Taxonomy, Big Data, and Knowledge Processes and Customer Experience

Technology Approaches for Competitive Advantage

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@sethearley
Earley & Associates Highlights

Founded 1994

Focus Areas Holistic approach to specific business contexts and goals for:
  • Retail
  • Manufacturing
  • Pharmaceuticals & Life Sciences
  • Public Sector
  • Media & Entertainment

Locations Carlisle, MA headquarters, consultants in US, UK & Canada, global projects

Services
  • Taxonomy & Information Architecture
  • Market Resource Management
  • Search Strategy for Enterprise & Web
  • ECM, DAM & Information Lifecycle
  • Program Management & Governance
Seth Earley, CEO, Earley & Associates

- Co-author of Practical Knowledge Management from IBM Press
- 17 years experience building content and knowledge management systems, 20+ years experience in technology
- Former Co-Chair, Academy of Motion Picture Arts and Sciences, Science and Technology Council Metadata Project Committee
- Founder of the Boston Knowledge Management Forum
- Former adjunct professor at Northeastern University
- Guest speaker for US Strategic Command briefing on knowledge networks
- Currently working with enterprises to develop knowledge and digital asset management systems, taxonomy and metadata governance strategies
- Founder of Taxonomy Community of Practice – host monthly conference calls of case studies on taxonomy derivation and application. http://finance.groups.yahoo.com/group/TaxoCoP
- Co-founder Search Community of Practice: http://tech.groups.yahoo.com/group/SearchCoP
Session Abstract

Big Data has all the buzz these days. First, what is the difference between Big Data, and Data? In addition to thinking about the 3 V's, Volume, Velocity and Variety, we also need to think about the relationship of structured to unstructured and semi structured content and information. Meanwhile, the nature of content processes and Digital Marketing are changing. Chief Marketing Officers wield more control and budget than Chief Information Officers. The marketing organization is being given responsibility for all manner of customer interactions. Internal inefficiencies are now being exposed when trying to provide seamless customer experience through web and mobile interfaces. How do content strategists, data architects and business leaders need to frame the challenges and complexities of this evolving and interconnected landscape?
Agenda

• Aligning enterprise strategy with enterprise data

• Customer analytics and enterprise processes (LBGUPS)

• Connecting the pieces: enterprise strategy => enterprise data => enterprise processes => voice of the customer

• Data trends and formats:
  ▪ Big Data
  ▪ Social Media
  ▪ Structured Data
  ▪ Unstructured content
  ▪ Semi structured content
  ▪ Structured (componentized) content

• Search as a Platform: Tools for dealing with heterogeneous data environments

• Developing a Strategy and Roadmap
Aligning enterprise strategy with enterprise data

CEO: “Show me how will this project increase our revenue.”

Enterprise Strategy

- Grow top line revenue

Business Unit Objectives

- Increase customer satisfaction
- Improve retention
- Increase wallet share

Business Processes

- Customer Support
- Web Channel Sales
- Customer Acquisition

Data Sources

- Call Center Knowledge base
- Customer Relationship Management
- E Commerce System

Objectives align with strategy

Processes enable objectives

Measuring here (macro level - outcomes)

Measuring here (micro level - effects)

Data supports (and measures) processes

Working here (tools, technology, IA, taxonomy, search, etc)
Measuring Customer Experience and Enterprise Processes

Customer Experience

Learn
- Event Management
- Webinar tools
- Promotion management
- Social media
- Marketing resource management

Buy
- Ecommerce
- CRM
- Web content management
- Sales Management
- Marketing resource management

Get
- Inventory Management
- Supply chain
- Logistics and Distribution
- Point of sale systems

Use
- Knowledge base/Unsupervised support
- On line documentation/help systems

Pay
- Ecommerce
- CRM
- Web content management
- ERP/Accounting
- Credit card authorizations/EFT

Support
- CRM
- Knowledgebase/Unsupervised support
- On line documentation/help systems
- Call center call tracking

Marketing
Sales
Distribution
Service
Finance
Support

Enterprise Processes: Departments/Functional Areas
Social Media and the Customer Journey

“LBGUPS”

Learn → Buy → Get → Use → Pay → Support

Marketing → Sales → Distribution → Service → Finance/Billing → Support

Customers have something to say at each step of the process.

