provides greater flexibility in content management and publishing.

In short, DITA makes the promise of XML a reality for more people by reducing the cost, complexity and risk of adoption.

### MAKING THE TRANSITION TO DITA: FACTORS FOR SUCCESS

The ease of your transition to DITA depends on a variety of factors.

- The extent to which you have already been authoring in a topic-oriented model—will authors and content need to break out of a book model?
- Buy-in from team members—will they tolerate minor inconveniences in the interest of the greater result?
- The complexity of your requirements—how many different media are you publishing to? Are you deploying a content management system at the same time?
- The degree of specialization your end-system will require—can you use a generic system out-of-the-box, or do you need to make customizations?
- The volume of your legacy content—how much needs to be maintained? How much can be retired from public life?
- The consistency of your pre-conversion content—are your information products already fairly uniform, or do individuals use disparate stylesheets and templates?
- The availability of the right team—do you have the right information architects and technical expertise at your disposal?

For some organizations, the transition takes a few weeks. For others, especially those with a ‘boil-the-ocean’ approach, taking on too much at once—it may be an ongoing process.



“DITA’s enablement of content reuse has the potential to save significant time and money in the long run, particularly for teams with global mandates and translation needs.”

Is it all worth it? With certainty, DITA’s enablement of content reuse has the potential to save significant time and money in the long run, particularly for teams with global mandates and translation needs. It might also save your team from dull, redundant writing and updating efforts, freeing up their time to focus on more value-adding projects.

Before you embark on an implementation, however, there are some steps to take to ensure a smooth transition.

### STEP ONE: ASSEMBLE THE RIGHT DITA IMPLEMENTATION TEAM

In order to ensure success of the implementation, there should be a core DITA implementation team that takes responsibility for the project. The core of the DITA implementation team is comprised of five essentials: a manager, a technical lead, an information architect, a lead editor and a content author. It is common for one person to take two or three of these roles.

#### Manager

When an organization adopts DITA, a crucial role for managers is to provide leadership and vision in the change management process. Usually a Director of Technical Publications or equivalent, the manager ensures that the team’s goals for moving to DITA are well-defined. Why are we moving to DITA? How will we measure success? What concerns exist, and are our expectations realistic? What training and support does the team need?

The manager acquires and oversees the project budget, and ensures that the tool selection process is systematic instead of ad-hoc. This leadership role usually takes a perspective of about 80% business and 20% technology, balancing the needs of the end-users with the goals of the organization’s ‘techies’.

#### DITA Technical Lead

To implement and maintain DITA, you will need someone who understands the technical details of XML, DITA, and the DITA toolkit in your organization. This individual (or individuals) will be responsible for maintaining the DTDs, or schemas and stylesheets. This role’s required level of skill is proportional to the extent to which you specialize and customize DITA.

Some organizations are satisfied with off-the-shelf software and the base DITA DTD/ schema and stylesheets. Other organizations, which tend to be large, need their authoring system to integrate with internal systems and/or to support organization-specific data models. In order to configure and specialize DITA, the technical lead must be proficient in working with and modifying DTDs and stylesheets.

Training in DITA is increasingly available in DITA-specific courses, and technical articles and specifications are available on the web for self-study. Some organizations choose to outsource this role to third-party consultants, especially during the initial transition phase.

#### Information Architect

The role of the information architect has become common in the field of website development. They design structure, layout, information retrieval, and navigational elements. Information architects for a DITA implementation play a key role in analyzing



content and mapping that content to the DITA structures. They build information product models, element models, metadata and reuse strategies. Then, with that knowledge, they can determine if and how DITA must be specialized to meet your organization’s content needs. It is often the case that an Information Architect is an author or was previously an author.

In a traditional authoring environment, authors are usually responsible for creating a specific information product. However in a DITA environment, content can be used in many different information products. There may be many authors responsible for creating various parts of an entire information product. Information architects, working with managers, must ensure that authors follow clearly defined guidelines in creating reuseable topics or chunks of content. They also define processes to ensure that authors reuse existing content whenever possible.

Consultants can help you get started with information architecture. We recommend, however, that you do not outsource this role entirely, as the information architect works day-to-day with authors to decide how and when to reuse content.

**Lead Editor**

A lead editor, one who best understands the content as a whole, can help guide key decisions on chunking and typing. They can also play a key role in author training by helping to demonstrate how content has been migrated. This exercise can be very helpful in enabling writers to become productive very quickly with newly-migrated DITA content.

