

Managing Enterprise Content

A Unified Content Strategy

Second Edition

Ann Rockley

Charles Cooper

Foreword by Kristina Halvorson

Managing Enterprise Content, Second Edition
Ann Rockley and Charles Cooper

New Riders

1249 Eighth Street
Berkeley, CA 94710
510/524-2178
510/524-2221 (fax)

Find us on the Web at: www.newriders.com
To report errors, please send a note to errata@peachpit.com
New Riders is an imprint of Peachpit, a division of Pearson Education.
Copyright © 2012 by Ann Rockley

Project Editor: Michael J. Nolan
Development Editor: Margaret Anderson
Production Editor: Cory Borman
Copyeditor: Marie-Lynn Hammond
Proofreader: Gretchen Dykstra
Book Designer: Mimi Heft
Compositor: Myrna Vladic
Indexer: Joy Dean Lee

Notice of Rights

All rights reserved. No part of this book may be reproduced or transmitted in any form by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the publisher. For information on getting permission for reprints and excerpts, contact permissions@peachpit.com.

Notice of Liability

The information in this book is distributed on an “As Is” basis without warranty. While every precaution has been taken in the preparation of the book, neither the authors nor Peachpit shall have any liability to any person or entity with respect to any loss or damage caused or alleged to be caused directly or indirectly by the instructions contained in this book or by the computer software and hardware products described in it.

Trademarks

Many of the designations used by manufacturers and sellers to distinguish their products are claimed as trademarks. Where those designations appear in this book, and Peachpit was aware of a trademark claim, the designations appear as requested by the owner of the trademark. All other product names and services identified throughout this book are used in editorial fashion only and for the benefit of such companies with no intention of infringement of the trademark. No such use, or the use of any trade name, is intended to convey endorsement or other affiliation with this book.

ISBN 13: 978-0-321-81536-1
ISBN 10: 0-321-81536-X

9 8 7 6 5 4 3 2 1

Printed and bound in the United States of America

To my mother, Dida Rockley—a librarian—who instilled in me her love of books, her desire for knowledge, and her ability to organize information. And to my father, J.W. Rockley (Rock)—a management consultant—who became my mentor in business.

A handwritten signature in black ink that reads "Ann Rockley". The signature is written in a cursive style with a long, sweeping horizontal line extending to the right from the end of the name.

Dedicated to my mother, Elizabeth Cooper, who passed her love of exploring the world through books and reading to me, and to my father, Earl Cooper, who instilled in me the love of examining the world around me, taking bits apart, and attempting to put them back together—just a bit better.

A handwritten signature in black ink that reads "Charles Cooper". The signature is written in a cursive style with a long, sweeping horizontal line extending to the right from the end of the name.

Table of Contents

1 The basis of a unified content strategy 1

1 Content: The lifeblood of an organization 3

Content: Where does it all come from? 4

Understanding the content silo trap 5

What is a unified content strategy? 10

Scope of a unified content strategy 12

Summary 13

2 Intelligent content 15

What is intelligent content? 16

Understanding intelligent content 17

Intelligent content and content strategy 28

Summary 29

2 Where does a unified content strategy fit? 31

3 Enterprise content: Web and beyond 33

The Web 34

Mobile 35

Beyond the Web 36

The role of a unified content strategy 38

Summary 39

4 Publishing 41

Digital publishing, a tsunami of change 42

The publishing process 42

The role of a unified content strategy 46

Summary 48

5 Product content 49

The evolution of reuse in technical publications 50

The role of a unified content strategy 55

Summary 56

6 Learning materials 57

- Types of learning materials 58
- The role of a unified content strategy 64
- Summary 64

**3 Performing a substantive audit:
Determining business requirements 65****7 What does your customer really need? 67**

- Identifying customer needs 68
- Personas 73
- Summary 77

8 Where does it really hurt? 79

- Who to interview 81
- Identifying the D.O.S.: Dangers, opportunities, and strengths 81
- Identifying the goals 82
- Identifying the challenges 83
- Sample questions 83
- Where a unified content strategy won't help 85
- Summary 86

9 Analyzing the content lifecycle 87

- Identifying your content lifecycle 89
- Identifying the players, processes, and issues 90
- Summary 100

10 Performing a content audit 101

- What is a content audit? 102
- What's involved in doing a content audit? 102
- Assessing the quality of the content 103
- Assessing the opportunities for content reuse 104
- Analyzing the content for reuse 104
- Content audit examples for reuse 106
- Summary 118

11 Envisioning your unified content strategy and lifecycle 119

The unified content strategy 120

The unified content lifecycle 123

Summary 130

4 Developing a unified content strategy 131**12 Content modeling: Adaptive content design 133**

What is adaptive content? 134

Understanding content modeling 135

Content first, not mobile first, eBook first, or any other “first” 136

Creating models 139

Understanding granularity 141

How are models used? 143

How are models implemented? 149

Summary 150

13 Reuse strategy 151

Structural reuse vs. content reuse 152

Creating a reuse strategy 152

Reuse methods 152

Securing reusable content 155

Types of reuse 156

Supporting adaptive design through reuse 161

When doesn't reuse make sense? 162

Summary 164

14 Designing workflow 165

What is workflow? 166

Depicting workflow 169

Roles, responsibilities, and processes 171

Writing task descriptions 175

Designing effective workflow 179

Summary 181

15 Designing metadata 183

- What is metadata? 184
- Benefits of metadata to a unified content strategy 187
- Types of metadata 188
- Metadata relationships 202
- Summary 204

16 It's all about the content 205

- Writing structured content 206
- Same content, different uses? 211
- Collaborative authoring: Breaking down the silos 218
- Summary 227

17 Change management and governance 229

- What is change management? 230
- What is governance? 230
- Change management 230
- Content governance 239
- Workflow governance 243
- Taxonomy and metadata governance 243
- Governance board 245
- Summary 247

5 Supporting your unified content strategy 249**18 Changing roles 251**

- Senior content strategist (new role) 252
- Content strategist (modified role) 253
- Content owners (modified role) 253
- External authors (modified role) 254
- Internal authors (modified role) 255
- Business owners/analysts (modified role) 255
- Editors (modified role) 256
- Information architect (modified role) 256
- Information technologists (modified role) 257
- Art (modified role) 258
- Publishing roles 258
- Summary 261

19 The role of XML 263

Should you fear XML? 264

The origins 265

What about DITA? 273

Summary 281

20 The role of content management 283

Authoring tools 284

Content management systems 289

Workflow systems 302

Delivery 308

Summary 310

6 Resources 313**Glossary 315****Bibliography 327****A Checklist for implementing a unified content strategy 331**

Phase 1—Analysis 332

Phase 2—Developing a unified content strategy 334

Phase 3—Selecting tools and technologies 336

Phase 4—Development 337

Phase 5—Testing and system modifications 340

Phase 6—Pilot 342

Phase 7—Implementation 344

Phase 8—Post implementation 345

Index 347

About the authors and book team

It's not possible to write a book without the help of a lot of different people. The following provides information about the authors and the people who helped make this book happen.

The authors

Ann Rockley is president of The Rockley Group, Inc. She has an international reputation for developing XML-based content strategies. She has been instrumental in establishing the field in eContent, content reuse, intelligent content strategies for multiplatform delivery, eBooks, and content management best practices. Rockley is a frequent contributor to trade and industry publications and a keynote speaker at numerous conferences in North America, Europe, and Asia-Pacific.

Known as the “mother” of content strategy, she introduced the concept of content strategy in 2002 with the first edition of this book. Ann was ranked among the top five most influential content strategists in 2010.

Ann led Content Management Professionals (CM Pros), an international organization that fosters the sharing of content management information, practices, and strategies to a prestigious eContent 100 award in 2005. Ann was cochair of the OASIS DITA for Enterprise Business Documents subcommittee in 2009–2011.

Ann is a fellow of the Society for Technical Communication (STC) and has a master of information science from the University of Toronto. She is also the primary author of *DITA 101: Fundamentals of DITA for Authors and Managers*, and coauthor of *eBooks 101: The Digital Content Strategy for Reaching Customers Anywhere, Anytime, on Any Device*.

Charles Cooper is vice president of The Rockley Group, Inc.

