



**EARLEY & ASSOCIATES**<sup>TM</sup>

IMPROVE YOUR ABILITY TO FIND CRITICAL INFORMATION



# Five Things You Need to do to Get Search Right

April 9, 2014

*Patrick Bosek, easyDITA*

*Paul Wlodarczyk, Earley & Associates*

# Earley & Associates Overview

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**What we do** – Help organizations make information more findable, valuable and usable through taxonomy, metadata, information architecture



# Earley & Associates | Industries & Clients

## Retail



AMERICAN GREETINGS

Onlineshoes.com



BED BATH & BEYOND

QOSINA

Thousands of Stock Components



MOTOROLA

intelligence everywhere



## Manufacturing



CORNING

Schlumberger

Raytheon



HUAWEI



Amway

The Coca-Cola Company

ThermoFisher  
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## Pharma, Life Sciences & Healthcare

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Thousands of Stock Components

**CRICO RMF**  
Protecting providers.  
Promoting safety.

**RTI**  
INTERNATIONAL



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The Permanente Medical Group

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# Housekeeping

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- Webinar will last 60 minutes
- You may submit questions to the speakers via the Question box on your screen.
- Need help? You can email [sharon@earley.com](mailto:sharon@earley.com)
- Tweet about this webinar with hashtag **#eawebinar**
- Follow us on Twitter at **@earleytaxonomy**
- Fill out the survey that should be in your inbox
  - Let us know what topics you are interested in, and how we can improve the series.
- Slides and recording will be available in a few days



## Practice Lead, Industrial Solutions Earley & Associates

- Joined Earley & Associates in 2008
- Key focus areas: Improving the quality and findability of Product Technical Content and Product Data
- 30 years' experience in unstructured content and related technologies (search, content management, classification, taxonomy, localization)
- Leads engagements to improve search, content management, content, and dependent business processes.
- Deep industry experience in high tech (products, software, components, semiconductor), consumer, life sciences, energy & water infrastructure, finance, insurance, and aerospace.



### Founding Partner Jorsek LLC (easyDITA)

- Founded Jorsek LLC in 2007
- Key focus areas: Improving authoring processes and improving the entire information supply chain from content creation to consumption
- 10 years experience in publishing systems and content management
- Deep understanding of XML, semantic content, DITA



# Agenda and Objectives for Today

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- Discuss 5 Things to Improve Search
- Present Key Concepts
- Illustrate with Real Case Study Examples
- Show you what's Possible
- Answer Your Questions



# Goals (Why are we improving search?)

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- Deliver Answers
- Call Center Deflection
- Improve Customer Experience

# Our Point of View on the “5 Things” to get Right

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- Shrink your content using Component Content
  - Either componentize the source, or surface smaller bits of the output.
- Define your terms using Taxonomy and Metadata
  - Mine customer-generated sources (search logs, chat logs) for customer language, and map it to your standard language.
- Prioritize FAQs and How-to Content
  - Focus on answer-oriented content that workers need to be successful.
- Get feedback through Ratings and Analytics
  - You can only improve what you can measure.
- It's a process: Metrics-driven Governance
  - Stop thinking about content improvement as a project. Use metrics to set the content development agenda, and establish a cycle to be responsive.

# The “5 Things” in Action: Financial Sales Self-help Case Study

## PROBLEM:

Search takes too long  
Call center inundated

## SOLUTION:

Self-help via an  
Intelligent Assistant

## SOLUTION DETAILS:

1. **Component content:** DITA FAQs and How-to's
2. **Taxonomy** and tagging of components for search
3. **Analytics** shows what is searched & viewed
4. **Ratings & comments** from end-users
5. **Dashboard** summarizes metrics for action
6. **Governance process** sets a cycle for continuous improvement
7. **Click to chat** integration with support desk

## RESULTS:

- **Self-help – use search 1<sup>st</sup>, chat 2<sup>nd</sup>**
- **Call centers re-focus on revenue growth**



# Where were they?

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- Product Docs in PDF
- Customer Support a Call Center Function
- Product Docs/Support Siloed

# Where were they? – Product Docs in PDF

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- PDFs produced like books
- Stored in an ECM/WCM
- No feedback



