



IXIASOFT



IS DITA RIGHT FOR YOU?

SCENARIOS FOR CONSIDERING A MOVE TO DITA

Keith Schengili-Roberts – May 9, 2017



Who is this Guy?

Keith Schengili-Roberts

- Working in Tech Comm since early 1990s: technical writer, manager, consultant, now a researcher
- Working with DITA since 2004 (pre-DITA 1.0)
- Chair of OASIS DITA Adoption Committee, member of LwDITA and DITA Technical Committee
- Author of four technical titles, contributor to forthcoming *Current Practices and Trends in Technical Communication*





Also Known As “DITAWriter”

- Industry blog started +6 years ago
- Just under 250,000 hits
- Regularly updated info on:
 - DITA Conferences
 - DITA Books
 - Companies Using DITA
 - DITA CMSs
 - DITA Editors
 - Other DITA Tools
 - DITA Consulting Firms
- News/views on DITA use
- Features interviews with those making a difference in the world of DITA

The screenshot shows the DITA Writer website interface. At the top, there's a navigation menu with links for ARTICLES, NEWS, INTERVIEWS, WEBINARS, SOFTWARE UPDATES, DITA CONSULTANTS, and ABOUT. Below the navigation, the site title 'DITA Writer' is displayed. A search bar is located in the top right corner. The main content area features a large featured article titled 'DON DAY AND MICHAEL PRIESTLEY ON THE BEGINNINGS OF DITA: PART 1' with a blue header and a photo of the authors. Below this, there are tabs for 'Latest Blogs', 'Popular', and 'Recommended'. The next article is 'DON DAY AND MICHAEL PRIESTLEY ON THE BEGINNINGS OF DITA: PART 2'. The right sidebar includes a 'FOLLOW ME ON TWITTER' section with tweets from @ditawriter and a 'RECENT POSTS' section listing various articles like 'Don Day and Michael Priestley on the Beginnings of DITA: Part 2' and 'Highlights from DITA North America 2016'.



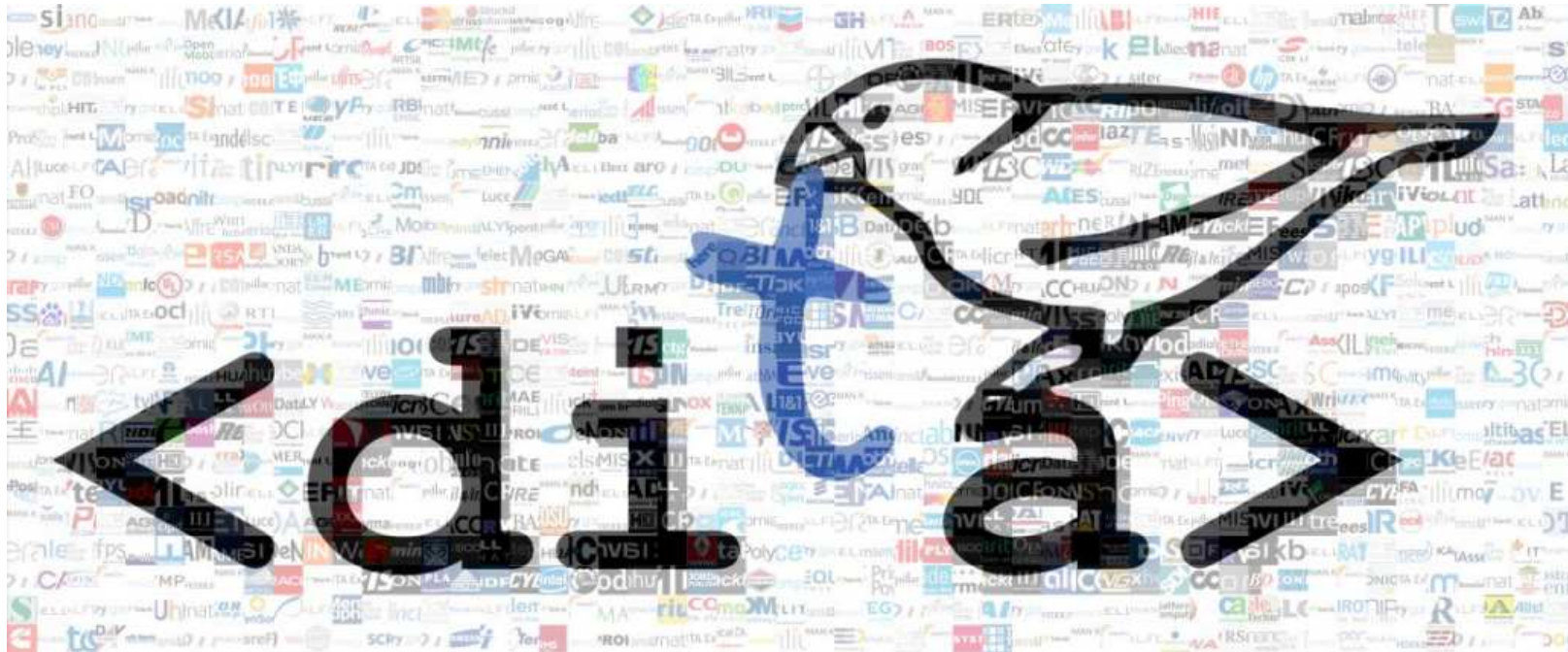
What We'll Cover

- Brief history of the development of DITA XML
- The chief advantages of DITA
- Main reasons why companies move to DITA
- When making the move to DITA makes sense
- QA

Let's get started!



Who is Using DITA?



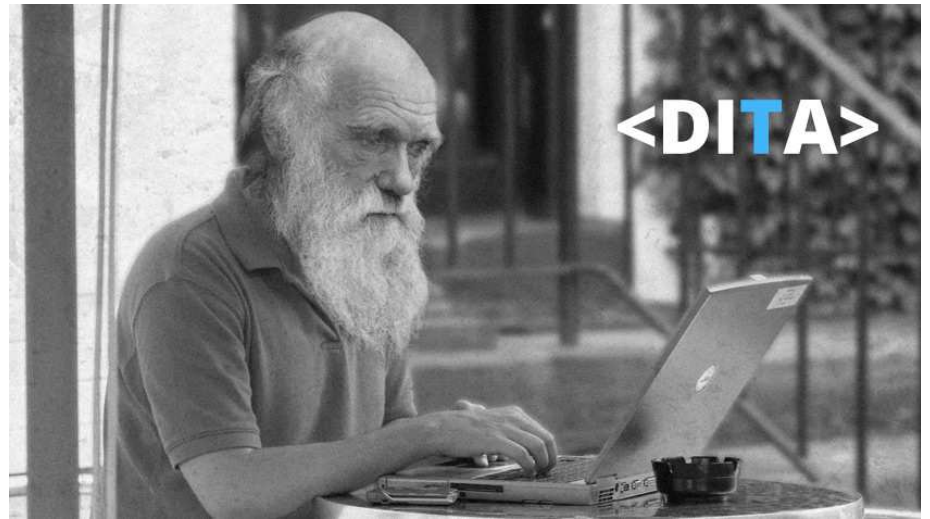
- Most recent count: 689 firms worldwide



What Makes DITA “DITA”?