Cooper has over 20 years' of experience in quality assurance and over 15 years' of experience in eContent, user experience, taxonomy, workflow design, composition, and digital publishing. He teaches, facilitates modeling sessions, and develops taxonomy and workflow strategies.

Charles has assisted companies by analyzing their content, current workflow, and taxonomy systems; helped to create new ones; and worked to ensure that they are maintained on a consistent basis. He not only understands process, he understands production tasks and can design a process that works for everyone in an organization. Charles always keeps the voice of the customer in mind when developing solutions.

He has a strong background in process and business planning and believes that taxonomies, structure, organization, workflow, and quality assurance processes must be designed to support the company as they work to provide products and services that their customers need. Charles is a coauthor of *DITA 101: Fundamentals of DITA for Authors and Managers* and *eBooks 101: The Digital Content Strategy for Reaching Customers Anywhere, Anytime, on Any Device*.

Case study contributors

Rahel Anne Bailie is an integrator of content strategy, requirements analysis, information architecture, and content management to increase ROI of product lifecycle content. She is also an aficionado of content structure and standards, founder of IntentionalDesign.ca, and a fellow of the Society for Technical Communication.

Derek Olson is vice president of Foraker Labs. Derek leads the design and development of award-winning iOS apps, web apps, and websites in Foraker's Boulder offices. He also provides usability, content strategy, and information architecture guidance to clients like Breastcancer.org.

Joe Gollner is the director of Gnostyx Research, an initiative he launched for the purpose of helping organizations adopt open content standards and leverage intelligent content technologies. Joe has a BA in mathematics and literature from Queens University and a master of philosophy from the University of Oxford. Joe is a popular keynote speaker at major content management events and for several years chaired the XML World series of conferences.

Richard Thompson is an English-language copywriter/editor, web writer, and content strategist. He lives and works in France, near Paris. When he's not obsessing about content, he's taking pictures and restoring old houses.

B. Noz Urbina is a content strategist, senior consultant, and trainer at Mekon Ltd. With years of experience as a content strategy and content management consultant, he has provided services to Fortune 500 organizations and small-to-medium enterprises. He specializes in helping companies align content processes and infrastructure with their business needs and customer goals.

The reviewers

Scott Abel, aka The Content Wrangler, is an internationally recognized content strategist, publishing process expert, and social networking choreographer whose

strengths lie in helping global organizations improve the way they author, maintain, and deliver information. Scott writes regularly for trade and industry publications, blogs, and newsletters. He's a popular presenter at publishing industry events and hosts a weekly webinar series. In his free time, Scott creates dance music mashups under the moniker The Audio Wrangler.

Ingrid S. Goldstein has worked in the publishing sector for more than 20 years and is an expert in the semantic preparation, processing, and cross-linking of content. A computational linguist and art historian located in London and Heidelberg, she advises publishing houses on the development and implementation of forward-looking digital content strategies. She has led industry and research projects for Fraunhofer and realized numerous projects with publishers in Germany and the UK.

Mark Lewis is a contributing author of *DITA 101*, second edition, by the Rockley Group. He has authored several white papers on DITA Metrics that prove the savings and high content reuse percentages possible with DITA's structured, topic-based architecture. His DITA metrics model was a 2009 competitor for JoAnn Hackos's Rare Bird Award. Mark manages the DITA Metrics LinkedIn group. He has presented on technical writing, DITA, and object-oriented design topics at DocTrain, STC, DITA North America, and other national conferences. Mark is a member of the Organization for the Advancement of Structured Information Standards (OASIS) DITA technical committee. He and John Hunt are cochairs of the OASIS DITA for the Web subcommittee. He has received Society for Technical Communication (STC) awards for Distinguished Chapter Service and the Florida Technical Communications Competition. Mark is the DITA product manager for usability and a product evangelist for Quark.

Clare O'Brien is a digital marketing and communications professional with a career in several branches of the media. Her mission with digital communications and content strategy consultancy CDA (other than to help get the right content in place to be reached by the right audience when they need or expect it) is to continue to develop standards for digital content management strategies, governance, and evaluation. She speaks internationally and writes widely on the subjects of digital marketing, content strategy, and digital enablement. She was a cofounder of the UK Content Strategy Association and works closely with other industry bodies such as the IAB.

Editorial

Marie-Lynn Hammond is a writer, editor, and proofreader who has edited materials ranging from United Nations reports and academic papers to biographies, novels, and poetry. She has a BA in English and is a longtime member of the Editors' Association of Canada. In her other life, she's a nationally acclaimed singer-songwriter who has also written four plays, all produced.

Laurel Simmons, BA, BEd, has been active in the technical communication industry since the early 1980s, and has worked with hi-tech companies, telecommunication companies, government organizations, defense industries, and financial and marketing companies. She speaks, consults, trains, and yes, still writes, for organizations around the world. She grumbles every time she gets on a plane but she loves it when she gets there.

Illustrations and cover design

Natasha Lessnik-Tibbott began her illustration career at *SPY* magazine, digitally drawing the numerous tiny charts, maps, and graphs for the first time in the history of magazine publishing. Since then her work has appeared in many publications and books, graced the information kiosks of the International World's Fair in Barcelona and expanded to op-ed pieces for the *New York Times*. She was born in Toronto, worked for over a decade in New York, and currently resides in Nashville, where she is a partner in Our Designs, Inc.

Acknowledgements

A lot of people helped make this book a reality, and we'd like to thank them for all their assistance.

We would like to thank our case study contributors, who provided exemplary examples of projects based on their wide experience in the industry. Rahel Anne Bailie, a content strategist evangelist, shared her experience with the City of Vancouver website redesign. Derek Olson, an innovator with a keen interest in content strategy and intelligent content, shared the story of the development of an app for BreastCancer.org. Joe Gollner, a longtime advocate of XML and intelligent content strategies, shared his story of a government organization that adopted intelligent content technologies. Richard Thompson caught our eye when he posted to the content strategy listserv about a low-tech but highly ingenious content strategy, and we asked him to repeat it for the book. Noz Urbina, a content strategist, content management specialist, and strong proponent of XML, shared the story of Elekta's successful move to DITA and managed translation.

We couldn't have done the book without the help of our reviewers. They each looked at the content from a different industry perspective, ensuring that the book met multiple industry requirements. Scott Abel, aka The Content Wrangler, who knows everything about everything in the content industry, provided his always insightful and laser-sharp comments. Ingrid S. Goldstein drew on her extensive publishing experience to give us industry-specific feedback. Mark Lewis, a DITA evangelist, did an incredibly thorough review, catching problems and making valuable suggestions. Clare O'Brien, a digital marketing and communications professional, provided feedback and identified additional areas of emphasis.

Marie-Lynn Hammond, whom we first got to know as a singer-songwriter before we learned of her editorial skills, provided meticulous copyediting changes. Laurel Simmons, a longtime friend and colleague, did pass after pass after pass to catch editorial issues.

Natasha Lessnik-Tibbott, a graphic designer (and a friend reaching all the way back to high school) created the cover design and illustrations for each of the scenarios.

We'd also like to thank our Peachpit team. Margaret Anderson, our developmental editor, provided much needed hand-holding and guidance, and worked closely with production to make this book happen in a very short period of time. And just when we thought there couldn't be any further edits, Gretchen Dykstra, our proof-reader, polished the language further.

Foreword

Ann Rockley has been talking about content strategy and intelligent content for over a decade. Why haven't the rest of us been talking about it, too?

Perhaps Ann's vision of content as a business asset was simply ahead of its time. Maybe the idea of "intelligent content"—content that's free from the constraints of a document or page, and therefore free to adapt to any context or platform—didn't seem as applicable to our challenges as, say, a website redesign or migrating to a new content management system. Of course, none of our tactics seem to have solved the core challenge enterprises have faced: ineffective, poorly organized, and laborious content processes.

So here we are, stuck with the same challenges we had last year, and the year before that, and the year before—you get the picture. On top of it all, we're dealing with the constant introduction of new platforms where we need to (or should) make content available to our customers. There are countless new opportunities to deliver the right content, to the right people, in the right place, and at the right time. How can we take advantage of them without starting from scratch?