ECM

# Product Docs in PDF – What’s the Problem?

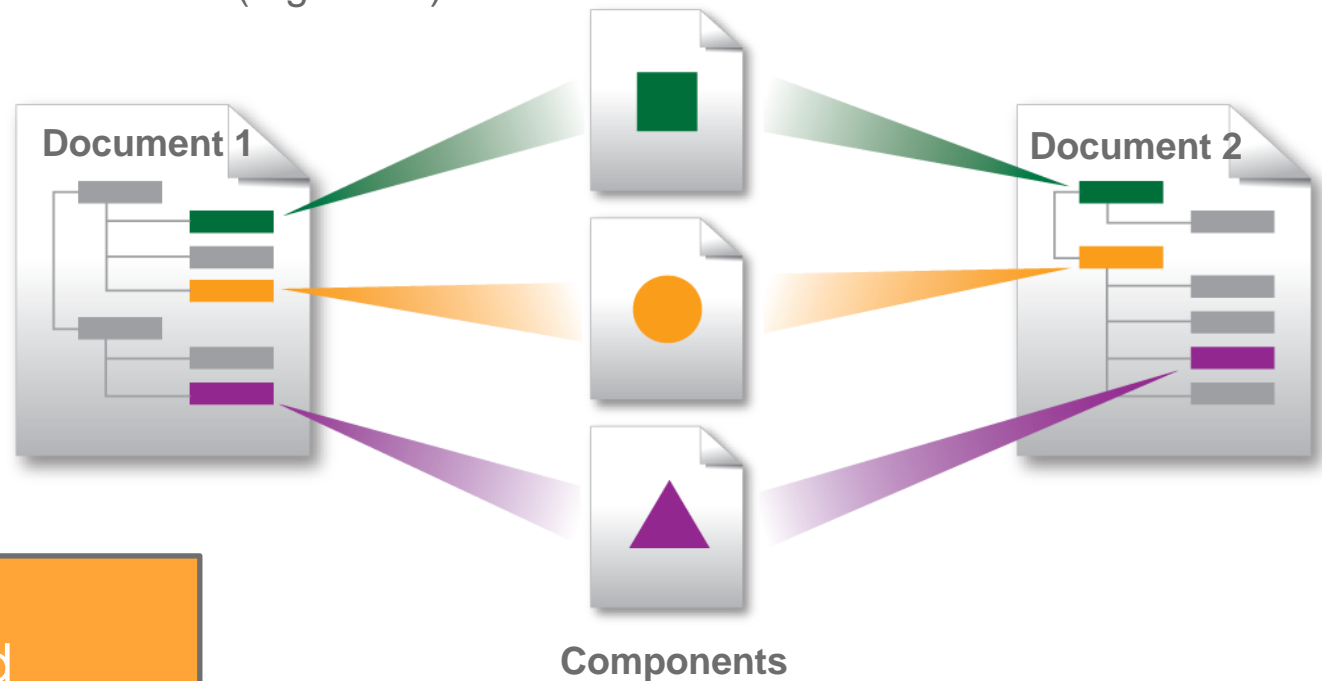
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- Poor search experience
- 2 step search
  - Online to find PDF
  - Offline to find content
- No feedback
- No metrics
  - User is “lost” once the PDF is downloaded
- No mobile experience
- Devalues Product Documentation



# Thing #1: Component Content

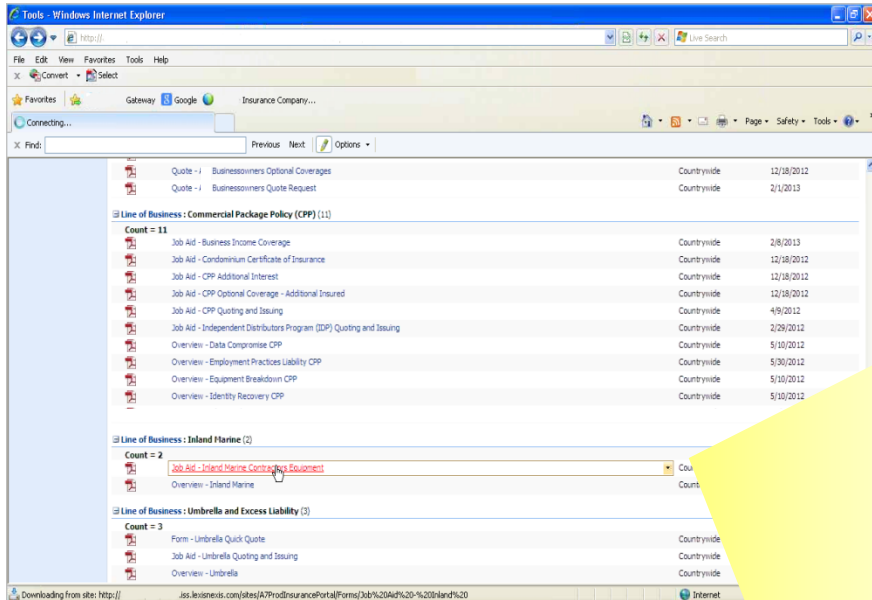
- Break up documents into smaller “chunks” that contain the answers.
- Index the answers by tagging them to the concepts and terms in the questions.
- Reuse components between documents.
- Often – convert to XML formats (e.g. DITA)



Key to success:  
DITA authoring and  
content management  
tools that were accessible  
to business users.