DITA is an acronym:

- “D” is for “Darwin”, alluding to his concept of evolutionary adaptation, as DITA is based on specialization and inheritance
 - All topic types inherit features of top-level generic “topic” type
- “IT” is for “Information Typing”, defining the semantic structure of individual topics
 - Topic types are: Concept, Task, Reference, Glossentry and Troubleshooting
- “A” is for “Architecture”, as this is a structured standard that is also extensible
 - An example: Lightweight DITA uses DITA’s structure but can be written using HTML5 or Markdown





Why is Topic Typing Important?

- Provides a focus to tech writer for writer to create content for type
 - concept provides info on the function of a product feature
 - task provides step-wise instructions
 - reference provides additional supporting information
 - troubleshooting provides a solution to a specific issue
 - glossary provides a description of terms pertaining to the product





Reuse is Built-in to DITA

- DITA was built around the idea of content reuse
 - Individual topics and parts of topics can be used in different maps
 - Ensures content consistency
 - Reduces localization costs
- Content reuse is a key advantage of the DITA specification over other standards



DITA XML: A Reuse by Reference Architecture for Technical Documentation

Michael Priestley
IBM Canada
mpriestl@ca.ibm.com

ABSTRACT

The Darwin Information Typing Architecture is an XML architecture for producing and reusing technical information. DITA promises the following:

- Scalable reuse, so you can reuse content in any number of delivery contexts simultaneously without complicating the source
- Descriptive markup, so you can use markup that describes your information in terms your customers need
- Interchangeability, so you can treat specialized markup as if it were general, getting reuse of tools and processes defined at more general levels of descriptiveness
- Process inheritance, so you can reuse existing process logic in your specialized processes.

It accomplishes these goals by applying the principle of reuse by reference to the dimensions of content, design, and process within a technical communications workflow.

1. BACKGROUND

For the past two years, a workgroup inside IBM's User Technology community has been working on creating XML architecture for the next generation of technical documentation. It was released for public review and testing in March of 2001, and is continuing to evolve with the input of a growing community of writers and developers.

The Darwin Information Typing Architecture (DITA) is an XML-based architecture for authoring, producing, and delivering technical information. DITA is an end-to-end architecture. It consists of a set of design principles for creating information-typed topic modules and for using that content in various ways, such as online help and product-support portals on the Web. At its heart, DITA is an XML document type definition (DTD) that expresses many of these design principles. The architecture, however, is the defining part of this proposal for technical information; the DTD, or any schema based on it, is just an instantiation of the design principles of the architecture.

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SIGDOC'01, October 21-24, 2001, Santa Fe, New Mexico, USA.
Copyright 2001 ACM 1-58113-295-6/01/0010...\$5.00.

2. DITA PRINCIPLES

DITA simplifies the creation of audience-specific content, DTDs, and processes. It is based on principles of modularity and reuse that allow not only the fast deployment of customer solutions but also the painless evolution of those solutions as customer needs, and our understanding of them, evolves.

2.1 Four principles

DITA's basic principles are as follows:

2.1.1 Topic orientation

DITA focuses on the topic as the smallest independently maintainable unit of reuse. This allows authors to focus on writing topics that efficiently and completely cover a particular subject, or answer a particular question, without dwelling on the various places the topic might end up being read.

2.1.2 Information typing

DITA focuses on information types as a way to describe content independent of how that content is delivered. Instead of creating chapters and appendixes, authors can focus on writing concepts, tasks, and reference topics using structures and semantics that remain valid regardless of how the information reaches the reader.

2.1.3 Specialization

DITA allows authors to create more specialized information types, so that the structures and semantics of the information are as specific as they need to be for a particular audience

2.1.4 Inheritable processes

DITA-aware processes, such as publishing and translation, work automatically on more specialized types, and can also be specialized themselves.

2.2 Embodied in architectures

Those principles are embodied in two architectures:

2.2.1 Information architecture:

The information architecture describes what a topic is and what the three core information types are. This provides a basic level of consistency across all DITA content, which allows for reuse of infrastructure and interchange of content across the entire range of possible information types.

2.2.2 Specialization architecture:

The specialization architecture describes how a specialized type of topic is derived from a more general type of topic, and it describes how specialization-aware processes can access topics at whatever level of specialization they require. For example, a



DITA and Other Tech Doc XML Formats

- DocBook focuses on book rather than individual topics; most recent version (v5.1) now includes “assemblies” which allows some level of reuse
- S1000D focuses primarily on needs of aerospace industry; reuse is limited to data module level (and only one use per document)



- Focus is at book/article level
- No reuse model until very recently



- Aerospace focused
- Reuse only at data modules level, and only one per doc



An Important Implication of Topic Reuse...

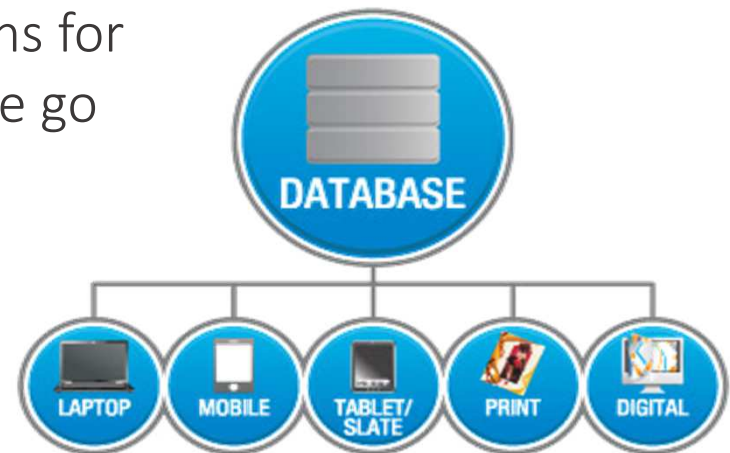
- ...is that the information needs to be non-narrative and self-contained, conveying all of the info a user needs for a given scenario
- This neatly matches needs of an increasingly mobile audience, who demand info when and where they want it
 - ...and who don't want to read a manual from beginning to end on their phone