Need to map customer framework to departments.

Enabling Functions

IT, Finance, Operations, HR
Likelihood to Recommend Framework: Drivers, Sub-drivers and Customer Needs

- **Products & Services**
  - Reliability
    - I am able to use the products when I want
  - Ease of Use
    - The products are simple and easy for me to use
  - Functionality
    - I can use the products in my life
  - Innovation
    - Enhancements make a difference to me

- **Pricing & Transparency**
  - Competitive Pricing
    - When I compare, I know I'm getting a fair price—especially when I comparison shop
  - Billing
    - Billing is clear, simple and accurate
  - Terms & Conditions
    - I feel the terms and conditions are fair and flexible
  - Clear & Simple
    - I know what I'm getting and I know what to expect

- **Reputation & Brand Image**
  - Corporate Social Responsibility
    - I can feel proud to be a customer of ABC: they are a good corporate citizen
  - Integrity
    - I can feel proud to be a customer of ABC: they are responsible
  - Advertising
    - I can feel proud to be a customer of ABC: they have great ads
  - Emotional Appeal
    - I can feel proud to be a customer of ABC: I like them

- **Contact Experience**
  - On-Boarding
    - ABC is there for me every step of the way as I become a new customer
  - Getting Help
    - ABC is there for me every step of the way when I need help
  - Repair
    - ABC is there for me every step of the way when I need a repair
  - Moves
    - ABC is there for me every step of the way when I move, upgrade or renew my services

Drivers and sub-drivers: Likelihood to Recommend
Customer Needs: Enhancements make a difference to me
Map Processes + Accountabilities to Customer Journeys

Customer Journey

- **Learn**
  - **Marketing Communications Processes**
  - **Sales Processes**
- **Buy**
  - **Fulfillment Processes**
- **Get**
  - **Product Performance Processes**
- **Use**
  - **Billing Payment Credit Collection Refunds Processes**
- **Pay**
  - **Help Repair Return Complain Processes**
- **Support**

**Accountabilities**
- Marketing Ops
- Product Mkting
- Marketing Comm
- Digital Mkting
- Training
- Dealers
- Retail
- Web Marketing
- Channel Mgmts.
- Telemarketing
- Sales
- Sales Support
- Logistics
- Installation
- Activation
- Product Development
- Operations
- Manufacturing
- Procurement
- Applications
- Quality Assurance
- Finance
- Billing Operations
- Credit & Collections
- Customer Care
- Executive Escalations
- Call Center Operations

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Customer experience entails outbound and inbound interactions

**Marketing and Product/Service Delivery**
- Webinars
- Email marketing
- Promotions
- Sales campaigns
- Social Media Campaigns

**Communications**
- Point of delivery interactions
- Purchase experience
- Contextual communications
- Lifecycle interactions

**OUTBOUND**

**Voice of the Customer Feedback**
- Paper Survey
- Web Survey
- Email Survey
- In Person Survey
- Mobile Device Feedback
- Focus Groups

**INBOUND**

- Web behavior - “Electronic body language”
- Search analytics
- Click streams
- Web conversions
- Contextual Feedback
Each stage entails outbound and inbound interactions
The Customer Communications Ecosystem (1)
Unlinked Data in the Enterprise

Marketing Technology Landscape
How can you describe this state of affairs?