**Content Author**

Having an end-user on the implementation team is critical. As is true with just about any corporate investment in technology, the new system should be built to fit the people who will use it—not the other way around. By giving authors an inside voice from the outset, your team will gain valuable perspective as well as a champion who can be a useful liaison during rollout. Even if the team’s Information Architect is also an author, other authors should be regularly consulted to get their input and buy-in.

**STEP TWO: DETERMINE YOUR REUSE STRATEGY**

The efficiency of content reuse is directly correlated to the efficiency of content creation, publishing and maintenance. Many different methods and options for reuse are available, and depend upon each organization’s needs and existing technology.

Content reuse is the practice of using existing content components to populate new documents. Although the majority of reusable content is text-based, any content can be reused (such as graphics, charts, media). In the technical communication domain, content reuse is often called single-sourcing, referring to the ‘write once, publish many’ nature of reuse-oriented workflows.

Most organizations already “reuse” content by copying and pasting it. But content is a living, breathing entity, and this model proves both time consuming and prone to mistakes once the content—every separate instance of it—has to be updated. Over time, inaccuracies and inconsistencies become so pervasive that the integrity of the original (if one master file still clearly exists) is lost. Truly reusing content—as opposed to duplicating it—increases consistency, reduces development and maintenance costs, speeds the reconfiguration of content and reduces translation costs.

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“By its nature, content written for reuse is more structured, and is therefore approached with a closer eye for a uniform writing style and branding.”

**Increased consistency** is one of the most dramatic effects of content reuse. When content is written once and reused many times, it is consistent and of a higher overall quality. By its nature, content written for reuse is more structured, and is therefore approached with a closer eye for a uniform writing style and branding.

**Development and maintenance** costs are reduced when content is reused, since redundancy in content creation is all but eliminated. Rather than writing all new content, or taking the time to find and copy content to be reused, reusable content is accessible through management facilities (metadata and content management) or is automatically made available to the author (systematic reuse). When a change is made in the central system, it is automatically changed everywhere it is reused, and tracked by the content management system for rapid selection and update.

A modular, reusable approach to content results in much **faster reconfiguration**. Alter content to meet changing needs by changing content order, authoring new elements or excluding outdated ones, or using existing ones to populate and enhance entirely new information products.

Any content that has been reused and already translated can be automatically inserted into the version to be translated, **significantly lowering translation costs**. Previously translated content is skipped and the time to identify content that must be translated is reduced.

## Understand the Types of Content Reuse

### Modular Reuse: An Automatic “Ripple Effect” of Content Reuse

‘Modular reuse’, also known as ‘building block’ reuse, refers to the practice of storing content in chunks and referencing when required via links. The content appears, but does not reside in the active document. When the reusable chunk (a descriptive paragraph, for example) is updated, every instance changes accordingly (brochure, system guide, label, press release, website).

This ‘change once, automatically change many’ model saves time and money by making content maintenance much more efficient.

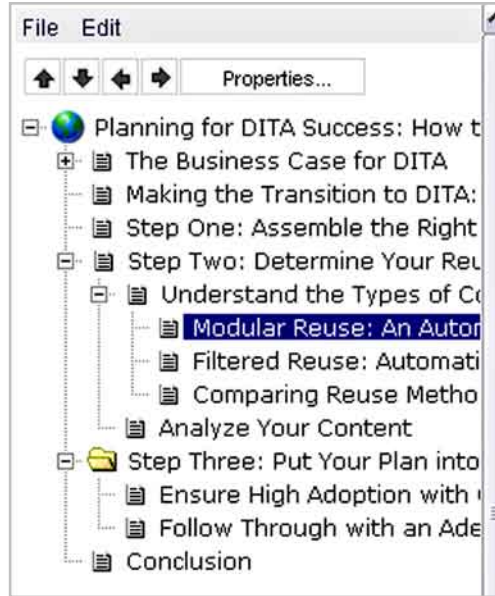
DITA enables two kinds of modular reuse—reuse of whole topics, and reuse of smaller elements by DITA content references (conref).

### How DITA ‘Topics’ Enable Modular Reuse

DITA maps assemble topics into an organized information product. These maps are similar to an intelligent table of contents, managing topic order, hierarchical relationships and desired output. Topic reference (topicref) elements, rather than the original content itself, live within the DITA map. They serve as pointers to the topic files, pulling in the right topics where appropriate. To create a topic hierarchy, topicrefs can be included in other topicrefs.