DITA was Built for Multi-channel Publishing

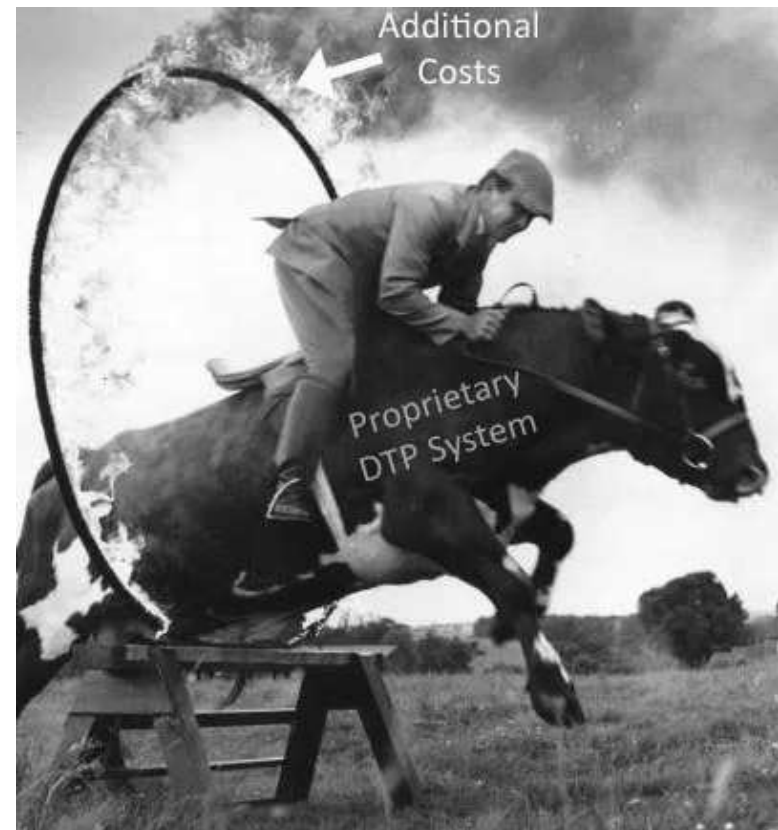
- This was a key design feature when DITA was still being devised at IBM; intent was to tame a multitude of output processes then in place with a single one
- DITA-OT by default supports 11 output types, including PDF, RTF, HTML5/XHTML; other output types possible
- DITA provides a straightforward means for publishing to multiple formats at one go





Other Factors that Come Into Play #1

- DITA is an open standard: there are no proprietary flaming hoops for your content to jump through
- Everything is available for inspection and can be modified/specialized/extended





Other Factors that Come Into Play #2

- DITA usage in some sectors is becoming an accepted way of doing business
- In semiconductor sector, where I.P. is content and manufacturers incorporate components from other vendors, DITA has become the *de facto* way of doing business

At least **75%** of the top 20 semiconductor companies globally are using DITA.

- | | |
|-------------|---------------------|
| 1. Intel | 11. MediaTek |
| 2. Samsung | 12. Infineon |
| 3. TSMC | 13. STMicro |
| 4. Broadcom | 14. Apple |
| 5. Qualcomm | 15. GlobalFoundries |
| 6. SK Hynix | 16. Renesas |
| 7. TI | 17. Nvidia |
| 8. Micron | 18. Sony |
| 9. Toshiba | 19. UMC |
| 10. NXP | 20. AMD |

*Top 20 List from
IC Insights for 1H16*



And by the way...

100% of the top 10 software companies are using DITA.

1. Microsoft
2. Oracle
3. IBM
4. SAP
5. Symantec
6. EMC
7. Hewlett-Packard
8. VMWare
9. CA Technologies
10. Salesforce.com

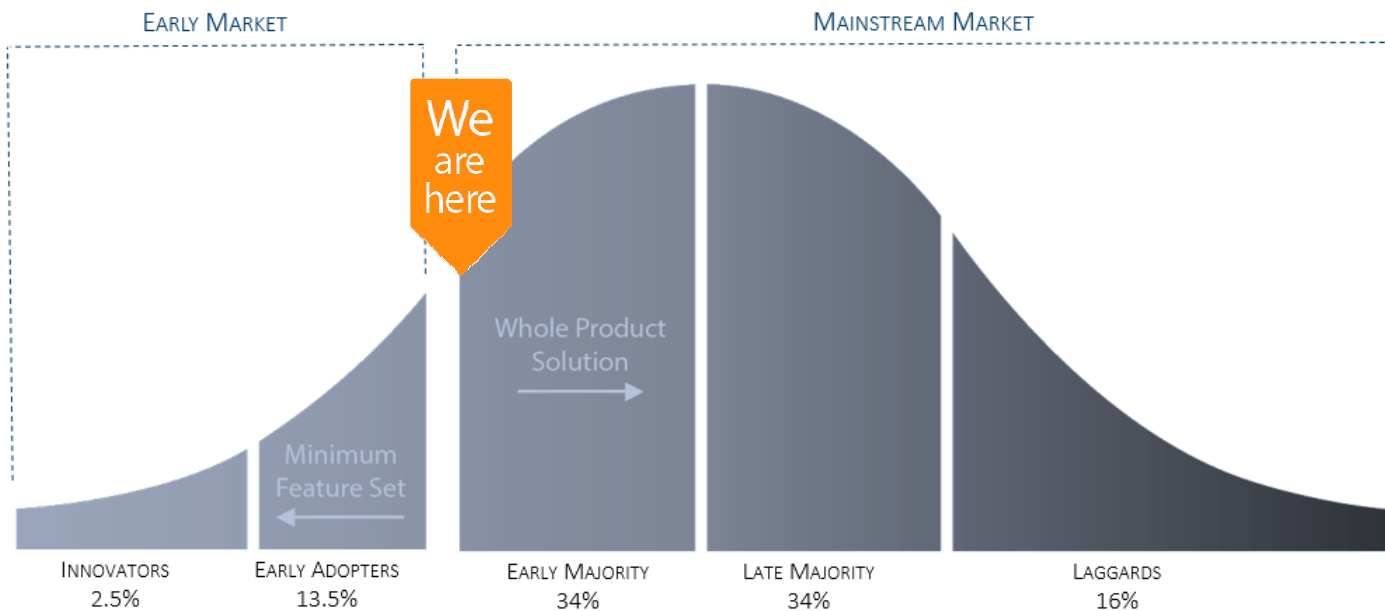
100%

Ranking data from Investopedia



Other Factors that Come Into Play #3

- Tool maturity: specialized tools are widespread and optimized for use with DITA
- DITA-related services and training are now widely available





Now the Stage is Set

- Now you know some of the key advantages that DITA provides
- But what are the common pain points/scenarios that leads documentation teams to use DITA?