Convoluted  Confusing  Powerful

Overwhelming  Complex  Expensive

Scary
For Effective OUTBOUND Communications - Context is Essential

- Need to model the customer and present to them what they want when they want it

- **Device specific context** – iPad users have different needs than mobile devices

- **User specific context** – technical users, business users, consumers of various kinds have different expectations about content and functionality

- **Task specific context** – the same user will have different needs depending on what task they are engaging in

- Context allows presentation of the correct information without overloading the user with extraneous details or irrelevant content

- In the physical world, we easily choose context

- In the on line world, context is presented to us and we have less control

**Key Concept:** *structuring, tagging, categorizing and organizing content for customer consumption in the context of their goals and activities*
For INBOUND Communication - derive and integrate context

• Each system and tool is collecting information in the context of the process it is supporting

• In order to get meaningful insights, these systems need to be integrated in a way that allows patterns to emerge

• Due to inconsistencies in terminology and tagging, a great deal of value is locked up in unstructured customer content

• Surveys, comments, feedback, observations, complaints, etc.

• Processing text and identifying patterns is core to all of these approaches. These approaches are related to one another and have search mechanisms at their core.

Key Concept: structuring, tagging, categorizing and ranking content for customer insights and improved value are text analytics based activities
Big Data

- The “new” old thing

- Big data simply means that we have more information to deal with from more sources (volume of data is very high)

- This data is also complex and varied (variety of data)

- It moves and changes quickly (velocity of data)

- Volume, Variety and Velocity are the three characteristics of Big Data

- Complexity arises in Customer Analytics applications due to the siloed nature of information across functions
Customer Analytics requires dealing with *Variety* and *Complexity*.

Top two reasons why Big Data projects are never completed or fail to meet expectations:

- Inaccurate scope: 61%
- Technical roadblocks: 41%

Top reasons why Big Data projects fail outright:

- Lack of business context around the data: 61%
- Inability to connect the dots between data sources: 67%

Source: Attivio

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Tools and approaches

- Clustering, Indexing, Entity extraction
- Semantic Search and Search Based Applications
- Data mining, Trending, Statistical Analysis
- Machine learning
- Sentiment analysis
- Structured and unstructured integration
So what is “Big Data”? 

• Big Data traditionally referred to:
  - Huge volumes of data around web analytics such as clickstreams and log files.
  - Large amounts of transactional data volumes of retailers such as Wal-Mart
  - Telecommunications and mobile data traffic patterns
  - Operating data from sensors embedded in physical environments
  - Electronic Medical Record information containing test results (structured) and diagnosis (both coded and uncoded)

• So what is new about it?
  - More sources of data, greater complexity, increasing variety, and higher velocity
  - New ways of dealing with it – traditional relational databases are not able to deal with the volume and complexity

  With all the sources of data and volume being produced, traditional relational databases (like Oracle or SQL databases) were not up to the task. For example, so much information might be produced in a day that it would take a month to process it using a single machine and a traditional database.

  **Hadoop** allowed, a free-license software framework offering highly scalable distributed storage and runs on clusters of low-cost commodity hardware. There is still a notion that Big Data “is” Hadoop. This is not the case.

*Source: http://blog.infochimps.com/2013/01/24/cios-big-data/
Big Data and Big Hype

• **55%** of all Big Data projects are not completed or fail to meet expectations. By January 2013, Gartner said Big Data had reached its “trough of disillusionment.”

But still a Big Priority

• **81%** of those surveyed said Big Data is a Top 5 IT priority.

The top two reasons why Big Data projects fail outright:
• *Lack of business context around the data (51%)*
• *Inability to “connect the dots” between data sources (51%)*

*Source: [http://blog.infochimps.com/2013/01/24/cios-big-data/](http://blog.infochimps.com/2013/01/24/cios-big-data/)
Classes of tool and technology

What is Hadoop?
• Hadoop is part of an open source ecosystem that allows commodity hardware to be clustered together in order to process large amounts of data.
• It breaks large amounts of data into pieces that are processed by individual machines. Largest Hadoop cluster – 4500 machines processing 25 petabytes*
• Redundancy and reliability built into system

What is MapReduce?
• A component of Hadoop that processes the computations. (Breaks the job up across multiple machines and then tallies the results from those jobs and produces a consolidated answer)

Source: Hortonworks video http://hortonworks.com/resources/?did=15895&cat=2
Hadoop with MapReduce Processes Large Amounts of Data