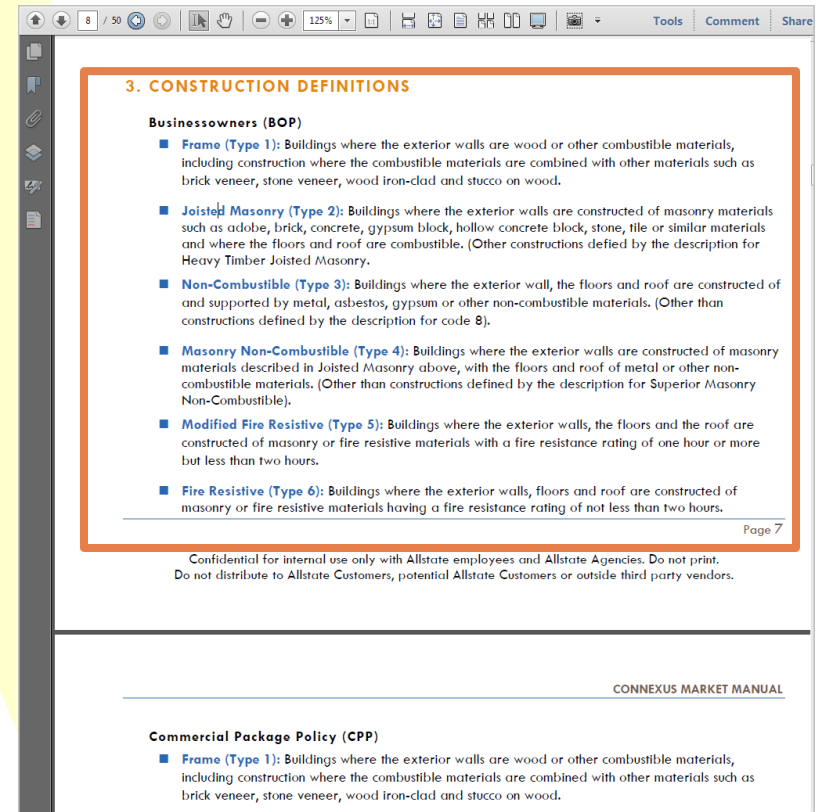


# Structured Authoring: Break Large Documents Into Components



Before: "Construction Definitions" are on page 7 of a 50-page PDF file.

Using metadata search or browse to specific group or area



# Intelligent Assistant: Relevant Content

The screenshot displays an intelligent assistant interface. On the right, a search results panel shows a search for "construction" with 23 results. The top result, "Construction Definitions", is highlighted with an orange box and an arrow pointing to the left. The left panel shows a help window titled "Construction Definitions" with a sub-section "Businessowners (BOP)". This section contains five entries, each with a type and a description:

Type	Description
Frame (Type 1)	Buildings where the exterior walls are wood or other combustible materials, including construction where the combustible materials are combined with other materials such as brick veneer, stone veneer, wood iron-clad and stucco on wood.
Joisted Masonry (Type 2)	Buildings where the exterior walls are constructed of masonry materials such as adobe, brick, concrete, gypsum block, hollow concrete block, stone, tile or similar materials and where the floors and roof are combustible. (Other constructions defined by the description for Heavy Timber Joisted Masonry.
Non-Combustible (Type 3)	Buildings where the exterior wall, the floors and roof are constructed of and supported by metal, asbestos, gypsum or other non-combustible materials. (Other than constructions defined by the description for code 8).
Masonry Non-Combustible (Type 4)	Buildings where the exterior walls are constructed of masonry materials described in Joisted Masonry above, with the floors and roof of metal or other non-combustible materials. (Other than constructions defined by the description for Superior Masonry Non-Combustible).
Modified Fire	Buildings where the exterior walls, the floors and the roof are constructed

The right panel also includes a "Hi. Here are some items that helped other people." message, a "Close" button, an "Open PDF" button, a "Was this helpful? Yes | No" feedback section, and a "Leave a comment" button. The search results list includes "Mixed or Unusual Construction", "Eligibility: Builders' Risk", "State Specific Guidelines & Catastrophe Management", and "General Information", each with an "Open" link. An "Ask" button is located at the bottom of the search results panel.

After: Search for "construction" returns the content in the help window. Converting content to XML enables reformatting for different delivery channels (e.g. PDF, HTML, text-to-speech, embedded, etc.)

# Componentizing Your Content

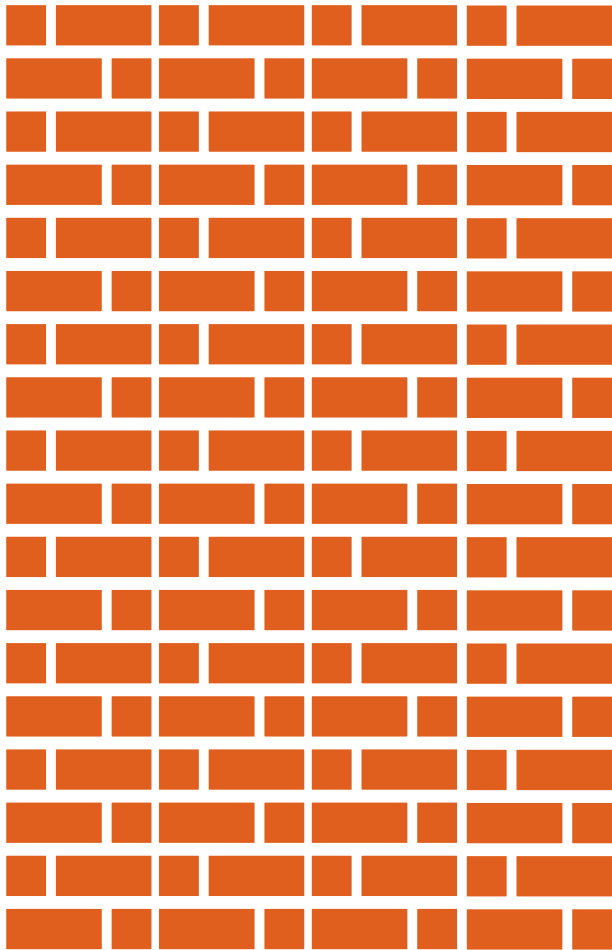
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PDF