Typical pain points and how DITA can help lessen them

CHIEF REASONS FOR WANTING TO MOVE TO DITA



Pain Points that DITA Can Help Solve

These are the pain points I have most often seen in doc teams motivating their move to DITA:

1. The need to reduce operational costs
 2. A requirement to decrease localization costs
 3. A need to improve content quality
 4. The company has moved to Agile (and doc team needs too as well)
- Let's look at them one-by-one





Paint Point #1: Need to Reduce Operational Costs

- For many documentation teams it is not possible to get more headcount
 - But there *is* a need to produce more documentation...
- Pace of work may have increased (Agile)

DITA has a proven track record for improving overall costs + efficiency





Separation of Form from Content

- In a study I did prior to moving to DITA at AMD, found that fully half of the time spent using DTP software was on formatting content
- Suggests considerable time savings, making content creators more nimble and able to concentrate on making additional content
 - From a localization perspective, also removes DTP charges from Localization Service Providers

Less
Time
Spent
Formatting



Some Problems Just Go Away

- An example: semiconductor firm with a division that created 1,000+ page documents using DTP
- Architectural chip engineer created 60+ step detailed document outlining what his engineering team needed to do to *minimize* (not eliminate) the chance of DTP crashing when outputting content
- Producing doc from DTP took *hours* to produce (assuming it did not crash)





Software Licensing Costs May Be Cheaper

- IT for one client was upgrading to latest version of Windows and their existing DTP program would not work in this new version
- Cost of buying XML editor licenses in bulk plus a DITA CCMS was cheaper than buying upgraded DTP licenses, which:
“would only bring us up to date with the software, and not improve our situation”





Pain Point #2: Need to Decrease Localization Costs

- Scenario: you have ongoing need to produce localized content, but costs (especially with desktop publishing-based processes) have become prohibitive
- Additional costs are incurred for:
 - Formatting content
 - Fixing code-page errors (a glyph is transformed into a different character)
 - Sending more content than necessary for localization





Reduced Localization Costs with DITA

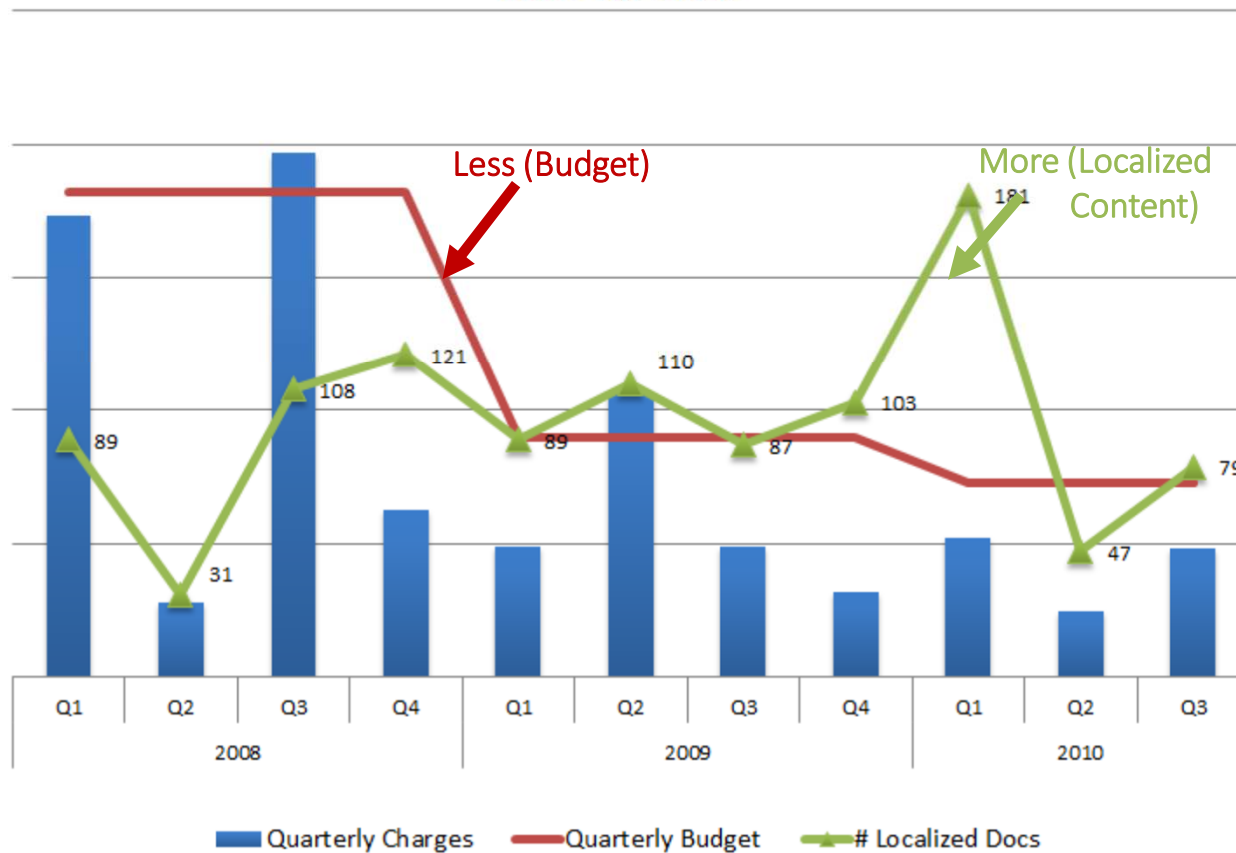
- Content reuse in English = localization savings
- If there are many target languages, the Return on Investment argument for moving to DITA (+ CCMS) is easier
- Also:
 - No DTP formatting charges
 - Code page errors go away
 - With a CCMS, content sent to Localization Service provider can be optimized