The good news is, we don't have to. It's very likely that your organization has at least *some* form of content infrastructure; the question is, how will it need to change? As Ann and her coauthor, Charles Cooper, write, "The processes and best practices to create and manage content are undergoing a dramatic shift as content creators adapt to the increasing demands of a volatile content world." I'd call this an understatement. Content processes and best practices are evolving at the speed of light, and it's not enough just to keep up. If you want your content to truly realize its value as a business asset, you need to be able to look ahead. And the only way you can continue to face forward toward an unknown future is to know your content is truly ready for it—no matter what may come. *That's intelligent content.*

Ann Rockley is nothing short of a visionary, someone who truly understands the value of content as a business asset. Intelligent, adaptive, nimble, or agile content—call it what you will, but without it, you'll stay mired in the content mess that's keeping you from getting ahead. It's time to make intelligent content a reality for your organization. *Managing Enterprise Content: A Unified Content Strategy* will show you how.

Kristina Halvorson

Introduction

A unified content strategy is about much more than just content. It's about how you create content once and how you publish many times from that content. It's about pulling together the best practices, guidelines, and content structure your organization needs to enable you to rapidly design, build, test, and deliver a customer-centric content experience across many channels.

It's about looking back at what worked and looking forward to what can work even better. It's about using all the resources you have in your organization: your people and teams, your departments, your technology, your vendors, your assets, your customers, and the content you have already created and will be creating.

A unified content strategy places the emphasis on “unity”—people and technology coming together to produce content that serves the needs of everyone who reads and uses that content.

Is this an easy task? No. But it's a necessary one as organizations battle it out in competitive markets for the attention of their most precious resource—their customers!

In this book, we will explore all the aspects of creating a unified content strategy. We'll show you the pitfalls to avoid, and we'll explain what you can do and how you can do it to create a unified content strategy that serves your organization's needs now and well into the future.

Who should read this book?

This book was written with a number of audiences in mind. It is designed to assist content managers who are responsible for creating and managing content in many different channels for many types of customers. Content managers will learn what they need to know about what is involved in developing what we call a *unified content strategy*.

This book is also designed for content strategists who are responsible for designing an effective content strategy not for just one channel, but for multiple channels. Content strategists will receive practical advice on analyzing the requirements for and developing a unified content strategy.

This book is also designed for authors, specifically anyone responsible for creating structured, modular content for multichannel products. Authors will receive practical advice on structured writing, writing for multiple channels, and collaborative authoring.

How this book is organized

This book is divided into five sections. Each section focuses on a particular aspect of creating a unified content strategy and how that serves to help you manage your content. You do not have to read this book in chronological order, but it is designed to lead you through the logical stages of implementing a unified content strategy.

Part 1: “The basis of a unified content strategy” (Chapters 1–2)

This section provides an understanding of what makes up a unified content strategy, and why it’s such an important foundation for getting content out to the right customer at the right time and in the right format. We also explain the concept of a sustainable and intelligent content strategy—one that will deliver maximum benefit to the users of content while minimizing the cost to the organization.

Part 2: “Where does a unified content strategy fit?” (Chapters 3–6)

In this section, we discuss the implications of what content means for organizations today. We explore the issues of content as a strategic asset, how content can be delivered to customers through multichannel delivery mechanisms, and what content strategists must think about as they prepare for that multichannel delivery. We also talk about the concept of content reuse and how organizations can reuse content to their advantage.

Part 3: “Performing a substantive audit: Determining business requirements” (Chapters 7–11)

Customers are the reason for your business’s existence, your products and services, and your content. In this section, we explain how you can understand your customers’ needs and your organization’s needs for unified content. We show you a discovery process we call the *substantive audit*, which allows you to figure out what processes you are using to produce your content and how you can unify those processes. We’ll discuss ways to identify the dangers and the opportunities available to your organization as you begin the process of creating a unified content strategy. We’ll show you how to perform a content audit that gets to the heart of the issue—your content and how it suits your audiences. And then we’ll help you pull together the big picture as you visualize your unified content strategy and the content lifecycle that is part and parcel of it.

Part 4: “Developing a unified content strategy” (Chapters 12–17)

At the heart of a unified content strategy is the methodology involved in creating models for your content, determining how you want to reuse content, defining how people produce content, and managing all the change that has to take place in your organization to make your content strategy effective. We’ll show you what content modeling actually is, and we’ll show you what the different types of content reuse are. We’ll discuss how you pull together all the tasks and processes that are required for implementing a successful content strategy through workflow. We’ll tell you about the information (the metadata) that you’ll need to track your content. Then we’ll focus on creating the content—why you need to separate format from content and how you can create structured writing guidelines that will help you in setting up collaborative authoring.

Part 5: “Supporting your unified content strategy” (Chapters 18–20)

A unified content strategy depends on the people, and the roles they fill, to support it. We’ll discuss the type of roles you’ll need—and you’ll probably find some new roles that you’ll need to introduce to your organization. Along with people, technology also needs to support your unified content strategy, so we’ll discuss XML, the underlying technology that makes modern content management systems possible. At the end, we’ll wrap up with a discussion about how you can integrate content management into your environment, what types of authoring tools are available, workflow systems you can set up, and delivery mechanisms you can choose.

At what level is this book written?

This book is written with the assumption that readers have some exposure to the concepts of content strategy, but that most readers do not understand the concepts of a unified content strategy and what has to be done to implement one. It is designed to ensure that all the concepts are clear no matter what your existing knowledge level is.

What you should take away

This book will assist you in creating, implementing, and managing your unified content strategy. It will help you define your requirements and build your vision, design your content strategy, understand the tools, and overcome the hurdles of creating and managing content in a multichannel world. We hope that it will help you see the broad spectrum of a unified content strategy and how you can escape the tyranny of format.

Chapter 4

Publishing

Digital publishing is fast becoming a critical requirement for publishers. It's no longer just a desirable capability; it's a matter of survival. Most publishers associate digital publishing solely with the production of eBooks and fall short of the mark. The crucial point for publishers today is to prepare their content for multichannel delivery where printed books and eBooks represent only two possible delivery channels.

The digital world offers many more possibilities to use content. Different types of content can now be connected with a wide variety of user experiences (UX): Fiction can be read as digital pages of eBook readers, travel guides can connect their route description to GPS devices, and dictionaries, which provide word definitions within text when and where they're needed, are incorporated into electronic reading devices.

The publishing industry has already changed dramatically, but this is only the start. It will continue to change and the speed of change is expected to increase exponentially. Traditional handcrafted processes are no longer sustainable and automated processes have become an essential requirement.

Content needs to be understood as an asset in its own right, freed from output-based workflows. Device-independent content creation and delivery processes must be adopted instead.

Digital publishing, a tsunami of change

In the last few years the advent of digital publications (eBooks, enhanced eBooks, eBook apps, and digital editions) has started to dramatically change the way publishers do business. Driven by customer demand, slumping print sales, and increasing digital sales, publishers have been racing to convert their backlist to eBooks and simultaneously to publish to print. Some publishers have begun to publish eBook-first, and others have begun to publish eBook-only versions of content. Most eBooks, though, still resemble printed books. This situation keeps publishers happy with the “old world” but is just the first step at the beginning of a radically changing business model.

Aptara’s third survey of eBook publishers¹ in 2011 provides insight into the changing field:

- The major driver for producing eBooks is increasing revenue (42 percent), followed by increased customer demand (36 percent).
- The majority of book publishers (85 percent) are printing both eBook and print versions of their titles.
- One out of five eBook publishers generates more than 10 percent of their revenue from eBooks.
- Most eBook production still follows outdated print production models at the expense of significant operational efficiencies.
- The greatest eBook challenge (30 percent) is content format and device compatibility issues.

The publishing process

According to Aptara’s survey (see above), the majority of publishers still follow a traditional print process. To achieve full, device-independent publishing, however, the traditional workflow must change.

¹ [http://www.aptaracorp.com/resources/category/white-papers/ eBooks Survey #3: Uncovering eBooks’ Real Impact, 2009-2011.](http://www.aptaracorp.com/resources/category/white-papers/eBooks%20Survey%20#3:Uncovering%20eBooks%20Real%20Impact,2009-2011)

Traditional publishing

In a traditional publishing workflow, each book or document is created by one author using some form of text editor or word processor. The document is created, edited, and published as one entity, or possibly a series of chapters, and it doesn't interact with anything else (see Figure 4.1).