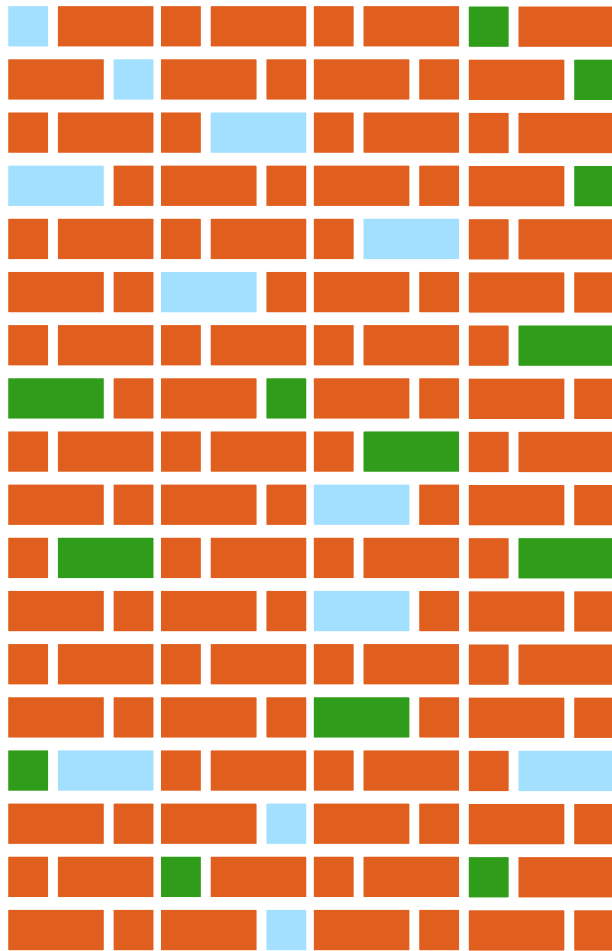
## Step 1

Start with PDF (book)






## Step 2

Break it down into logical, digestible pieces



## Step 3

Add “is-ness”

-  Procedures (tasks)
-  FAQs
-  About (concepts)

# The Before and After

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Question: Can I sell a XYZ product to a bakery?



PDF

All About Selling Our Financial Products to Food Service Small Business

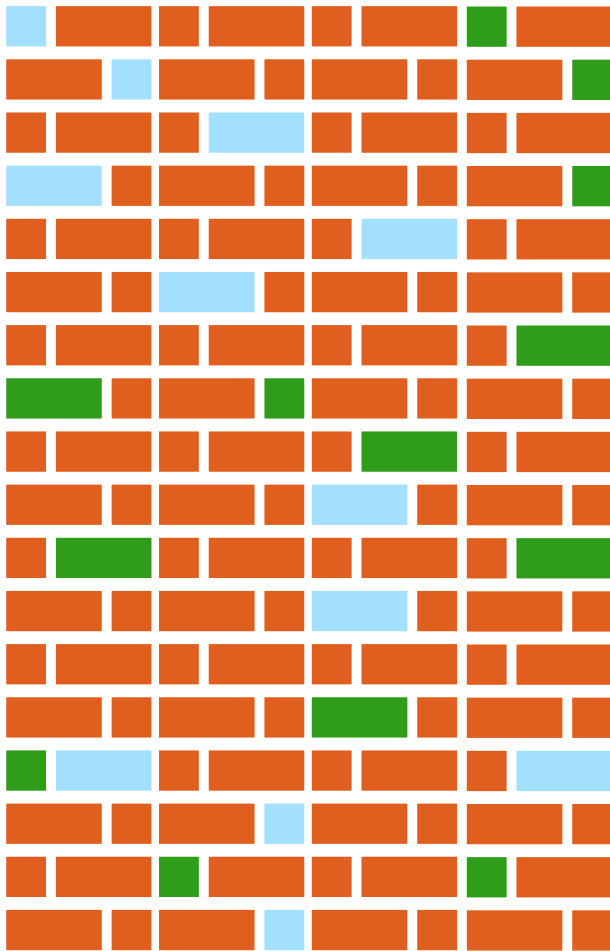
We have a wide variety of products for the food service industry...

You can sell an XYQ to dinners, food carts, fast food chains, and other general eateries, but not to food bakeries or ice cream parlors. Bakeries are best suited for XYZ. For ice cream parlors you should offer to sell XYW or TYZ...

Never consider selling both XYW and TYZ to two different locations inside of one chain...

# The Before and After

---



Can I sell a XYZ product to a bakery?

**Yes**



# Result: Answers to Questions

By simply breaking up long document content into smaller, answer-oriented chunks, we can get closer to answering questions:

- How Do I change a mailing address?
- What is the Green Upgrade?

Hi, Here are some items that helped other people.

**Search Results (83)**

Search: "change mailing address"

- 🕒 **How to Change a Mailing Address**  
[Begin Step-by-Step](#) [Open](#)
- 🕒 **How To Change a Business Name**  
*Use this process to change the name on policy.*  
[Begin Step-by-Step](#) [Open](#)
- 📄 **ISSUE a Change Endorsement**  
*After you RATE the policy for the endorsement, to complete the transaction it must be ISSUED.*

Type your question here... [Ask](#)

[Click Here to Leave a Comment](#)

Hi, Here are some items that helped other people.