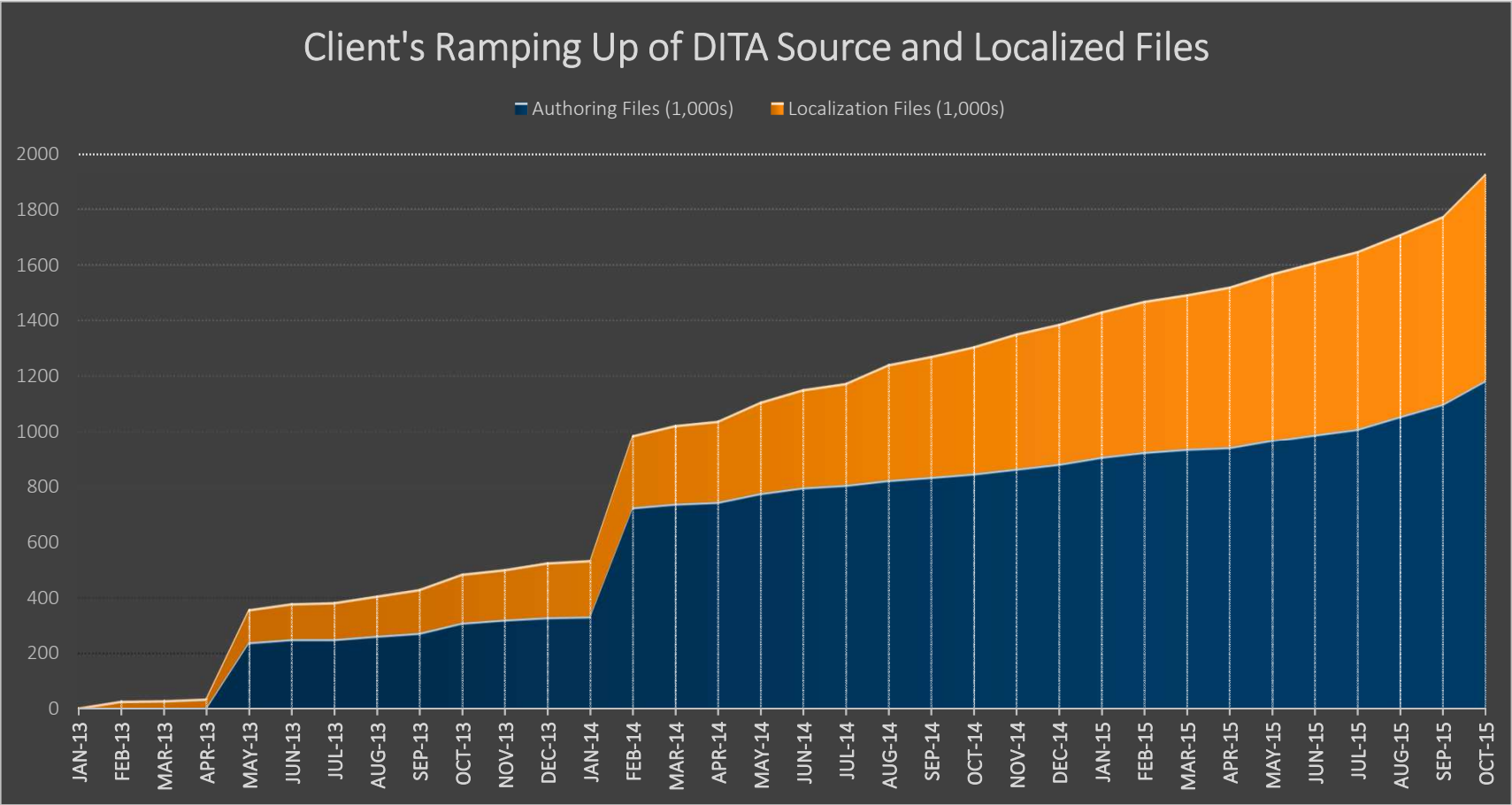
Doing More with Less (Localization)

Quarterly Localization Run-rate vs.
Number of Localized Docs Published
2008-Q3 2010





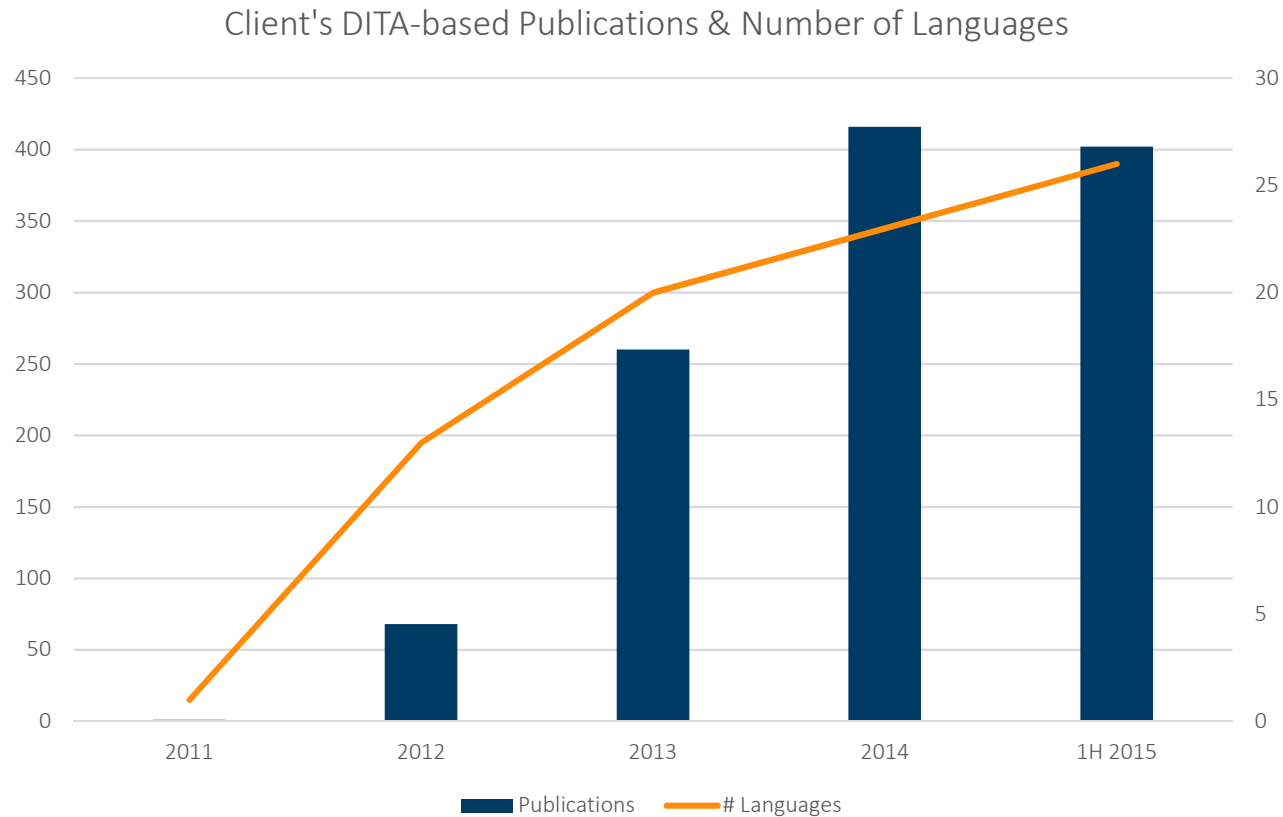
DITA Can Enable a Firm to Localize *More* Content



- Depicts a client's progress as they are able to localize more content over time using DITA + CCMS