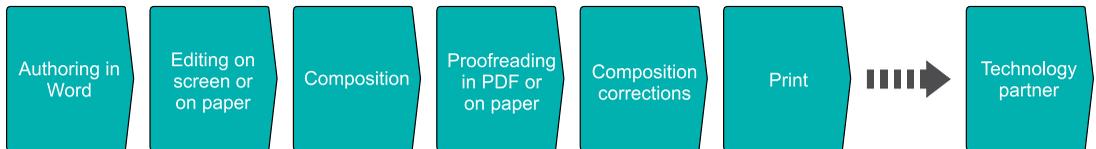


Figure 4.1 Traditional publishing workflow.

Advantages

- Traditional publishing represents a typical, familiar workflow.
- Familiarity makes it easy to use for existing authors and editors.
- eBooks are created by a technology partner skilled in the conversion of print-oriented content to functional eBooks.

Disadvantages

- The file is managed as a complete document.
- Print-oriented content is converted, rather than specifically designed for eBooks.
- Future changes must be done in the production copy, or the content must be exported back out to Microsoft Word and then re-laid out for a new publication.

Note that in this scenario the creation of successful eBooks depends on the publisher's understanding of the nature of the eBook they want to produce and the clear communication of those requirements to the technology partner.

This workflow is very effective for the conversion of the publisher's backlist.

In-house eBook publishing

The in-house publishing workflow for eBooks is very similar to the traditional publishing workflow except for the end product, which is digital, not paper (see Figure 4.2). Publishers use the same publishing software to publish to an EPUB file that they use for print. EPUB, short for electronic publication, is an open standard for electronic books from the International Digital Publishing Forum (IDPF) and is used by the majority of eReaders. In addition, the publishing software may provide the ability to publish to other channels such as Web or mobile.

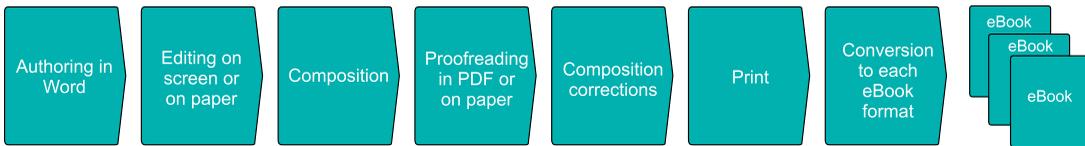


Figure 4.2 In-house eBook publishing workflow.

Advantages

- In-house eBook publishing represents a typical, familiar workflow.
- Familiarity makes it easy to use for existing authors and editors.
- The publisher creates their own eBooks from the publishing software.

Disadvantages

- The file is managed as a complete document.
- Print-oriented content is converted; it is not specifically designed for eBooks or other channels.
- Future changes must be done in the production copy, or the content must be exported back out to Microsoft Word then re-laid out for publication.

In-house eBook publishing often feels like the easiest route for publishers because they don't have to change any of their process or their technology. However, the content is often constrained by the print paradigm. It's a difficult task to publish in different ways depending on the channel and the device. More often than not, it ends up as a simple conversion (different look-and-feel), rather than optimized output for each channel and device.

In a recent discussion with a new client of ours, they spoke about the challenges of creating eBooks. The output to the EPUB format was pretty simple, but testing on different devices revealed a number of display problems and usability issues.

They were spending weeks “hand tweaking” the output for each device, and with each new device, the job got larger and more arduous.

XML early

Recognizing the challenges they face in publishing to multiple channels and the proliferation of devices, some publishers are choosing to use XML (Extensible Markup Language) in their publishing workflow. XML is a set of rules for encoding documents.

“XML early” means converting your content to XML early on in your workflow to enable you to produce content for multiple channels and to easily reuse content. (See Figure 4.3.)

XML enables you to design and prepare content in a way that’s completely portable and open, which in turn enables a wide range of applications that allows you to automate common content tasks such as formatting. If you make the content intelligent by tagging and structuring it, and then if you design and prepare it for discovery and reuse, you’re freed from managing content within the “black boxes” of completed books. For more information on XML refer to Chapter 19, “The role of XML.”



Figure 4.3 XML early publishing workflow.

Advantages

- Edits can be handled online using collaborative review tools. This speeds up the editing and allows multiple editors to work on the content simultaneously. Change tracking is supported in these tools.
- XML can be configured to support reuse across media (print, eBooks, apps, and so on).
- XML can be optimized to support current and future products (for example, article compendiums, eLearning, and custom books from selected chapters).
- Corrections and changes to content are done in the XML content and “reposed” into each of the outputs. There’s no need to transfer content back and forth.

Disadvantages

- Copy editors and others involved in the publishing workflow need to become increasingly comfortable with working largely online and with new software.
- The concept of WYSIWYG no longer exists because content can be published in multiple formats.
- Content is created and managed as components, which may be a paradigm shift for some people.
- Production staff need to learn to work with structured templates and cannot continue to manually tweak content.
- While most people in the organization don't need to understand XML, at least one individual will need a strong understanding of XML.

Although XML early has the most advantages, XML can be incorporated into your workflow at any point. You might choose to incorporate it somewhere in the middle of your workflow, with content created in Microsoft Word, but converted to XML after the final manuscript was approved. This could be a long-term strategy, or it might be a short-term strategy only—a stepping-stone on the way to creating a full XML-based workflow.

The role of a unified content strategy

To take advantage of new digital markets, you must rethink the way you create, manage, publish, and deliver content. You must reengineer your processes to create a more flexible and sustainable future. You must also reimagine a production process that frees your content to be easily transformed into whatever new formats and devices that your customers desire. In this new world, a publisher becomes a content and service provider, capable of meeting the ever-changing time-to-market requirements. It is not as straightforward as simply incorporating XML into your workflow, because the workflow is only as effective as your content strategy. You also need to determine how you want to create modular, structured content that can be repurposed for multiple information products and services. What's needed is a unified content strategy.

Case study: American Society for Training and Development

The American Society for Training and Development (ASTD) is an association for workplace trainers. We create content to help trainers do their jobs better. We publish 20 books per year, a monthly magazine, and several newsletters. ASTD content is mostly evergreen and not time-sensitive, so reuse is central to our content strategy.

Goals

At ASTD we wanted to increase personalization and findability of our content, to reduce production resources (including time to produce the content and headcount), and to generally make it easier to do business with ASTD.

What we did and why

ASTD started by improving production workflow. We mapped out the current production workflow in a new content management system (CMS) and added automated email notifications, status reporting, and a content repository of XML versions of our books and magazines. We then converted our back catalog and front list into XML, and we integrated our Microsoft Word and InDesign content into XML as well. We added XML format transformations that converted our XML into multiple “flavors” of HTML, PDF, and EPUB. We developed a master taxonomy of training terms and applied that taxonomy to our content down to the article level (for our magazines) and to the chapter level (for our books). We also released this taxonomy for the benefit of the training profession. Finally, with all our rich XML content in the repository, we built a user interface to create custom packages of content.

Outcomes

In addition to meeting our goals, we also experienced other, unexpected outcomes:

- Reduced onboarding time. New ASTD employees became “instant experts”

in training content because they could instantly find everything we’ve published on a certain topic.

- An integrated language. Our taxonomy is applied across the organization, so how we segment our customers is aligned with how we are segmenting our content.
- Meeting customer expectations. Customers increasingly expect publishers to offer multiple formats to customers. XML-based publishing allows small companies like ASTD to meet those customer expectations in a cost-effective way.
- Agility. With our content already in XML, ASTD is now creating several new (and very cool) content apps. We can concentrate on the app without having to go back and do anything (at all) with the content.

Lessons learned

Start free and small. We started our content management initiative with a company-wide blog. It was a great, stress-free way to get everyone speaking the same language of content management: categories, tags, analytics, search engine optimization (SEO), linking, and findability.

Incentivize the community. ASTD’s certified trainers earn recertification credits for tagging our content to our taxonomy. How can you incentivize your volunteers to help you with your content management needs?

Complexity can kill. ASTD integrated XML into the tools that were already being used: Microsoft Word, Excel, and InDesign. Forcing staff to change tools is the surest way of undermining your unified content strategy!