Hadoop

MapReduce

Job Tracker

Task Tracker

Data Node

Task Tracker

Data Node

Task Tracker

Data Node

Hbase

Real time Query
Big Data Opportunity

• [http://www.youtube.com/watch?v=kQkiVr4hC90&feature=player_embedded](http://www.youtube.com/watch?v=kQkiVr4hC90&feature=player_embedded)


• Lots of complexity, yet lots of opportunity
Digital Marketing

- Includes Sentiment Analysis and Social Media Management

- Marketing Automation - Outbound Campaign Management (such as email marketing) and Website Experience Management (can include ecommerce and customer self service)
Social Media

- Various sites and tools allow for customer community development and interaction
- These range from Likes on Facebook to product commentary on Twitter and customer reviews and feedback on Yelp.
- Anyplace there is a public forum for communication, there are opportunities to mine social media
- The purpose is to Monitor, Engage and Measure interactions
- **Sentiment Analysis** tools allow for the ability to process Social Media.

Vendors include:
- Attensity
- Attentio
- SDL Tridion
- Visible Technologies
- Sysomos
- Radian 6
# Social Media Monitoring and Sentiment Analysis

<table>
<thead>
<tr>
<th>Function</th>
<th>Driver</th>
<th>Role of Analytics</th>
<th>Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monitor</td>
<td>Determine effectiveness of marketing and value of participation in social media through search metrics, blog mentions, conversations on social networks</td>
<td>Essential to tailor sentiment analysis to specific terminology of your organization</td>
<td>Capturing the nature of conversations, forms the basis for engagement strategy. Ability to react in near real time to changes in marketplace</td>
</tr>
<tr>
<td>Engage</td>
<td>Need to be active participant in the conversation. Connecting with customers through appropriate channels. Make contribution based on insight captured through monitoring activities.</td>
<td>Proper use of key terminology that will be picked up by search engines, hash tags on social networks, manage categories of interactions for brands and products</td>
<td>Ability to impact conversations positively, head off problems that are developing in the marketplace, direct traditional messaging to communicate with key influencers</td>
</tr>
<tr>
<td>Measure</td>
<td>Develop metrics program and analytics. Feedback mechanisms to measure if activities and interventions are moving toward desired goals.</td>
<td>Required for metrics program. If developed correctly for monitor and engage activities, will flow through to metrics</td>
<td>Hard data on effectiveness of social media. Ability to direct effort to needed categories of content and products</td>
</tr>
</tbody>
</table>
Marketing Automation

- Marketing automation is a class of Digital Asset Management software that integrates workflow processes and creative outputs.

- Also called Marketing Resource Management.

- Can be used to monitor campaigns and initiatives.

- Some types of marketing automation tools integrate with lead capture and tracking tools.

Vendors include:

- Marketo
- Eloqua
- Exact Target
- Adobe Digital Marketing Suite
- Aprimo (Teradata)
- IBM Enterprise Marketing Management
Structured Data

• Typically sourced from transaction processing systems

• The data from systems that track day to day business

• Retail Point of Sale systems generate common forms of structured transactional data

• Banking generates large volumes of transactional data

• Web commerce is also a source of transactional data

• ERP systems like SAP, Lawson or Microsoft Dynamics are typical repositories for transactional data
Structured Content

• Also referred to as Componentized Content

• Used in eLearning applications, customer help systems and tools, technical documentation, some types of web sites, contract management systems

• Common standards include DITA – Darwin Information Typing Architecture

• Wide variety of content standards

• Most organizations create their own internal standards (content models)
Unstructured Data and Semi Structured Content

• Unstructured Content refers to several types of information

• Usually text data in the form of Word documents, PowerPoint presentations, Adobe PDF’s, web pages, video and audio

• Sources might include file shares, intranets, web sites or some content management and document management systems

• If these documents contain metadata and are well formed, they can be referred to as semi structured content
Structured Data, Structured Content, Unstructured Data, Unstructured and Semi and Structured Content

Structured Data
- Sourced in relational databases
- Stored in tables that are related to one another