DITA Can Enable a Firm to Localize to More Languages

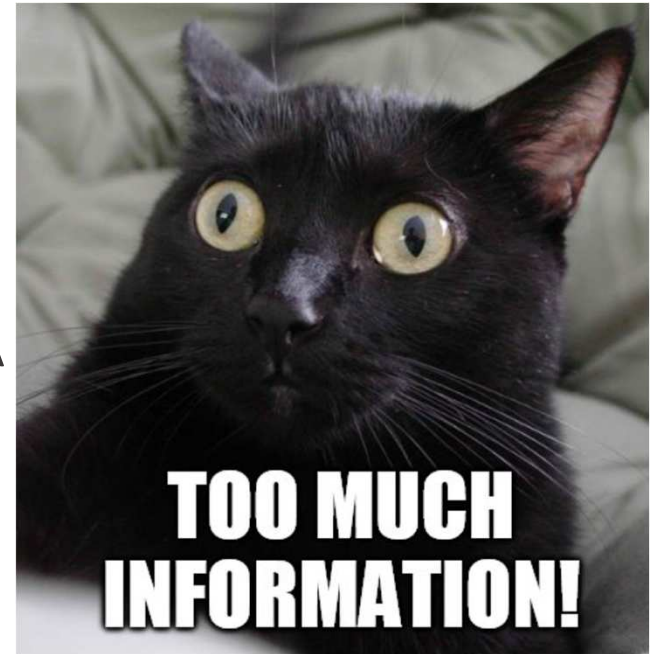


- A different client, showing their ramp-up of DITA-based publications and the number of languages they were able to do under *the same budget*



Pain Point #3: A Need to Improve Content Quality

- More common these days for Subject Matter Experts (SMEs) to be contributors and reviewers of content; quality can be improved with DITA + CCMS
- Any CCMS can provide workflow, but DITA has an advantage as topics are easier to assign/create/review
 - Topic-based review is much easier for a SME to do than: “read this whole manual, and provide comments. By tomorrow.”





Requirement to Verify Content Before Publication

- In regulated environments such as in the medical device sector, content must first be vetted by medical professionals
- Similar requirements in other sectors, such as legal publishing, heavy manufacturing, etc.





Have Outgrown Current Toolset

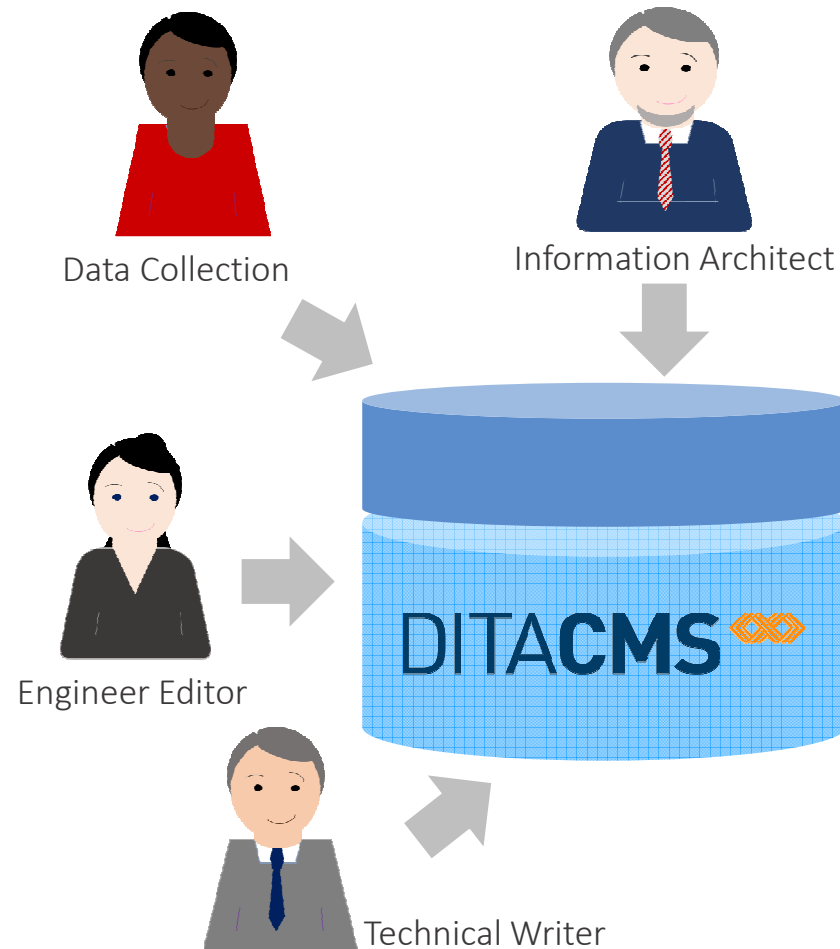
- Traditional Desktop Publishing tools cannot cope with growing need to produce content
- Hard for writers to find existing material for reuse in file folders or existing repositories
- Pressing need to automate existing processes
- Seeking a more mature process





DITA + CCMS Can Provide Workflow Capabilities

- Once a writer has completed writing a topic, can then be routed automatically
- Useful for when you need to have content edited/verified before it goes out the door
- Introduces ways to improve content quality





Typical Workflow Examples

- An example: a Subject Matter Expert (SME) may be assigned within the system to write content which is then “polished” by a technical writer, and then sent to another SME for approval
- Or: technical writer creates content, is routed to another writer/editor who verifies quality



Engineer
(SME)



Technical
Writer



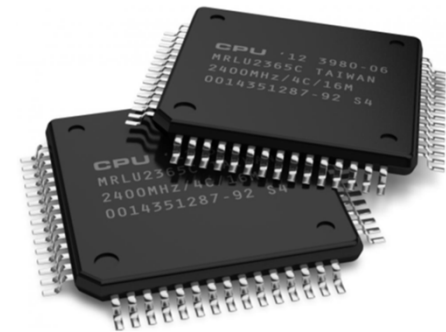
Engineer
Who Approves
Content
Accuracy



Examples Where Quality Matters

- Medical Device manufacturers: strong need for SME (usually by an MD) review, plus regulatory requirements
- Semiconductor firm that sells IP: content primarily written by SMEs for third-party design engineers