Anthony Allen, Director of Production, American Society for Training and Development

Summary

Digital publishing is fast becoming a critical requirement for publishers. It's no longer just a desirable capability; it's a matter of survival. Most publishers associate digital publishing solely with the production of eBooks and fall short of the mark. The crucial point for publishers today is to prepare their content for multi-channel delivery where printed books and eBooks represent two possible delivery channels.

In a traditional publishing workflow, each book or document is created by one author using some form of text editor or word processor. This document is created, edited, and published as one entity, or possibly as a series of chapters, and doesn't interact with anything else.

The in-house publishing workflow is very similar to the traditional publishing workflow with the exception of the production of eBooks. Publishers use the same publishing software they use for print to publish to an EPUB file.

Recognizing the challenges they face in publishing to multiple channels and the proliferation of devices, some publishers are choosing to use XML in their publishing workflow. "XML early" means converting your content into XML early on in your workflow to enable you to produce content for multiple channels and to easily reuse content.

To take advantage of new digital markets, you must reengineer your processes to create a more flexible and sustainable future. This requires a unified content strategy.

More information on the effective design and creation of eBooks can be found in *eBooks 101: The Digital Content Strategy for Reaching Customers Anywhere, Anytime, on Any Device*, by Ann Rockley and Charles Cooper.

INDEX

A

acquisitions editors

- identifying players, 93–94
- roles, 258

adaptive content design, 26, 28, 35

- content modeling/models, 135
 - creating, 139–141
 - implementing, 130
 - uses, 143–145
- content owners' roles, 254
- content's importance over device considerations, 136–139
- content strategists' roles, 253
- definition, 134
- reuse, 161–162
 - granularity of, 141–142

ADL (Advanced Distributed Learning), 57

Adobe Flash, 62

Advanced Distributed Learning (ADL), 57

Alexa.com, 37

Allen, Anthony, 47

Ambient Insight Research, 61

American Society for Training and Development (ASTD) case study, 47

analyzing content lifecycles, 87–88

- identifying lifecycles, 89
- identifying players, processes, and issues, 90
 - acquisitions or product development, 93–94
- authors or content contributors, 92–93
- customers, 90–92
- design, 94–95
- editors, 95
- information technology, 95–96
- instructional design, 97
- learning development, 97
- production, 97–98
- reviewers, 98
- sales and marketing, 98–99
- translation/localization, 99

analyzing content reuse, 104–105

analyzing customer needs, 67

- conducting assessments, 68
- content strategists' roles, 253
- customer personas, 73–74
- identifying, 68
- identifying players, 90–92
- information

analyzing customer needs (*continued*)
 analyzing existing, 70–72
 gathering new, 72–73
 metadata, 191–192

analyzing workflow by reviewers, 172

Aptara, 42

archive portion, CMS (content management systems), 292–293

art roles, 258

assistant editors, roles, 259

ASTD (American Society for Training and Development) case study, 47

auditing content, 101, 104
 analyzing content, 104–105
 versus content inventories, 102
 content reuse analysis, 104–105
 content reuse assessment, 104
 examples, 106–116
 examples for reuse
 enterprise content, 106–110
 learning materials, 114–116
 product content, 112–114
 publishing, 110–112
 processes
 representative materials
 selection, 102–103
 scope identification, 102
 quality assessment, 103

augmented reality systems, 55

authors/authoring
 collaborative, 218–221
 organization changes required,
 221–228
 content models, 143–144, 150
 guidelines for structured content,
 208–209

 identifying players, 92–93
 information technologists'
 roles, 257
 internal authors' roles, 255
 tools
 familiar tools, 286–287
 integration with CMS (content
 management systems), 289
 overview, 284
 page layout, 284–285
 separation of format and
 content, 288
 structural and stylistic control,
 287–288
 structured content, 286
 structured editors, 285–286
 technically complex, 287
 traditional word processing,
 284–285
 workflow design, 172

**automated reuse of content, options,
 145–149, 154–155**
 component-based, 152, 157
 conditional/filtered, 152, 157–159
 fragment-based, 153, 159–160
 identical, 152, 156
 section-based, 152, 156–157
 variable, 153, 160

B

books

 automated device adaptation,
 146–147
 publishing roles, 258–260

Breast Cancer Diagnosis Guide, 37

Breastcancer.org case study, 37

brochures

- reuse of content, 213, 216
- types of content, 4

building block approach to writing, 211, 255**business owners/analysts, roles, 255–256****C****case studies**

- ASTD (American Society for Training and Development), 47
- Breastcancer.org, 37
- Elekta Group, 53–54
- global content strategies, 63
- global foodservice retailer, 63
- lack of ongoing oversight, 240
- LCMS (learning content management systems), 63
- staring with content and context, 74

CCMS (component content management systems)

- dedicated, 297
- enterprise, 298–300
- learning, 298–299
- publishing, 298
- socially enabled content integration layer, 53–54
- Web, 297

change management

- communicating, 231–232
- content owners' roles, 254
- definition, 230
- eliciting change agents' help, 233

identifying pain, issues, and

- consequences, 231
- obtaining champions, 233
- overcoming resistance, 233–236
- reasons projects fail, 236–239

changing roles

- art, 258
- business owners/analysts, 255–256
- content owners, 253–254
- content strategists, 253
 - senior, 252
- editors, 256
- external authors, 254
- information architects, 256–257
- information technologists, 257
- internal authors, 255
- publishing
 - acquisitions editors, 258
 - assistant editors, 259
 - copy editors, 260
 - development editors, 258–259
 - production-print, 260

channels

- editors' roles, 256
- structured writing, 210
- technical publishing, 50

CMS (content management systems)

- ability to meet enterprise requirements, 301–302
- archive portion, 292–293
- basics, 289–290
- CCMS (component content management systems)
 - dedicated, 297
 - enterprise, 298–300
 - learning, 298–299

content management systems (CMS)*(continued)*

publishing, 298

Web, 297

CRM (Customer relationship management) systems, 300

crosswalks, 196–197

versus databases, 301

DMS (document management systems), 296

ECM (enterprise content management) systems, 300

information technologists' roles, 257

integration with authoring tools, 289

LCCMS (learning component content management systems), 298

LCMS (learning content management systems), 57, 299

management portion
access control, 290
checking in/checking out, 292
search and retrieval, 292
updates, 291–292
version control, 291

modular DITA-based content, 54

reuse of content
automatic, 154
manual, 153

socially enabled content integration layer, 53–54

TCMS (traditional content management systems), 295

types, 293

WCMS (Web content management systems), 293

advantages, 294

disadvantages, 294–295

workflow, 169, 172

XML (Extensible Markup Language), 263

collaborative authoring, 218–221

definition, 219

internal authors' roles, 255

organization changes required, 221–228

requirements, 221

communities, structure *versus* community, 52**component-based reuse of content, 152, 157****component content management systems (CCMS)**

dedicated, 297

enterprise, 298–300

learning, 298–299

publishing, 298

socially enabled content integration layer, 53–54

Web, 297

component metadata, 195–197**component models, 135**

constraints of eBooks, 137–138

constraints of mobile, 137–138

granularity of reuse, 141–142

conditional/filtered reuse of content, 152, 157–159**content**

multiple use, 211–212

- mobile, 213
- reuse of, 213–218
- writing guidelines, 212–213
- sources of
 - customer service departments, 4
 - learning groups, 4
 - marketing and sales departments, 4
 - publishers, 4
 - technical publications, 4
- in technical publications
 - customized, 50–51
 - dynamic, 51
 - dynamic and personalized, 54
 - reuse of, 50
 - types of, 4
- content audits, 101, 104**
 - analyzing content, 104–105
 - content strategists' roles, 253
 - versus content inventories, 102
 - content reuse analysis, 104–105
 - content reuse assessment, 104
 - examples, 106–116
 - examples for reuse
 - enterprise content, 106–110
 - learning materials, 114–116
 - product content, 112–114
 - publishing, 110–112
 - processes
 - representative materials selection, 102–103
 - scope identification, 102
 - quality assessment, 103
- content lifecycles, analyzing, 87–88**
 - identifying lifecycles, 89
 - identifying players, processes, and issues, 90
 - acquisitions or product development, 93–94
 - authors or content contributors, 92–93
 - customers, 90–92
 - design, 94–95
 - editors, 95
 - information technology, 95–96
 - instructional design, 97
 - learning development, 97
 - production, 97–98
 - reviewers, 98
 - sales and marketing, 98–99
 - translation/localization, 99
- content lifecycles, visions after substantive audits**
 - authoring, 124, 126
 - business owners/analysts' roles, 255–256
 - creating content, 125–126
 - global requirements, 124–125
 - localization, 124
 - managing content, 127–129
 - multichannel delivery, 129
 - publications and delivery, 125
 - reviewing content, 126–127
 - usage, 123
- content management systems (CMS)**
 - ability to meet enterprise requirements, 301–302
 - archive portion, 292–293
 - basics, 289–290