Structured Content
- Componentized content
- Well tagged
- Structured for reuse
- Contracts, help data, technical documentation

Unstructured/ Semi structured Content
- Free form text
- Email, web pages, social media, wikis, intranet content, file shares. Semi structured if contains metadata

Unstructured Data
- Sometimes called semi structured data
- Can be processed to parse out specific fields
- Click streams, web logs, search logs, etc.
- Common form of Big Data
Business Processes
Compliance, Privacy, Security
Risk Management
Digital Rights
Decision Support
Knowledge Processes
Collaboration
Digital Marketing
Voice of the Customer
Internal Metrics
Process Scorecards

Content
Text
Rich Media

Data
Transactions
Tables
Summary

Big Data
Logs
Web History
Transactions
Search Results

Text Analytics
Images and Rich Media
Video Analysis
Audio Analysis

Data Analytics
BI
Reporting

Web traffic patterns
Search logs
Click streams
Social media

Search Based Applications (SBA)
Business Intelligence Applications (BIA)
Unified Information Access (UIA)

Search Results
Ad Hoc Canned Reporting
Classes of Tool

Structured Data

Unstructured Data

Integration Framework (SBA, BIA, UIA)

Structured Content

Search Applications
Integration Engines
Business Intelligence tools
Data Visualization Applications

ERP

Data Marts

Unstructured Data

Sensor data
Log files
Clickstreams

Unstructured Content

Social Media

Voice of the Customer

CRM

Digital Marketing

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Information and Access are Heterogeneous

Data Sources

- Business Intelligence
- Product Lifecycle Management
- ERP Systems
- Digital Asset Management
- Customer Relationship Mgt
- Data Warehouses
- Document repositories
- Messaging
- Custom databases and applications
- Intranets/web pages

Search/Tagging/Taxonomy Integration Framework

Auto categorization/Clustering

BI Integration

Ontology Navigation

Entity Extraction

Faceted Search

Semantic Search

Access Mechanisms
## Example Classes of Tool and Integration Issues

<table>
<thead>
<tr>
<th>Tool/technology class</th>
<th>Description</th>
<th>Integration Challenge</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marketing Resource Management</td>
<td>Systems that allow asset reuse and streamline production workflow</td>
<td>Embedding metadata in assets as they move from system to system, consistency of terminology for component and composite assets</td>
<td>Integration of Digital Asset Management with Creative Workflow and editing tools</td>
</tr>
<tr>
<td>Customer relationship management</td>
<td>Applications that provide an integrated view of customer interactions</td>
<td>Ability to consolidate and roll up different activities that are fundamentally different</td>
<td>CRM systems consolidate information from a variety of subsystems: Email management, event management, customer support, collateral fulfillment</td>
</tr>
<tr>
<td>Document and web publishing</td>
<td>Moving content from one application to another, syndication of external content</td>
<td>Inconsistent metadata standards, inconsistent vocabularies, lack of context for user</td>
<td>Content migration from legacy applications to new systems or syndication of content to a channel partner’s web site</td>
</tr>
<tr>
<td>Federated/Integrated Search</td>
<td>Enterprise systems that search across structured and unstructured content and data</td>
<td>Inconsistent terminology from one content system to another Inconsistent terminology between structured and unstructured applications</td>
<td>Content management system term = SOW, Document management system = Statement of Work, Customer relationship management system = Work Order,</td>
</tr>
<tr>
<td>Transaction processes</td>
<td>Registration or commerce types of applications</td>
<td>Inconsistent description of customer and processes from one system to another</td>
<td>Registration in a web application needs to create a new account profile in another application</td>
</tr>
<tr>
<td>Data Warehousing</td>
<td>Extraction/Translation and Load processes</td>
<td>Format and conversions required to normalize data across systems</td>
<td>Business intelligence applications to analyze sales transactions over time</td>
</tr>
</tbody>
</table>
There are Multiple Uses for Consistent Terminology