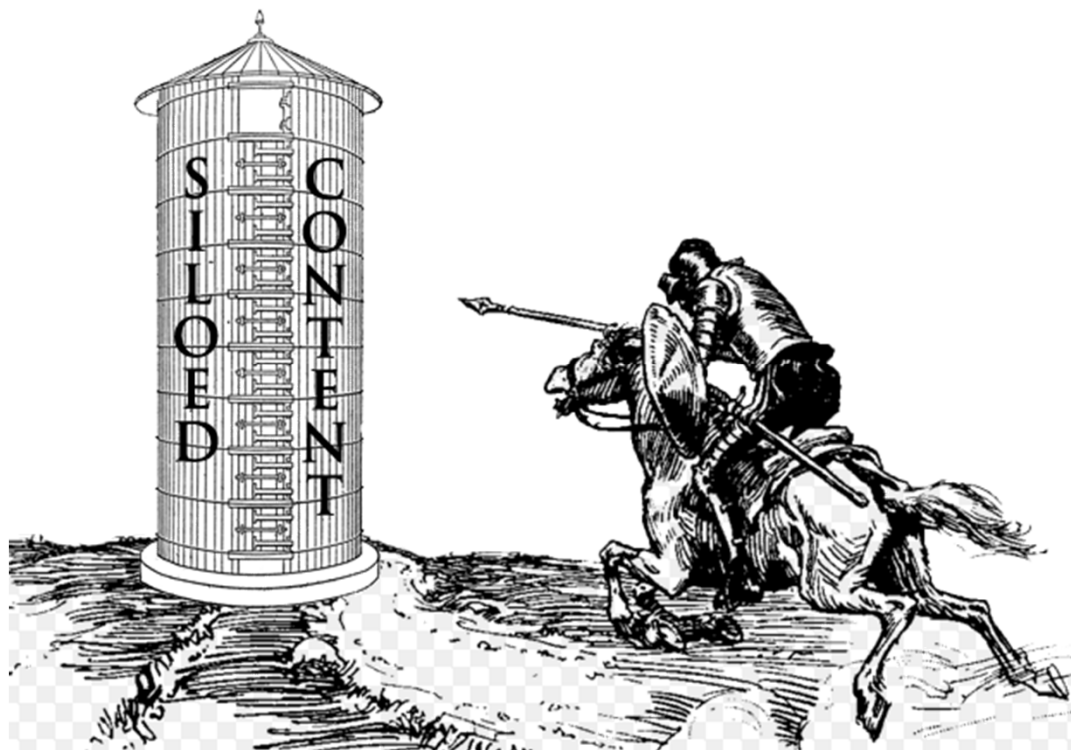
In these cases, topic-based DITA + a CCMS routing workflow provides a means for improving documentation quality





A Side-benefit: DITA Can Help Break Down Silos

- The need to optimize reusable content encourages any previously siloed doc teams (or any other team that contributes content) to cooperate with each other





Pain Point #4: Company Has Moved to Agile

- ...and the documentation team needs to move to Agile as well
- Most often seen in software firm/department where development moves to Agile
- What this means for the documentation team:
 - Expectation of faster turnaround times for development
 - Documentation teams are now asked to keep pace



How DITA Can Enable Agile-based Processes

DITA is a good fit in this scenario:

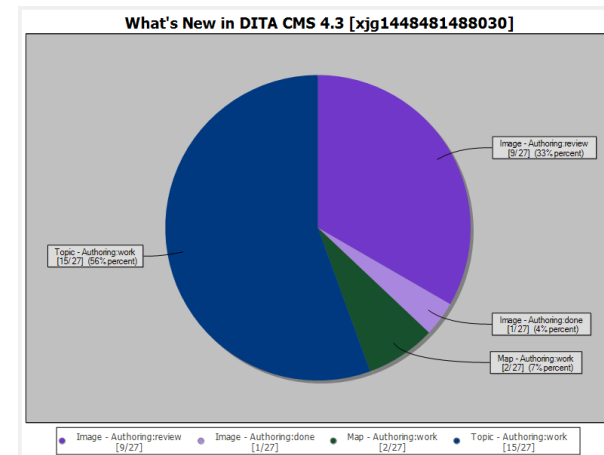
1. Topic-based approach in DITA assists with incremental development
2. Agile user stories maps well to the task topic type in DITA
3. DITA best practices advocate that content is focused squarely on the user





How DITA Can Enable Agile-based Processes (Cont.)

4. The DITA best practice of minimalism reduces “waste” (“muda” from a Lean perspective)
5. Agile encourages continuous feedback; topic-based review is easier
6. Individual topics can be counted, allowing for documentation project measurement
 - At Scrum meetings doc manager can report on topics assigned to their group and on how “done” they are





Tech Writers Become Part of the Feedback Loop

- Tight integration of tech writers with development team opens possibilities for early feedback on product development
- “The goal of technical communicators is not to explain confusing product features, but to prevent them.” – Tim Grantham, 2008





Separate Content Management from Authoring

- Ideally IA / Manager are several iterations ahead and planning out topics to be authored
 - Map with topics created, technical writers and/or SMEs “fill in the blanks”
 - Helps to emphasize that writers need to be embedded with development + QA



Example of creating stub topics within a map in the IXIASOFT DITA CMS



Only Document What is Necessary

- Not only based on feedback from developers, but also from users
- Fits with minimalist writing principles; ditto Lean
- When possible, track online usage from published docs, and prioritize user-favored content
 - One interesting example: UI-related content “how to” style content is reduced and UX is improved by writer feedback, ensuring UI is more usable





DITA Short Descriptions Direct Users to Content

- Writing short descriptions for DITA topics is already considered a best practice
- An example of progressive disclosure as to the relevancy of content to users
 - Can be similar in intent to an Agile user story, where: “User x can do y based on z”
 - A well-written short description also helps with Search Engine Optimization

- **Open a document with a specific editor**
Use this procedure to edit a document with an editor other than its default editor.
- **Open the current topic with a different editor**
Use this procedure to switch editors when you're editing a topic.
- **Create a map**
A map is designed to manage topics – their order and relationships.
- **Drag documents into a map**
You can add content to a map by dragging in topics and maps from other views.
- **Move a document within a map using drag and drop**
You can move topics quickly and intuitively using the mouse.
- **Create a topic**
Use this procedure to create a new unit of information using one of the structured topic templates.