- content management systems (CMS) (continued)**
- CCMS (component content management systems)
 - dedicated, 297
 - enterprise, 298–300
 - learning, 298–299
 - publishing, 298
 - Web, 297
- CRM (Customer relationship management) systems, 300
- crosswalks, 196–197
- versus* databases, 301
- DMS (document management systems), 296
- ECM (enterprise content management) systems, 300
- information technologists' roles, 257
- integration with authoring tools, 289
- LCCMS (learning component content management systems), 298
- LCMS (learning content management systems), 57, 299
- management portion
 - access control, 290
 - checking in/checking out, 292
 - search and retrieval, 292
 - updates, 291–292
 - version control, 291
- modular DITA-based content, 54
- reuse of content
 - automatic, 154
 - manual, 153
- socially enabled content integration layer, 53–54
- TCMS (traditional content management systems), 295
- types, 293
- WCMS (Web content management systems), 293
 - advantages, 294
 - disadvantages, 294–295
- workflow, 169, 172
- XML (Extensible Markup Language), 263
- content modeling/models, 135**
- adaptive content, 134
- component models, 140–141
 - constraints of eBooks, 137–138
 - constraints of mobile, 137–138
- content models
 - creating, 139–141
 - editors' roles, 256
 - elements, 135
 - granularity, 141–143
 - implementing, 150
 - information products, 135
 - IPM (information product models), 135, 139–140
 - uses, 143–145
- content's importance over device considerations, 136–139
- governance, 241
- structured content, 209–210, 255
- content owners, roles, 253–254**
- content reuse**
- adaptive design support, 161–162
- automated reuse/options, 145–149, 154–155

- component-based, 152, 157
 - conditional/filtered, 152, 157–159
 - fragment-based, 153, 159–160
 - identical, 152, 156
 - section-based, 152, 156–157
 - variable, 153, 160
- content owners' roles, 254
- content strategists' roles, 253
- creating strategy, 152
- governance, 241–242
- manual reuse/options, 145, 153–154
 - component-based, 152, 157
 - conditional/filtered, 152, 157–159
 - fragment-based, 153, 159–160
 - identical, 152, 156
 - section-based, 152, 156–157
 - variable, 153, 160
- metadata, 196–200
- multiple use, 211–218
- not most productive, 162–163
- RLOs (reusable learning objects), 64
- securing
 - derivative reuse, 156
 - locked reuse, 155
- structured writing, 207
 - internal authors' roles, 255
 - structural *versus* content reuse, 152
- content silo traps, 5**
 - causes of, 9–10
 - effects of
 - customers suffer, 9
 - duplication of effort, 6
 - explosion of mobile devices, 7
 - higher costs, 6
 - lack of consistency and standardization, 8–9
 - multiple content management system purchases, 8
 - poor communication, 7
 - reduced awareness of other initiatives, 8
- content strategists, roles, 252–253**
- Content Strategy for the Web, 34*
- Contributor element of semantic metadata, 194**
- Cooper, Alan, 74**
- Cooper, Charles, 48, 139**
- copy editors, roles, 260**
- Cost of Offering, 142**
- Coverage element of semantic metadata, 194**
- create, content lifecycle, 89**
- Creator element of semantic metadata, 194**
- CRM (customer relationship management) systems, 196–197, 300**
- crosswalks, 194, 196–197**
- customer needs analysis, 67**
 - conducting assessments, 68
 - content strategists' roles, 253
 - customer personas, 73–74
 - identifying, 68
 - identifying players, 90–92
 - information
 - analyzing existing, 70–72
 - gathering new, 72–73
 - metadata, 191–192
- customer relationship management (CRM) systems, 196–197, 300**
- customer service departments, 4**

D

Darwin Information Typing**Architecture (DITA) and XML
(Extensible Markup Language), 51–52**

- alternatives, 278–280
- DITA for Publishers, 279–280
- reasons needed, 273–278
- social Web, 52, 54
- structured XML to DITA XML, 53

**Date element of semantic
metadata, 194****delivery systems**

- automation, 309–310
- basics, 308
- capabilities, 308
- content lifecycle, 89
- output support, 309–310
- transformation, 309

derivative reuse, 156**Description element of semantic
metadata, 194****descriptive metadata, 189–195****development editors, roles, 258–259****Dewey, Melvil, 189****Dewey Decimal Classification
system, 189****digital publishing, 42****discoverable content, 23****DITA (Darwin Information Typing
Architecture) and XML (Extensible
Markup Language), 51–52**

- alternatives, 278–280
- DITA for Publishers, 279–280

- reasons needed, 273–278
- social Web, 52, 54
- structured XML to DITA XML, 53

**DMS (document management
systems), 296****DocBook, 278–279****D.O.S.[®], 81–82****DTD (Document Type Definition),
269–271, 274–275****Dublin Core Metadata Element
Set, 194****Dublin Core Metadata initiative,
194–195**

E

eBooks

- automated device adaptation, 147
- component models, 137–138
- content's priority, 136
- content types, 4
- information architect's roles, 256
- publishing in-house, 44–45
- publishing roles, 258–260
- shift in content delivery, 36

**eBooks 101: *The Digital Content Strategy
for Reaching Customers Anywhere,
Anytime, on Any Device*, 48, 139****ECM (enterprise content management)
systems, 300****editors**

- identifying players, 95
- roles, 256
- structured editors tools, 285–286

- eLearning Guild, 61
- eLearning materials, 60–61, 64
 - shift in content delivery, 36
 - types of content, 4
- electronic point of sale (EPOS) apps, 36
- electronic publication (EPUB) files, 44
- Elekta Group case study, 53–54
- enhanced eBooks, 4
- enterprise content
 - CMS (content management systems), 298–299
 - ECM (enterprise content management) systems, 300
 - representative material for audits, 103
 - reuse of, 106–110
- EPOS (electronic point of sale) apps, 36
- EPUB (electronic publication) files, 44
- eReaders, 44
- Extensible Markup Language (XML).
See XML
- eXtensible Metadata Platform (XMP), 195
- eXtensible Stylesheet Language (XSL) stylesheets, 266, 272–273
- Extensible Stylesheet Language Transformations (XSLT), 272
- external authors, roles, 254

F

- FAQs (frequently asked questions), 4
- flowcharts, 169, 171
- Foraker Labs, 37
- Format element of semantic metadata, 194
- fragment-based reuse of content, 153, 159–160

G

- Goldfarb, Charles, 265
- governance
 - boards, 245–247
 - content guidelines, 239, 241
 - content models, 241
 - definition, 230
 - reuse of content, 241–242
 - taxonomy and metadata, 243–245
 - workflow, 243
- granularity, component models
 - reuse, 141–142
 - structure, 142–143
 - Value Proposition, 142–143