**Search Results (12)**

Search: "green upgrade"

- 🗨️ **What is the Green Upgrade Endorsement and what does it cover?**  
*The Green Upgrades endorsement is optional and covers the increased cost of loss and related expenses to various **Section I - Property** coverage provisions to address green upgrades to real and personal property, and related expenses.*  
*Green Upgrade Coverage modifies Replacement Cost Coverage to address loss settlement of damaged property using more energy-efficient, environmentally-preferable materials, products or methods in design, construction,*

Type your question here... [Ask](#)

[Click Here to Leave a Comment](#)

## Thing #2: Taxonomy & Metadata Modeling

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- Diagram the Questions
- Model the best methods for delivering Answers
- Gives us insight into the **Domain Model**:
  - What is the **SIC code** for a **<type of customer>**?
    - **SIC code(s)** ← **List of relevant codes**
  - How do I do **<specific task>**?
    - **Step-by-step procedure** ← **Walk thru step-by-step procedure**
  - Can I sell this product to a **<type of customer >**?
    - **Yes or no** answer ← **Display answer to question in search results**
  - What is our target customer for **<product>**?
    - **Types of customers** ← **Simple list of customer types**
  - What is the **<minimum or maximum limit>** for **<qualification criterion>** for **<product>**?
    - **A number.** ← **Display the Number**

# Taxonomy

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VA college

Virginia university

Commonwealth  
of Virginia trade  
school





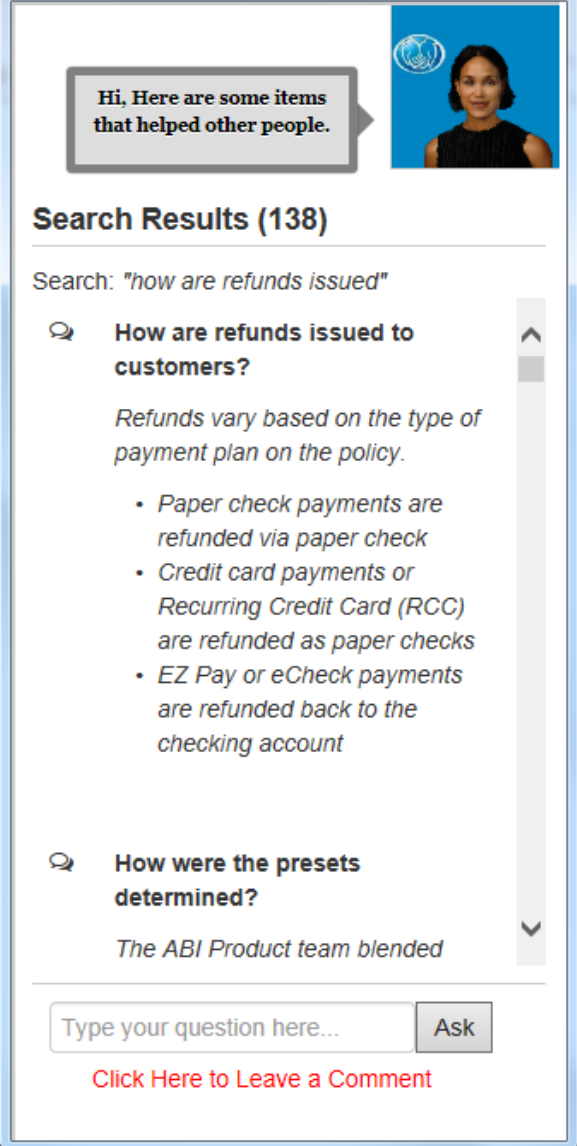
**Taxonomy:**

**It's Tuning.**

**It's an Art.**

# Thing #3: Prioritize Answer-oriented Content - FAQs & How-To's

- Make “answer-oriented” content the top priority
- FAQs and How-to materials contain answers
- Analyze the existing information
  - Documents – FAQ and How-To
  - Data – references, look-up tables
- Does the content contain the answers to the questions?
  - Yes – Good!
  - No – Not uncommon, but not the end of the world.
- What do we need to do?
  - Locate the answer
  - Present the answer
  - Optimize the answer for action



Hi, Here are some items that helped other people.

**Search Results (138)**

Search: "how are refunds issued"

**How are refunds issued to customers?**

*Refunds vary based on the type of payment plan on the policy.*

- Paper check payments are refunded via paper check
- Credit card payments or Recurring Credit Card (RCC) are refunded as paper checks
- EZ Pay or eCheck payments are refunded back to the checking account

**How were the presets determined?**

*The ABI Product team blended*

Type your question here...

[Click Here to Leave a Comment](#)

## Thing #4: Ratings & Analytics

### Understand Interactions with Content using Google Analytics (GA)

- GA treats search-based web application like a web site
- Every action is a “click” on a link to a “page”
- “Pages” are really application modules











Google Analytics can tell us almost everything we need to know about how content is being used, and to infer if content is effective at answering Customers' questions.



# Thing #4: Ratings & Comments for direct feedback

## BUSINESS OWNER POLICY — OPTIONAL COVERAGES



Coverage (Connexus Level)	Description	Business Benefit/Need
 <b>Accounts Receivable*</b> (Location)	Provides coverage for insured's inability to collect amounts due from customers because of loss or damage to the insured's records. Also reasonable expense to restore the insured's records.	<ul style="list-style-type: none"><li>• BOP automatically includes \$10,000</li><li>• Protects insured's credit rating.</li><li>• Cash flow keeps coming in.</li></ul>
 <b>Additional Insured</b> (Policy)	A person, other than the named insured, who is protected by the terms of the policy	<ul style="list-style-type: none"><li>• Contractual agreements may require it.</li></ul>
 <b>Barbers and Beauticians Liability</b> (Policy)	Insures damages awarded to a customer due to negligent professional services provided by a beautician or a barber. Operations that employ barbers and beauticians.	<ul style="list-style-type: none"><li>• Protection of insured's assets.</li></ul>
 <b>Brands and Labels</b> (Policy)	Grants permission for the insured to remove labels from damaged goods or mark the items as "salvage," provided the goods are not damaged in the process.	<ul style="list-style-type: none"><li>• Protects the insured's business reputation resulting from the sales of salvaged goods.</li></ul>
 <b>Business Income from Dependent Properties*</b> (Location)	Protect an insured for its loss of business income as a result of a direct damage loss at a scheduled dependent property.	<ul style="list-style-type: none"><li>• BOP automatically includes \$5,000.</li><li>• Avoid reduced earnings.</li></ul>
 <b>Computer Fraud and Funds Transfer</b> (Policy)	Insures against theft of money, securities or property by using a computer to transfer covered property from the insured's premises.	<ul style="list-style-type: none"><li>• Protects property and assets stolen by Technology.</li></ul>
 <b>Data Compromise</b>	Insurance coverage that helps businesses respond to data breaches by covering the cost of client notifications and supplying services such as credit monitoring and identity restoration for	<ul style="list-style-type: none"><li>• Protection against data</li></ul>