An Example of How DITA Can *Enable* Agile

- Lean methodology employed at AMD; early on localization was a focus:
 - Under old toolchain could only localize software (that was updated every month) once every *6 months*
 - Using DTP-based processes, it was costly, slow and process did not allow for feedback
- DITA + CCMS made localizing on a monthly cadence possible
 - Demonstrated considerable costs savings
 - Localization staff could focus on quality and provide developers with feedback

Localization Process Pre-Lean:



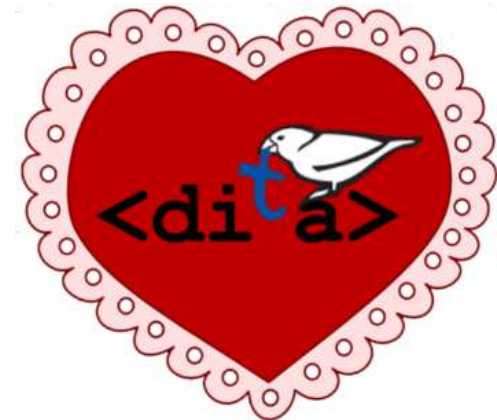
Localization Process After-Lean + DITA + CMS:





Another Example of DITA + Agile Working Together

- Software sector example:
 - Writers were already embedded in software development teams, but existing DTP tools meant they were always trying to catch up
 - Lack of granularity meant that DTP-produced documents were hard to track
- Results:
 - DITA + CCMS means that writers now have the time to both create content and to participate fully in the Agile process
 - Per topic progress reports now possible; now a regular part of scrum meetings, and can even be created on-the-fly by request





Not Convinced Yet?

“DITA did not directly enable or guarantee effective documentation in an Agile/SCRUM environment, but it sure saved my bacon in supporting multiple scrum teams with variant definitions of done.”

- Stan Doherty



“Agile development goes hand in hand with topic writing, and I think this is why it’s a perfect match for DITA. I love working in Agile! It makes my life as a writer much, much easier.”

- Nathalie Laroche

Where are you now and where do you need to be 5 years from now?

WHEN DOES A MOVE TO DITA MAKE SENSE?



Some Non-budgetary Reasons for Moving to DITA

- Any of the previous scenarios make for a good *budgetary* argument to move to DITA
- Some teams are also swayed by how best practices are incorporated into DITA
 - Content reuse = consistent messaging
 - DITA metadata promotes findability = better SEO (bit.ly/2qimeCQ)
 - Topic-based content easier for users to digest
 - Multi-channel publishing built-in





Transition Strategies for Moving to DITA that Work

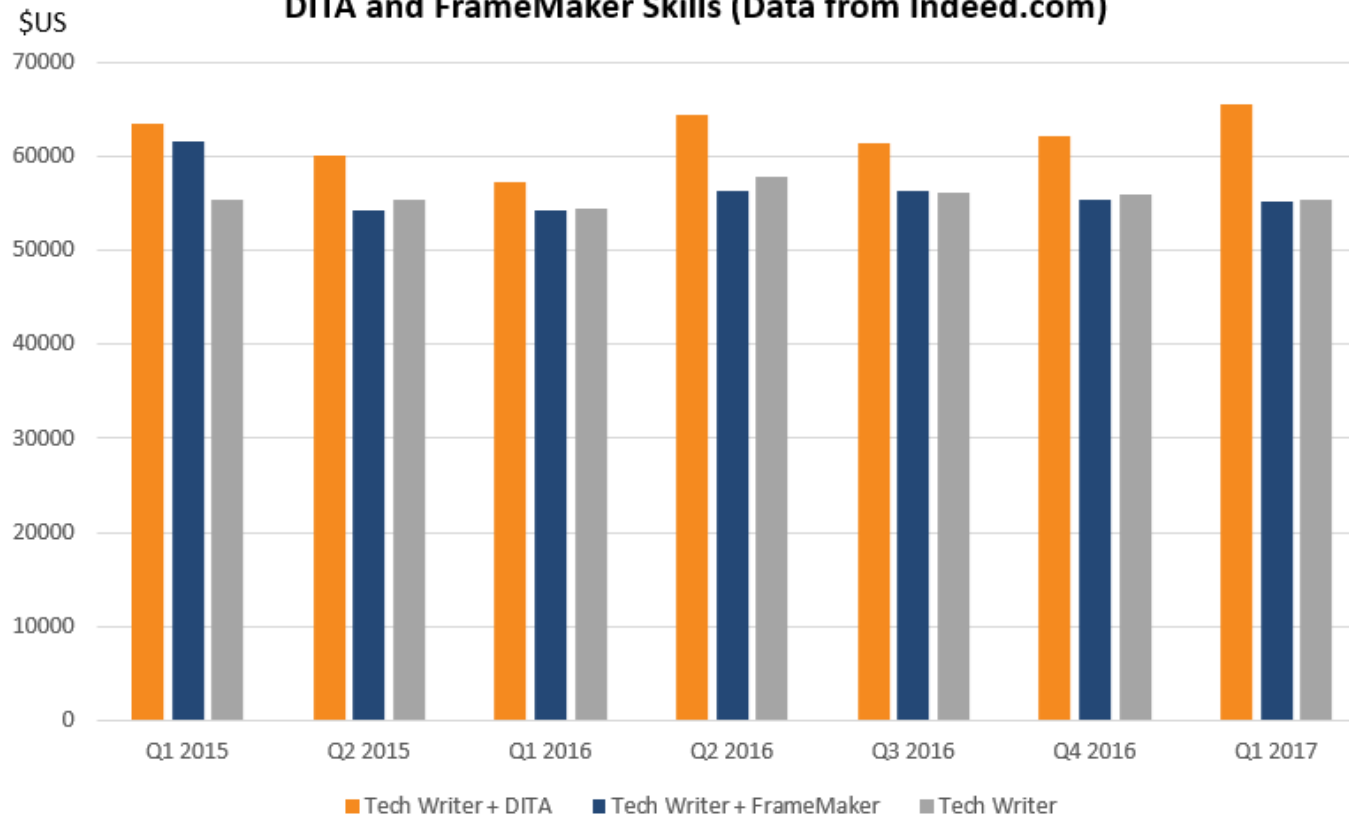
1. Start writing topic-like content prior to moving fully to DITA.
2. DITA training.
3. Hire/train key technical writers to be the “DITA Leads”.

Note that these approaches are not mutually exclusive.



DITA is Also a Career-enhancing Move

Avg. Starting Wage Rates for Technical Writers with DITA and FrameMaker Skills (Data from Indeed.com)



- On *average*, starting wages for technical writers with DITA experience get a better starting wage than those without, or those with FrameMaker experience



Upfront Costs vs. Opportunity Costs

- Yes, there are often significant costs associated with moving to DITA and possibly purchasing a DITA CCMS:
 - Conversion costs of legacy content
 - Change management
 - Cost of CCMS software
 - May involve separate purchase of repository software for content
- But can your organization support ongoing costs of current toolchain?
 - This is an opportunity for change and improvement...



**OPPORTUNITY
COST**



DITA-based Documentation and The Road Ahead



- DITA + CCMS should be thought of as an opportunity to improve the quality of your content and your documentation processes
- Think of where you need to take your documentation team and what your users will expect of you five years from now



QA

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Twitter: @IXIASOFT (plus @KeithIXIASOFT)

IXIASOFT DITA CMS Users LinkedIn group:
www.linkedin.com/groups?gid=3820030