H

- Halvorson, Kristina, 34
- help, shift in content delivery, 36
- HTML (Hypertext Markup Language) 265, 62
 - interactivity, 62
 - versus XML (Extensible Markup Language), 268

|

IBM, 265, 273

identical reuse of content, 152, 156

Identifier element of semantic metadata, 194

IDPF (International Digital Publishing Forum), 44

IDs (instructional designers), 57

ILT (instructor-led training), 58–59, 64
versus eLearning, 60

information architects, roles, 256–257

information product model (IPM),
135, 253

information technology/technologists
identifying players, 95–96
roles, 257

The Inmates Are Running the Asylum, 74

instructional designers (IDs), 57, 97

intelligent content

adaptable, 26, 28

definition, 16

discoverable, 23

National Regulatory Agency, 27

reconfigurable, 26

reusable

definition, 23

reasons to reuse content, 23–25

roles in unified content

strategies, 28

semantically categorized, 22–23

structurally rich

benefits of, 22

importance of, 21–22

semantic structure, 18–21

stylesheets, 19

interactive web content

shift in content delivery, 36

types of content, 4

internal authors, roles, 255

International Digital Publishing Forum (IDPF), 44

IPM (information product model), 135

K

KM (knowledge management)
systems, 196–197

KPCB, 35

L

Language element of semantic metadata, 194

LCCMS (learning component content management systems), 298

LCMS (learning content management systems), 57, 299

LD (learning development) teams,
57, 64

learning management systems (LMS), 57

learning materials

content lifecycle analysis, 97

eLearning, 60–61, 64

ILT (instructor-led training), 58–59
versus eLearning, 60

mLearning (learning via mobile),
61, 64

mobile, 61–62

- representative material for audits, 103
- reuse of content, 114–116
- roles in unified content strategies, 64
- shift in content delivery, 36
- types of content, 4
- virtual classroom training, 59–60
- lifecycle of content, analyzing, 87–88**
 - identifying lifecycles, 89
 - identifying players, processes, and issues, 90
 - acquisitions or product development, 93–94
 - authors or content contributors, 92–93
 - customers, 90–92
 - design, 94–95
 - editors, 95
 - information technology, 95–96
 - instructional design, 97
 - learning development, 97
 - production, 97–98
 - reviewers, 98
 - sales and marketing, 98–99
 - translation/localization, 99
- lifecycles of content, visions after substantive audits**
 - authoring, 124, 126
 - business owners/analysts' roles, 255–256
 - creating content, 125–126
 - global requirements, 124–125
 - localization, 124
 - managing content, 127–129
 - multichannel delivery, 129
 - publications and delivery, 125
 - reviewing content, 126–127
 - usage, 123
- Living the GI Way*, 100**
- Living the GI Way (LGIW), 75–76**
 - adaptive content, 162
 - automated device adaptation, 146–147
 - component models, 141
 - concentration on areas of need, 84–85
 - content audits, 117–118
 - content lifecycles, 100
 - exploratory phase, 121
 - content models
 - supporting authors, 144
 - value proposition reuse, 145
 - content reuse
 - component-based, 157
 - conditional, 158–159
 - fragment-based, 160
 - section-based, 157
 - variable, 160
 - customer needs analysis, 75–76
 - IPM (information product model) for sales and marketing, 140
 - metadata, 203
 - partial content matrix, 122
 - problems to be solved, 84–85
 - scenario, 121
 - unified content lifecycle, 125–129
 - visions after substantive audits, 123–125
 - workflow, 181
- LMS (learning management systems), 57**
- locked reuse, 155**

M

manage, content lifecycle, 89

management portion of CMS (content management systems)

- access control, 290
- checking in/checking out, 292
- search and retrieval, 292
- updates, 291–292
- version control, 291

manual reuse of content/options, 145, 153–154

- component-based, 152, 157
- conditional/filtered, 152, 157–159
- fragment-based, 153, 159–160
- identical, 152, 156
- section-based, 152, 156–157
- variable, 153, 160

Marco, David, 184

Marcotte, Ethan, 134

marketing and sales departments, 4

Mars Climate Orbiter mission, 187

metadata

- benefits of, 187–188
- CMS (content management systems), 290
- content reuse considerations, 188, 198–200
- content strategists' roles, 253
- crosswalks, 194, 196–197
- definition, 184–187
- designing, 183
- governance, 243–245
- information architect's roles, 256
- intelligent content, 23
- learning materials content, 64
- relationships, 202–203

standards, 194–195

Dublin Core Metadata Element Set, 194

Dublin Core Metadata initiative, 194–195

RDF (Resource Description Framework), 194–195

URI (Uniform Resource Identifier), 195

XMP (eXtensible Metadata Platform), 195

for tracking, 200–202

types, 188–189

component, 195–197

descriptive, 189–195

visions after substantive audits, 127

Microsoft Office 2007, XML (Extensible Markup Language), 287

Microsoft Word

designed for paper output, 275

DocBook, 279

familiar authoring tools, 286–287

metadata properties, 184–186

RTF (Rich Text Format), 265

XML (Extensible Markup Language), 264

mLearning (learning via mobile), 61, 64

mobile

automated device adaptation, 149

component models, 137–138

content's priority, 136

information architect's roles, 256

learning materials, 61–62

multiple use content, 212–214, 217

technical publications

influences, 55

modeling/models of content, 135

- adaptive content, 134
 - component models, 140–141
 - constraints of eBooks, 137–138
 - constraints of mobile, 137–138
 - content models
 - creating, 139–141
 - editors' roles, 256
 - elements, 135
 - granularity, 141–143
 - implementing, 150
 - information products, 135
 - IPM (information product models), 135, 139–140
 - uses, 143–145
 - content's importance over device considerations, 136–139
 - governance, 241
 - structured content, 209–210, 255
- modular RLOs (reusable learning objects), 64**
- Mulcahy, Anne, 22**
- multichannel content delivery, 129**

N

- National Aeronautics and Space Administration (NASA), 187**
- National Library of Medicine (NLM), 279–280**
- National Regulatory Agency, 27**
- NLM (National Library of Medicine), 279–280**

O

- OASIS (Organization for the Advancement of Structured Information Standards), 273**
- Olson, Derek, 37**
- online help, shift in content delivery, 36**
- Oracle XML Author, 264**
- Organization for the Advancement of Structured Information Standards (OASIS), 273**

P

- page layout tools, 284–285**
- pattern matching, 24**
- players**
- content lifecycle analysis, 90
 - workflow design, 171–172
 - approvers, 173
 - authors, 172
 - editors, 172
 - reviewers, 172
- press releases**
- multiple use content, 217
 - reuse of content, 212
 - types of content, 4
- product content**
- representative material for audits, 103
 - reuse of, 112–114
- production-print's roles, roles, 260**
- Publisher element of semantic metadata, 194**

publishers/publishing

- CCMS (component content management systems), 298
- changing roles
 - acquisitions editors, 258
 - assistant editors, 259
 - copy editors, 260
 - development editors, 258–259
 - production-print, 260
- content's priority, 136
- digital publishing, 42
- eBook, in-house, 44–45
- EPUB (electronic publication)
 - files, 44
- processes, 42
- representative material for
 - audits, 103
- reuse of content, 110–112
- roles in unified content
 - strategies, 46
- solutions to challenges, 125
- sources of content, 4
- traditional, 43
- XML (Extensible Markup Language)
 - early, 45–46

R**RDF (Resource Description Framework), 194–195****reasons to reuse content, 23–25****reconfigurable content, 26****Relation element of semantic metadata, 194****Resource Description Framework (RDF), 194–195****reusable learning objects (RLOs), 64****reuse of content**

- adaptive design support, 161–162
- automated reuse/options, 145–149, 154–155
 - component-based, 152, 157
 - conditional/filtered, 152, 157–159
 - fragment-based, 153, 159–160
 - identical, 152, 156
 - section-based, 152, 156–157
 - variable, 153, 160
- content owners' roles, 254
- content strategists' roles, 253
- creating strategy, 152
- governance, 241–242
- manual reuse/options, 145, 153–154
 - component-based, 152, 157
 - conditional/filtered, 152, 157–159
 - fragment-based, 153, 159–160
 - identical, 152, 156
 - section-based, 152, 156–157
 - variable, 153, 160
- metadata, 196–200
- multiple use, 211–218
- not most productive, 162–163
- RLOs (reusable learning objects), 64
- securing
 - derivative reuse, 156
 - locked reuse, 155
- structured writing, 207
 - internal authors' roles, 255
- structural *versus* content reuse, 152