Case Example: Motorola’s Global Taxonomy Framework Served Multiple Processes

- Browsing & filtering
- Related documents
- Financial reporting
- Compare product
- Business intelligence
- Program Management
- Product Lifecycle Management
Search as an Integration Platform
The Reality

- The fact of IT life is that there will likely always be multiple repositories of information.
- There will never be a single grand galactic Über system that will hold all information.
- Applications grow up over time to solve specific problems, even when enterprise information strategies exist.
- Part of the reason for this is the clock speed of processes or in parts of the organization run at different rates (e-commerce is different than finance) and business problems vary throughout the enterprise.
- Managing, retrieving, searching, and interacting with content in place will be necessary in some cases as migration is too costly and complex.
Three TLA’s for the day:

SBA – BIA – UIA
Why Search Based Applications?

• The lines between search and navigation are blurring - search is more than the white box

• Search increasingly functions behind the scenes to bring content to users to support specific tasks and at particular points in their work processes

• Best in Using search to surface content throughout the application (not the “white box”)
Search needs to be intentionally designed as an application

Search cannot be “bolted on” to a project or an application… institutional awareness has to be designed into the fabric of the tool.

Search Based Applications require integrated design methods – around user, process, task, content, inputs, outputs, use cases and scenarios – in order to optimize the search experience.
What are Search Based Applications (SBA’s)?

• Search is no longer the white box
• Content lives in disparate locations
• Structured and unstructured content lives in different locations

• Need to aggregate content according to
  ▪ Process
  ▪ Context
  ▪ Customer
  ▪ Goal
  ▪ Program
  ▪ Parameter of any of the above

• Search based applications allow content to be pulled from multiple disparate sources

• SBA’s are adding structured data context to unstructured content or adding unstructured context to structured data

• Ability to leverage multiple organizing principles through novel mechanisms
What makes an application a “search based application”?

SBA’s can be defined by having some or all of the following characteristics:

• The use of a search engine to dynamically drive the information processing interaction

• Triggering of information retrieval through key term or phrase query that returns additional parameters used to pull information from other sources

• The use of search engine connectors to bring data from its sources

• Processing of user search terms either before the query is sent to the engine (pre-processing) or after the results are returned (post processing)

• Enhancement of the index (by adding more metadata, changing that metadata or removing metadata)

• Combining, ranking and formatting result sets

• Integrating information from disparate or similar sources

• Performing document processing (previewing content, segmenting content, or recombining content)

• Allowing for interaction with content or data
Difference Between SBA’s and Business Intelligence Driven Applications

- **Search Based Applications** are primarily dealing with unstructured and semi structured content.

- Search enhancement platform tools contain connectors to crawl and index structured data sources, however, this is not the primary focus of SBA’s.

- Unstructured access tools are not geared to dealing with large amounts of structured data.

- **Business Intelligence Application** integration frameworks do have the capability of retrieving unstructured content that contains metadata.

- However, those are not geared toward search enhancement (i.e., the ability to disambiguate queries, leverage associative relationships, and auto categorize content that does not contain metadata).

- A new class of tool referred to as **Unified Information Access** is attempting to bridge that gap.
## BIA, SBA and UIA

<table>
<thead>
<tr>
<th>Nature of Content</th>
<th>Business Intelligence Applications</th>
<th>Search Based Applications</th>
<th>Unified Information Access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structured</td>
<td>Unstructured</td>
<td>Unstructured and Structured</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mechanism</th>
<th>Retrieving Data from disparate sources</th>
<th>Retrieving Content from disparate sources</th>
<th>Retrieving Data and Content from disparate sources</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Insights</th>
<th>What happened?</th>
<th>Why did it happen?</th>
<th>What happened and why did it happen?</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Enhancement</th>
<th>Database joins</th>
<th>Content enrichment</th>
<th>Joins on unstructured content sources</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Ability to deal with large volumes of data, many tools already in place</th>
<th>Ability to auto-categorize content and provide associative relationships, ability to leverage search platform</th>
<th>Ability to provide flexibility of ad hoc queries across systems using attributes from structured and unstructured sources</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Weaknesses or drawbacks</th>
<th>Inability to natively connect to unstructured data and lack of content enrichment mechanisms</th>
<th>Inability to perform database joins and process large amounts of data</th>
<th>Addition of new tools to enterprise</th>
</tr>
</thead>
</table>
Developing a Roadmap
Organizational Governance and Process Infrastructure

