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Introduction

Content Technology Works (CTW)

CTW is an industry initiative that is administered by The Gilbane Report to develop and share content technology best practices and success stories. The premise is that when given enough proven recipes for success, enterprise consumers will be able to adapt and replicate that success for themselves – increasing productivity and confidence.

Success stories are written by The Gilbane Report and are told in the voice of the enterprise adopter with final editorial control resting entirely in the hands of the adopter. The result is that:

- Vendors do not control content
- Success stories are as opinionated and as jargon-free as the adopter prefers
- Analysis is included from The Gilbane Report and invited contributors
- In addition to technology recipes, strategies for securing funding, measuring actual value, driving adoption and other business and social issues are of interest

Typically, this kind of valuable information is only available for purchase. CTW content is different because CTW partners subsidize the program to ensure that this information is free. Partners want to push as many best practices to as many organizations as possible with the expected result being an overall acceleration of content technology adoption. For more information on the CTW program, visit www.gilbane.com/technology_works.html.

Overview of success story

CMP Media LLC publishes over 200 print and online properties covering the technology industry, including *InformationWeek*, *Dr. Dobbs Journal* and *Network Computing*. While the traditional publishing business continues to be the mainstay of CMP's business, it was evident that online sales of CMP's considerable inventory of technology content should be able to form the basis for a sustainable, profitable business. This success story outlines how CMP rapidly and cost-effectively built a parallel content technology infrastructure that sits alongside and across existing publishing infrastructures to provide the background for a new and profitable CMP business.

Goals and non-goals

This case study outlines essential elements of a successful online content research and intelligence service. This is an individual story told in the voice of the “end user” organization. While their approach may not be universal, their success is indisputable. This is not an attempt to generalize CMP's recipe for success into a universal formula.

Acknowledgments

The Gilbane Report would like acknowledge the generous contribution of time and intellectual property from CMP Media. Specifically, they have allocated the time of talented and heavily committed staff to improve the understanding and adoption of enterprise content technology.

In Their Own Words: CMP's Perspective

When selecting a fine restaurant, nothing is more valuable than a review. The best ingredients and the latest recipes cannot guarantee a great night out; price, service, convenience, etc. are all critical elements. CTW success stories are organized around a recipe for success rather than the ingredients. This interview section takes the analogy one step further and provides a review of the entire experience, from soup to nuts. Here, the enterprise adopter introduces their experience with an eye towards enticing others to follow.

What were the symptoms in your organization that brought this need to your attention?

“Traditional online sales were flat and the margins were shrinking. We knew we needed a way to create a higher value product that would appeal to a broader market.”

– Chantal Chassagne, Director of Online Licensing, CMP Media

“While we had a comprehensive enterprise content management migration strategy underway, we needed a way to capitalize on the business opportunities that were open to us in the near term. We could not wait for each of the 200 publications to migrate to our target ECM platform.”

– Mike Azzara, Vice President of Internet Technologies, CMP Media

How did you identify what specific content technologies were appropriate?

“We needed to identify technology components that were open and flexible enough to integrate with the variety of existing systems and information models, could be deployed at a low cost and with little or no disruption to our ongoing IT and publishing activities, and could provide the functionality required to develop a sophisticated personalized online content licensing product.”

– Howard Roth, independent consultant to CMP Media and principle contributor to Acumen

Which vendors did you select and what were the overriding considerations?

“As the backbone for Acumen, CMP selected Context Media's Interchange Suite to provide XML conversion from our content sources, database aggregation including schema transformation, authentication and general administration of the Acumen virtual repository. We integrated nserver e-publisher suite from nstein for automated content categorization.”

– Howard Roth, independent consultant to CMP Media

How did you justify the funding and other necessary resources?

“The specific business plan is confidential, but the requirement that Acumen be profitable and that the IT strategy we pursued also show a positive ROI was an absolute. One very pleasant surprise was the high value that CMP internal users (editors and writers) have placed on the Acumen service. While the cost justification was based solely on new revenue generated by online licensing, we have seen significant savings and productivity benefits for CMP editors and authors.”