reviewers

- content lifecycle, 89
- identifying players, 98

- workflow analysis, 172
- Richtext.com**, 74
- Rights element of semantic metadata**, 194
- RLOs (reusable learning objects)**, 64
- Rockley, Ann**, 48, 139
- roles and change**
 - art, 258
 - business owners/analysts, 255–256
 - content owners, 253–254
 - content strategists, 253
 - senior, 252
 - editors, 256
 - external authors, 254
 - information architects, 256–257
 - information technologists, 257
 - internal authors, 255
 - publishing
 - acquisitions editors, 258
 - assistant editors, 259
 - copy editors, 260
 - development editors, 258–259
 - production-print, 260
- RTF (Rich Text Format)**, 265
- S**
- schemas and DTD (Document Type Definition)**, 269–271
- SCORM (Sharable Content Object Reference)**, 57
- section-based reuse of content**, 152, 156–157
- securing reusable content**
 - derivative reuse, 156
 - locked reuse, 155
- semantically categorized content**, 22–23
 - semantic structure, 18–21
- senior strategists**, 252
- SGML (Standard Generalized Markup Language)**
 - DITA (Darwin Information Typing Architecture), 275
 - DocBook, 278
 - XML (Extensible Markup Language)
 - moving to from SGML, 274
 - origins of, 265–267
- Sharable Content Object Reference (SCORM)**, 57
- Simplified Technical English (STE)**, 53–54
- single sourcing**, 49–51
- SMEs (subject matter experts)**, 53
 - authors or content contributors, 92
- social Web**, 4, 52
 - DITA (Darwin Information Typing Architecture), 52, 54
- Source element of semantic metadata**, 194
- STE (Simplified Technical English)**, 53–54
- Strategic Coach® Program**, 81
- strategies**, 152
- structurally rich content**
 - benefits of, 22
 - granularity of structure, 142–143
 - importance of, 21–22
 - semantic structure, 18–21
 - stylesheets, 19

- structure, versus community**
 - communities, 52
 - DITA (Darwin Information Typing Architecture) and social Web, 52, 54
 - social Web, 52
 - wikis, 52
- structured content**
 - authoring guidelines, 208–209
 - authoring tools, 286
 - building block approach, 211, 255
 - versus content reuse, 152
 - definition, 206–207
 - importance of, 206
 - internal authors' roles, 255
 - models, 209–210
 - for different channels, 210
 - multiple uses of, 211–218
 - principles of, 207
 - XML (Extensible Markup Language), 266
- structured editors tools, 285–286**
- Subject element of semantic metadata, 194**
- subject matter experts (SMEs), 54**
- substantive audits**
 - content audits, 101
 - versus content inventories, 102
 - content reuse analysis, 104–105
 - content reuse assessment, 104
 - examples for reuse, 106–116
 - processes, 102–103
 - quality assessment, 103
 - content lifecycle analysis, 87–88
 - acquisitions or product development, 93–94
 - authors or content contributors, 92–93
 - customers, 90–92
 - design, 94–95
 - editors, 95
 - identifying lifecycles, 89
 - identifying players, processes, and issues, 90
 - information technology, 95–96
 - instructional design, 97
 - learning development, 97
 - production, 97–98
 - reviewers, 98
 - sales and marketing, 98–99
 - translation/localization, 99
- customer needs, 67
 - conducting assessments, 68
 - identifying, 68
 - information, analyzing existing, 70–72
 - information, gathering new, 72–73
- customer personas, 73–74
- problems to be solved, 79–80
 - challenges, 83
 - dangers, 81–82
 - D.O.S.[®], 81–82
 - goals, 82–83
 - opportunities, 82
 - roles of unified content strategies, 85
 - staff to be interviewed, 81
 - strengths, 82
- visions
 - unified content lifecycles, 123–125

unified content strategies,
120–122

swimlane diagrams, 170–171
versus flowcharts, 171

T

taxonomies

governance, 243–245
information architect's roles, 256
vertical, 190–191

TCMS (traditional content management systems), 295

technical publications, reuse in
augmented reality systems, 55
content

customized, 50–51
dynamic, 51
dynamic and personalized, 54
reuse of, 50
types of, 4

mobile influences, 55

multiple channels/copies, 50

single-source publishing, 50

structure *versus* community

communities, 52

DITA (Darwin Information Typing Architecture), 51–52, 54

social Web, 52, 54

wikis, 52

and unified content strategies, 55

TEI (Text Encoding Initiative), 279–280

textbooks

content's priority, 4

content types, 4

types of content, 4

Text Encoding Initiative (TEI), 279–280

Thompson, Richard, 74

Title element of semantic metadata, 194

TMSs (translation memory systems),
24–25

trade books, 4

traditional content management systems (TCMS), 295

traditional publishing, 43, 136

translation memory systems.
See TMSs

Type element of semantic metadata, 194

U

unified content strategies

adaptive content design

component models, granularity,
141–143

content modeling, 135

content models, creating,
139–141

content models, implementing,
150

content models, uses, 143–149

content owners' roles, 254

content's importance over device
considerations, 136–139

definition, 134

benefits of

cost reduction, 11

faster time-to-market, 11

quality improvement, 12

resource use improves, 11

unified content strategies (*continued*)

- unlimited device delivery, 12
- business owners/analysts' roles, 255–256
- change management
 - communicating, 231–232
 - content owners' roles, 254
 - definition, 230
 - eliciting change agents' help, 233
 - identifying pain, issues, and consequences, 231
 - obtaining champions, 233
 - overcoming resistance, 233–236
 - reasons projects fail, 236–239
- definition, 10–11
- editors' roles, 256
- intelligent content, 28
- roles of, 38–39
 - in intelligent content, 28
 - with learning materials, 64
 - in problems to be solved, 85
 - in publishing, 46
 - in technical publications, 55
- scope of, 12
- visions after substantive audits, 120–122
- web, 34–35
 - expectations beyond, 36

Urbina, Noz, 54

URI (Uniform Resource Identifier), 195

V

Value Proposition, 142

- reusable content, 145, 152

variable reuse of content, 153, 160

vertical taxonomies, 190–191

virtual classroom training, 4, 59–60

visions

- of unified content lifecycles, 123–125
- of unified content strategies, 120–122

W

W3C (World Wide Web Consortium), 195, 265

WCMS (Web content management systems), 293, 297

- advantages, 294
- disadvantages, 294–295

Webby Awards Official Honoree, 2011, 37

websites

- automated device adaptation, 148
- information architects' roles, 256
- reuse of content, 212, 218

white papers

- shift in content delivery, 36
- types of content, 4

wikis, 52

word processing, 284–285, 287

workflow/workflow systems

- basics, 302
- benefits of, 166–167
- business rules governing, 177–178
- components, 166
 - administration, 305–306
 - creation, 303
 - processing, 303
 - routing, 303–304
- deadlines and escalation, 306–307
- definition, 166

- designing, 165, 179–181
 - flowcharts, 169
 - governance, 243
 - ideal workflow, 169
 - information technologists'
 - roles, 257
 - metadata review and approval,
 - 200–201
 - players, 171–173
 - processes, 171, 176–177
 - defining, 178
 - improving, 168
 - simplifying, 168
 - reporting, 307–308
 - responsibilities, 171, 173
 - roles, 171, 173
 - rules, 304–305
 - security and electronic
 - signatures, 306
 - swimlane diagrams, 170
 - versus flowcharts, 171
 - tasks, 173–175
 - defining, 176–177
 - descriptions of, 175–176
- World Wide Wed Consortium (W3C), 195**
- X**
- Xerox Corporation, 22**
 - XML (Extensible Markup Language)**
 - advantages, 269
 - authoring tools, 284
 - structured editors, 285–286
 - CMS (content management systems), 263
 - definition, 267
 - DITA (Darwin Information Typing Architecture), 51–52
 - alternatives, 278–280
 - reasons needed, 273–278
 - social Web, 52, 54
 - structured XML to DITA XML, 53
 - DTD (Document Type Definition)
 - and schemas, 269–271
 - early version, 45–46
 - fear of, 264
 - versus HTML (Hypertext Markup Language), 268
 - origins, 265–266
 - in content creation, 266
 - production-print's roles, 280
 - separating content and format,
 - 271–273
 - tags, use of, 268
 - W3C (World Wide Wed Consortium), 265
 - XSL (eXtensible Stylesheet Language) stylesheets, 266,
 - 272–273
 - XMP (eXtensible Metadata Platform), 195**
 - XPath, 272**
 - XSL-FO (XSL Formatting Objects), 272–273**
 - XSL (eXtensible Stylesheet Language) stylesheets, 266, 272–273, 309–310**
 - XSLT (Extensible Stylesheet Language Transformations), 272**