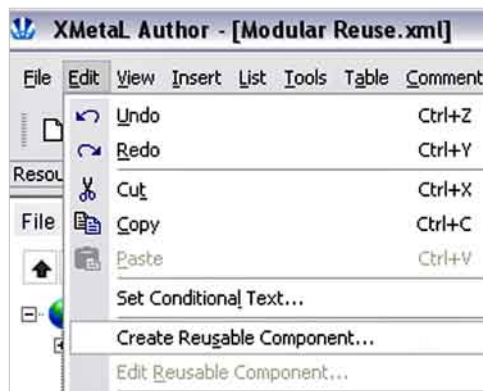
FIGURE 4.1. A DITA MAP



#### How DITA's 'Conref' Feature Enables Modular Reuse

The DITA content reference (conref) feature allows reuse of any chunk of content smaller than a topic, such as a single paragraph, sentence or word. Small pieces of content are stored as separate files and pulled into the document where appropriate via the conref attribute.

FIGURE 4.2. CREATE SMALL CHUNKS OF CONTENT



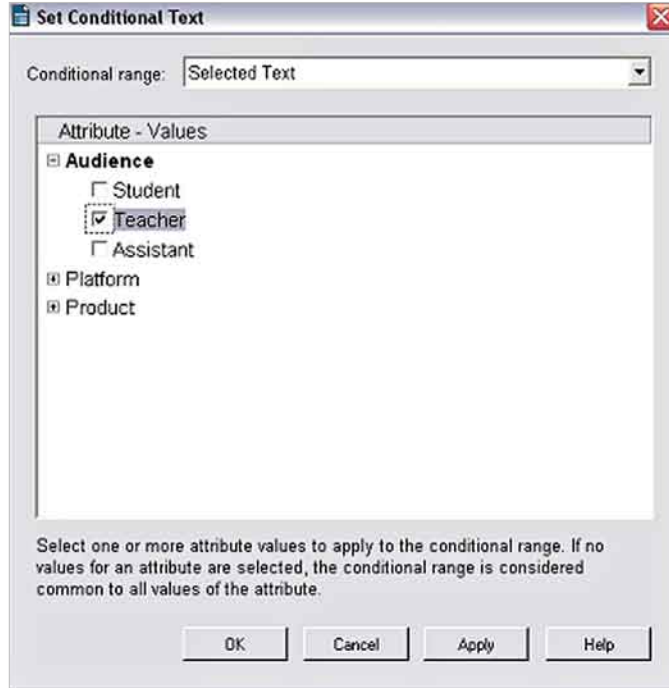
#### Filtered Reuse: Automatic, Reader-Specific Tailoring

Filtered reuse, also known as 'conditional text', 'profiling' or 'nested reuse', refers to the practice of selectively hiding content from a document, depending on how the content is marked up. Different subsets of the whole document can be used in alternate information products.

Filtered reuse is a good method to employ when a variety of information products require differing depths of detail for unique purposes and audiences. In addition, filtered reuse is also useful in its ability to retain the context for alternate content. In DITA, content creators can achieve filtered reuse by applying attributes to elements.

In DITA, content creators can achieve filtered reuse by applying attributes to elements.

FIGURE 4.3. APPLYING CONDITIONAL ATTRIBUTES



### Comparing Reuse Methods

Reuse Opportunity	Recommended Method
A topic is used in many different information products	Modular reuse: Include it in different information products through DITA maps
A piece of content is used in many different contexts, such as: <ul style="list-style-type: none"> <li>Boilerplate text</li> <li>Definitions</li> <li>Policy statements</li> <li>Index markers</li> <li>Terminology</li> </ul>	Modular reuse: Create a reusable component and include it in different topics using conref
You have multiple similar information products, such as: <ul style="list-style-type: none"> <li>Macintosh and Windows versions of software</li> <li>Standard and Professional versions of a product</li> <li>A product sold under different brand names</li> <li>Instructor and Student versions of training materials</li> </ul>	Filtered reuse: Flag some content as conditional
A product name or term varies between information products. In some legacy tools these cases are handled by 'variables'.	The DITA 1.1 architecture will include formal structures to put the appropriate product names or terms in deliverables. With DITA 1.0, teams use reusable components, sometimes in combination with conditional text, to create variables.  For example, you can create a reusable component, containing all versions of the product name. Within the reusable component, make each product name conditional for the product it applies to. Then include the reusable component in different topics using conref.