Was this helpful?  
Yes | No

Leave a comment

Hi. Here are some items that helped other people.

### Help with *BOP - Policy Info*

- Line Placement for BOP Retail, Wholesale, Service and Office Risks  
[Open](#)
- Overview - Businessowners BOP Optional Coverages  
[Open PDF](#)
- State Specific Guidelines and Catastrophe Management  
[Open](#)
- Programs - BPP/CPP: Home-based Businesses  
[Open](#)

Can Rate & Comment on any document



# Adding Support to the Equation

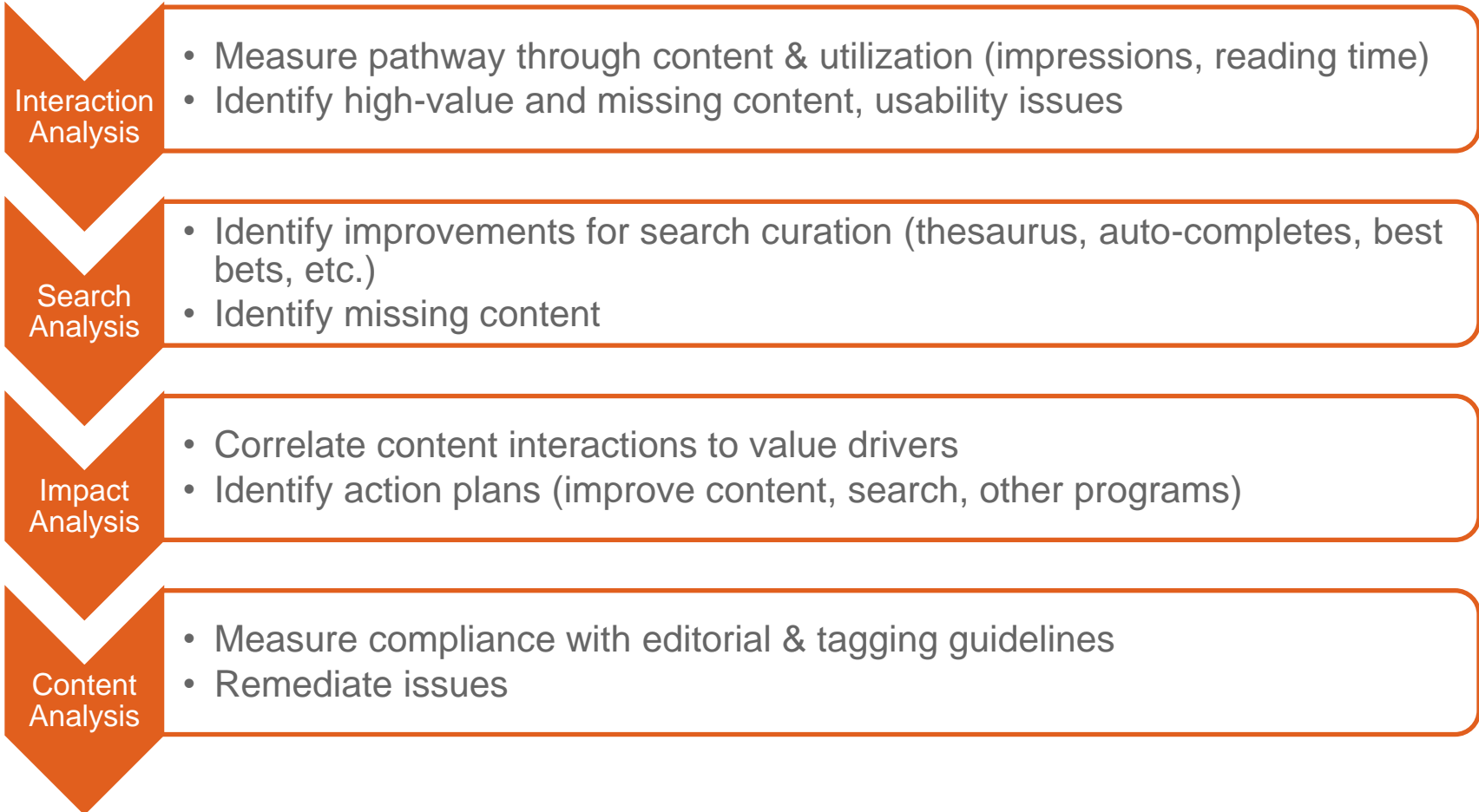
- Documentation becomes front line
- Support fall back
  - Considered a “failure case” – tracked
- Support routes resolved issues as bugs in documentation