- Search Based Applications begin with the business case, governance processes and leadership/sponsorship
- The business case is driven by scenarios and development of a concept of operations (high fidelity day in the life)
Designing for Content in Context

Workstreams

Search Based Applications (Content in Context)
- Navigation
- Wireframes
- User Interface Design

Search Architecture Design
- Ontology Development
- Site Collection Architecture
- Site Maps and Logical Content Organization
- Search Experience Design

Content Authoring & Publishing
- Content Creation and Curation
- Information Lifecycle Management Design
- Publication Process Modeling

Process and Integration
- Workflow Design
- Automated vs. Manual Process Analysis
- Online vs. Offline Functional Capability
- Data Integration and Synchronization

Content Modeling
- Content Type Definitions
- Metadata Schema Design
- Managed Metadata Service Design
- Taxonomy Framework and Development

Audience & Content Analysis
- Content Audits and Inventories
- Personas, User and Group Matrices
- User Scenarios and Use Cases

Workflow & System Integration
- Content Types,
  Metadata Schemas
  & Taxonomy Design

Search Architecture Design
- Audience Analysis
  Content Analysis

Content Authoring & Publishing Processes
- Audience Analysis
  Content Analysis

Search Based Applications
- Audience Analysis
  Content Analysis

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How do you take advantage of the power of big data?

- Don’t get distracted by the shiny bits
- Don’t lead with technology (though this can be a challenge at times)
- Don’t get controlled by the vendor sales process
- Do develop an understanding of your business problem
- Do model the attributes of your customer
- Do develop a rational and credible business case

**Key Concept:** Understand the role of **content, text and data analytics** in making sense of **customer behavior** as it relates to **internal processes**
Integration across systems, tools and silos is one of the largest impediments to successful 360 degree customer analytics programs.
Summary

• Big Data, Transactional Data, Unstructured Information and Marketing Content can be managed effectively in the context of a focused problem

• Many Big Data projects fail due to the inability to define appropriate focus and inability to integrate information sources

• Customer Analytics programs provide a broad view of enterprise processes that impact the customer relationship and improve internal processes

• Unified information access requires consistency of information interpretation throughout the enterprise

• This means developing information and customer analytics frameworks and models for structuring unstructured information and adding context to semi structured communications
Whitepapers

Get it here:

http://info.earley.com/what-is-the-business-value-of-taxonomy/

Other Whitepaper Topics

Digital Asset Management
http://info.earley.com/download-whitepaper-critical-success-for-dam-project/

Information Supply Chain
http://info.earley.com/retail-whitepaper-use-taxonomy-to-optimize-retail-information-supply-chain/

The Role of Taxonomy & Metadata in Search
http://info.earley.com/taxonomy-metadata-search-whitepaper-request-download/
Events and Communities

Upcoming Training Opportunities
• SharePoint Information Architecture (3 days)
  ▪ Learn more and register: http://www.earley.com/training/sharepoint-information-architecture

Communities of Practice
• Linked In
  ▪ Taxonomy CoP - http://www.linkedin.com/groups/Taxonomy-Community-Practice-1750?trk=myg_ugrp_ovr
  ▪ IA Experts - http://www.linkedin.com/groups?gid=3774461&trk=myg_ugrp_ovr

• Yahoo
  ▪ SharePoint IA Group: http://tech.groups.yahoo.com/group/SharePointIACoP/
  ▪ Taxonomy Group: http://finance.groups.yahoo.com/group/TaxoCoP
  ▪ Search Group: http://tech.groups.yahoo.com/group/SearchCoP
Questions?

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References

2. http://searchbusinessanalytics.techtarget.com/definition/text-mining
Icons courtesy of http://openiconlibrary.sourceforge.net/