## Analyze Your Content

To measure the greatest value from your DITA deployment, particularly in the extent to which you will be able to reuse content, examine both the capabilities of DITA and the needs of your own organization. This stage is generally led by the team's information architect and DITA technical lead, and should include all stakeholders in the DITA deployment, particularly authors.

“An effective implementation requires that an information model be developed prior to choosing a standard. For a brief background on information modeling, see the white paper, ‘Preparing for DITA: What You Need to Know’ available at [www.rockley.com](http://www.rockley.com).”

One of the least understood activities in content management is the relationship between implementing standards and information modeling. Many people think that by implementing a standard which incorporates a specific information model, they do not need to do their own information modeling. They can just adopt the information model in the standard. However, an effective implementation requires that an information model be developed *prior* to choosing a standard. For a brief background on information modeling, see the white paper, ‘*Preparing for DITA: What You Need to Know*’ available at [www.rockley.com](http://www.rockley.com).

Information modeling is the identification of all information requirements for a particular project (or for an entire organization). Teams typically explore the following types of questions:

- What types of documents are you currently delivering? How could your deliverables be created as a series of topics? Look at the heading structures and sketch out how a few sample documents would be restructured as topics, subtopics, and sections.

Bear in mind that you will only get the full benefit of a topic-based architecture like DITA if your content is actually organized in terms of topics. Topics are shorter, easier to read and easier to reuse than the long narrative chapters of the past. Use your information modelling as an opportunity not just to describe how your documents are structured today, but how they should be structured tomorrow.

- What patterns do you want to encourage in terms of how writers structure information for procedures, troubleshooting, or reference information? For example, the base DITA “task” topic type requires prerequisites to be stated before the task steps.
- What types of information are currently styled in a distinctive way, such as bolding for the names of menu commands, or a text box for warnings?
- What style rules do you currently ask writers to follow, such as requiring that a bulleted list contain at least two items?
- What duplication in your content do you want to eliminate through modular reuse? Make a list of pieces of content that could be reused as topics (e.g. boilerplate about contacting Technical Support) or as small reusable components (e.g. definitions of terms).
- What do you want to achieve through filtered reuse and variables? Make a list of the user roles, skill levels, platforms, geographic regions, and product variations by which you would like to vary the delivered content.
- What metadata do you want your readers, and/or internal staff, to be able to search on?

Good sources of information for this stage include stylesheets, style guides, writers and editors.



Information modeling prompts the consideration of all requirements, and the assessment of which content elements would best fulfill those requirements. This analysis of both content needs and assets—done in advance of any implementation—ensures success in the long-term by exploring who is most suited to produce content, who will use it and how it can be leveraged across more than one information product.

The information model becomes like a catalog of all information products produced within an organization, and outlines the necessary information elements for each of them.

“By giving your team a complete understanding of content from creation to delivery, information modeling makes it possible to assess the impact of implementing standards after-the-fact.”

By giving your team a complete understanding of content from creation to delivery, information modeling makes it possible to assess the impact of implementing standards after-the-fact. In addition, it highlights opportunities for reuse, increasing efficiencies further over time. Your team will have a more holistic, big-picture view on the information products they create and author, the elements that are stored and tracked and how those elements contribute to specific information products—the sum of all parts. If you want to implement DITA as the core of your authoring environment, information models are indispensable in order to extend DITA base types.

### Determine Specialization Needs

People frequently ask: ‘Can I use DITA to do...?’ The simple answer is yes. DITA was created expressly to transform, to meet unique needs. A more appropriate question would be: ‘*Should* I use DITA to...?’ This question is not as straightforward to answer, since it depends on how much you would need to specialize DITA to make it work for your team.

To come to a decision, you must first know your content needs. Then, build a model of your content, including all information products (guides, help systems, FAQ...) and element structures (procedures, concepts, error message...). Determine your reuse strategy, and map your models against DITA. Finally, determine new topic types and new elements.

### Checklist for Effective Information Modeling

When devising your DITA strategy, ensure your team leaders:

- Understand the different types of content reuse.
- Understand how DITA maps work.
- Understand how filtered reuse (conditional text) works in DITA.
- Develop an information model of your content.
- Create a list of the attributes, and the values for those attributes, that you will need for filtered reuse or for other purposes.
- Identify any elements, attributes, or DITA domains you will not need to use right away.