## Thing #5: Metrics-driven Content Governance Cycles

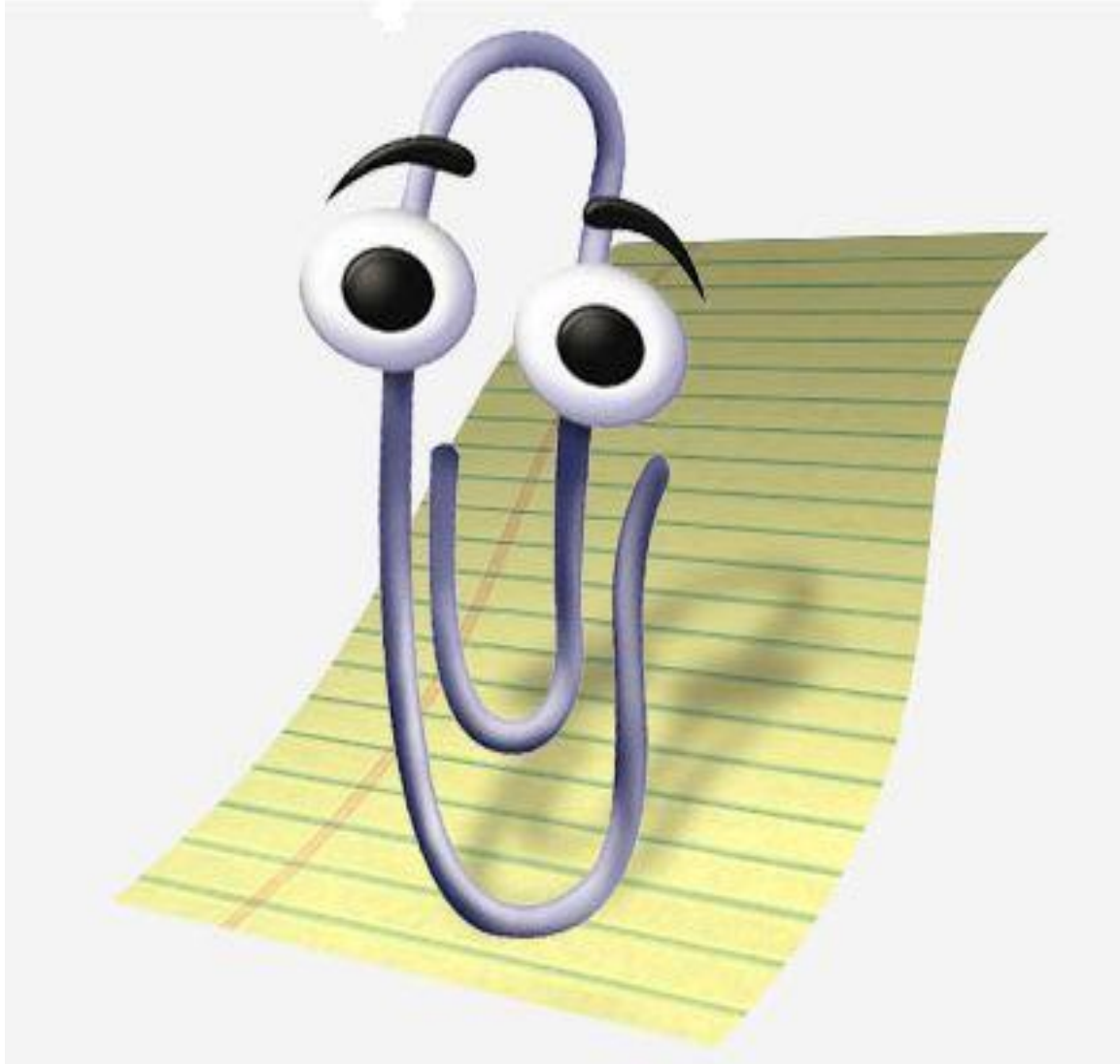
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Establish several metrics-driven cycles that run monthly or as needed:  
Examples:



# When you don't have User Analytics

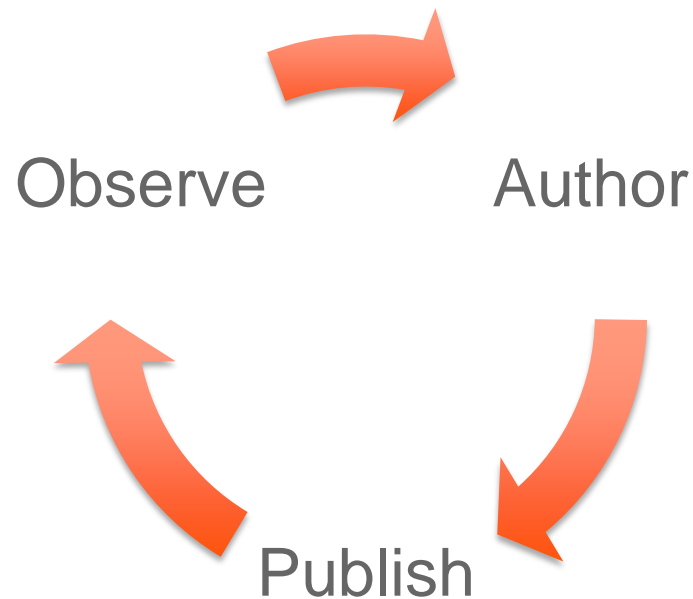
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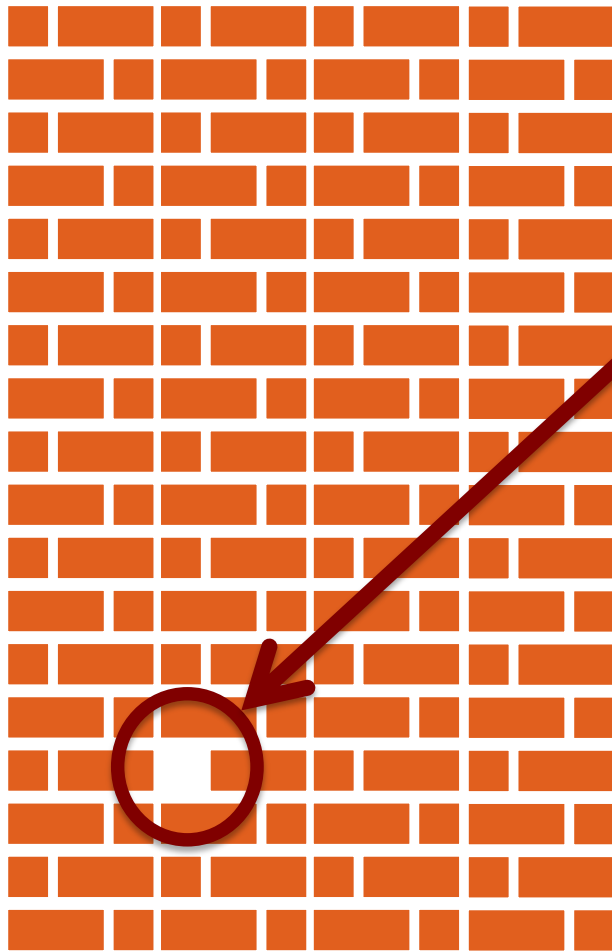


# User Analytics

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- Feed back loop
- Continual improvement
- Purpose driven content development





Hey look!  
There's  
your  
problem...

# Is this achievable in my organization?

Any organization with many of these traits is a good candidate for a successful proof of concept in 100 days or less.

- **People**
  - Organized cross-functional team in place
  - Culture of Metrics / Measures
  - Culture of Business and IT Collaboration
- **Technology**
  - ECM Platform
  - Web Portal / Search
- **Process**
  - Program Management
  - Agile / Iterative Development
  - Content Lifecycle
  - Content / Data Governance
- **Content**
  - High-quality content
  - Task-oriented content
  - Taxonomy, metadata, and tagging

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# Questions?



## Upcoming Appearances – Paul Wlodarczyk

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Date	Event	Topic
April 29	2014 CMS/DITA North America	Metrics-Driven Content Governance: Managing Information Development for Business Outcomes
May 14	Connect IT 2014**	Measuring Information Engagement: The Key to Program Support and Resourcing

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Headquarters - Boston, MA

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# Please fill out the survey that should be in your inbox.

Let us know what topics you are interested in and how we can improve the series. Email your suggestions to [sharon@earley.com](mailto:sharon@earley.com)

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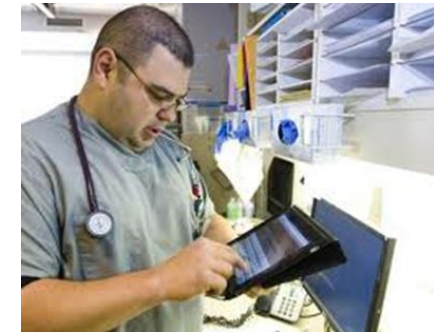
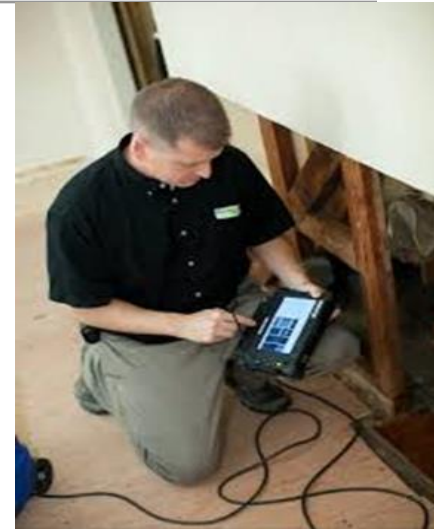
Thank You

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Slides I might use and can't bring  
myself to delete 😞

# Why now? What is driving this transformation?

- Rapid maturation of ability to deliver and display content
  - Internet-connected mobile devices – smart phones and tablets
  - ATMs, gas pump transactions, GPS and GPS apps
  - XML, SOA, web services, and syndication
- Business exploitation of Internet-connected mobile devices
  - Company-issued or BYO
  - Sales professionals, field service, logistics
  - Requires multi-channel content
  - Smaller form-factor does not favor document display
- Analytics of web, search, and social media
  - Two-way dialog introduces terms and concepts
  - Behavior provides evidence for content quality and value
  - Ratings and comments give direct evidence on content



# Document Management Often Falls Short

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Too often, projects aim no farther than Document Search & Retrieval:

- **Excellent** for finding **documents** that contain facts, rules, and procedures
- Just **OK** at finding the **answers** I need

Why doesn't document search provide answers?

- We return the artifacts we have **lying around** (manuals, training, FAQs)

Why?

- We **don't invest in task-oriented content.**

Why?

- We **don't invest in modeling user intent and search context.**

Why?

- We **don't change the way we create content** –
- We still create “books” instead of components