“Crafting information products is less about linear flow, and more about populating a self-serve model in which people dive in and get what they need.”

## STEP THREE: PUT YOUR PLAN INTO ACTION

### Ensure High Adoption with Change Management

Managing the rollout of a new system to writers and content contributors is critical that the system is enthusiastically adopted—or at least tolerated until it can prove its worth! To ensure that your implementation is successful, have a change management plan. Consider the following steps:

- People are generally more open to change when they have a clear picture of not only how the changes affect them, but, more importantly, how the changes will benefit them. Clearly **communicate the expected benefits** of moving to DITA to your authors—less redundancy of work, better use of their time and the freedom to focus on high-value activities.
- Identifying the benefits of moving to DITA is important, but you must also put the changes in context. That means first identifying the pain, issues, and consequences. **Communicate the issues** facing your organization, as well as the impact of not addressing these issues.
- **Listen to what people have to say** about issues and solutions. If you involve people early on and demonstrate that their concerns and needs have been addressed, they will be among your strongest supporters.
- The best way to convince people that change is needed is to have ‘one of their own’ communicate the excitement and possibilities. **Elicit the help of a change agent**—someone who is not necessarily part of the implementation team, but who will be a user of the new system and methodologies. With their help, you are more likely to deliver a consistent message that prevents misinterpretations and ensures users stay focused on how the new system will make their jobs easier.
- Enlist the help of a **champion to endorse the cause**—one who is senior enough in the organization to effect change, and who can inspire widespread buy-in either by legislating adoption or by restructuring personnel to facilitate it.
- It is also wise to **anticipate some resistance** among end-users. Authors may feel that their community is diverse enough so that moving to a standard will limit them as individuals, or they may feel it will have a negative impact on their creativity. They may think that learning a new working model is too much work, or may worry that increased productivity per person may result in decreased job security. Think through your responses ahead of time, and answer pragmatically and proactively when the time comes.
- **Support and acknowledge authors** as they adapt to the new system. One of the toughest aspects of the shift to DITA is getting authors accustomed to writing topics rather than books. Every chunk of content has to stand alone. Crafting information products is less about linear flow, and more about populating a self-serve model in which people dive in and get what they need. In order to help writers overcome a potential ‘XML block’, try engaging them immediately with newly-migrated content. This is an excellent way to orient them to working in DITA and XML, and to demonstrate firsthand how it will help them to be more effective in their day-to-day work.
- To **select the right tools**, first consider what works best within your authors’ working environment, and then choose technology that enhances it (not the other way around). XML editors come in all shapes and sizes. Purchase authoring tools with functionality that fits.



## Follow Through with an Adequate Training Plan

The effectiveness of any DITA program ultimately depends on the ability of its authors to apply it. Help them make a successful transition with prompt and thorough training.

Many companies will be new to XML and XML technologies, and even more so to DITA. Authors need not be trained to specialize or modify DITA—they are not building the system. Their training should instead focus on applying your specific DITA system in their work.

- **Train authors on topic-oriented writing.** Producing reusable topics represents a shift in approach to writing. Authors need to understand the issues of creating standalone, reusable topics.
- **Train authors on ‘just enough’ XML.** Familiarize authors with basic XML concepts such as elements, attributes, validity and separation of content from presentation. However in day-to-day work, high-end editors can hide XML code so that authors can focus on content instead of constantly having to think about the XML.
- **Train authors on the structure of each DITA topic type.** Content must be consistently and predictably structured for reuse and automated output production. Do not rely on authors to understand when and where to use all elements.
- **Train authors on where to put metadata.** If you can’t find it, you can’t reuse or manipulate it. Effective metadata content is essential, and authors may not grasp its significance or leverage all attributes and metadata elements.
- **Train authors on how to create new DITA projects and topics** and how to edit them.

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## CONCLUSION

With DITA, documentation teams can finally capitalize on the promise of XML—but with greater cost-efficiency and value. In this Part One ‘*Planning for DITA Success: How to Set Up the Right Team and the Right Strategy*’, we’ve reviewed how to best apply the principles of content re-use, and how to set the stage for a strategy and rollout that best suits the people in your organization.

Part Two of this series, ‘*How to Deploy and Configure DITA for Success, Step-by-Step*’, will reveal how you can optimize DITA tools and technology to best suit your organization’s specific content needs, environment and people.

### About XMetaL

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