– Mike Azzara, Vice President of Internet Technologies, CMP Media

Acumen: CMP's Research and Intelligence Service

“I have a growing number of projects beyond my regular full time role as senior editor at *Information Week* including producing *Information Week's* Windows Enterprise Newsletter that serves over 14 thousand subscribers. Without Acumen, I do not see how I could sustain the level of output that is required to keep our content fresh, focused and timely.”

– John Foley, Senior Editor, *Information Week*

What were the most valuable lessons learned?

“Consolidate as much as possible but no more than that. CMP has recognized improved margins, increased revenue and higher productivity through the intelligent balancing of content technology consolidation with content technology integration and aggregation. There is no one approach that works ideally for all scenarios. Selecting an approach that affords the flexibility to take advantage of tactical business opportunities while strategically positioning your content technology infrastructure offers the best of both worlds.”

– Howard Roth, independent consultant to CMP Media

“Entrepreneurial ventures are more likely to be successful if they can be developed, deployed and validated without having to impact ongoing operations. Acumen is an excellent example of how elegant technology can create real business opportunity.”

– Steve Weitzner, Chief Operating Officer, CMP Media

CMP Media Corporate Background

Headquartered in Manhasset, NY, CMP Media is part of United Business Media (www.unitedbusinessmedia.com), a focused market information group whose products and services focus on professional media, news distribution and market research.

CMP Media LLC is a leading high-technology business-to-business multimedia company that provides information and integrated marketing services to technology and healthcare professionals worldwide. Capitalizing on its editorial strength, CMP Media also offers marketers and advertisers media solutions tailored to meet their individual needs. Their products and services include newspapers, magazines, Internet products, research, education and training, trade shows and conferences, direct marketing services and custom publishing.

CMP Media's product offerings provide concurrent and synergistic branding opportunities that reach large volumes of highly very targeted audiences. The editorial focus covers industry news targeting the builders, sellers and users of technology. To learn more about CMP Media's brands, products and services visit www.cmp.com/totallist.

Acumen is a research and intelligence service of CMP Media. As such, Acumen offers a content stream and detailed topic groupings that are focused exclusively on technology and include over 1,600 technology-specific topics and cover over 40,000 companies. Acumen carries all of CMP Media's technology content. Sources range from *InformationWeek* to *C/C++ Users Journal*, from *EE Times* to *TechWeb*, from *Gamasutra.com* to *VARBusiness*. Acumen's sources produce an average of over 1,000 stories a week, providing a broad range of detailed technology information.

The challenge for Acumen is to deliver this information at a price point that is compelling, profitable and complimentary to CMP's continuing mainstream magazine publishing business.

For more information on CMP and Acumen, visit www.cmp.com.

Criteria for Success

Problem definition

CMP Media knew that it was producing world-class content from over 200 distinct sources and that the online market for that content had not yet been fully exploited. The challenge was two fold:

- CMP Media needed to define a value proposition, a price point and a sales model that was more than simply an online version of their existing publications or a fire hose stream of all of their published content.
- A sales and delivery process including editorial/product definition, specialized sales tools and content delivery options had to be developed cost-effectively and without disrupting ongoing publishing operations.

Margins were shrinking on existing online content licensing and there was a growing awareness that content was not getting picked up as it should.

CMP Media's business model evolved to focus on bypassing traditional content aggregators and focusing on individuals who will actually use the content. This focus increased the importance of understanding the context that specific content would be used in on an individual-by-individual basis. The successful online licensing of content would need to be about content in context – for people who are willing to pay for content only when it meets a specific business need.

The clarity of the desired business model formed the basis for the product definition – the need for one-on-one product usages such as a financial analyst who wants only specific information on ten companies in an IT segment on a daily basis. Acumen's objective was to combine the editorial strength of CMP publications with personalized usage.

From a technical perspective, this raised a number of interesting challenges. Due to the growth strategies of CMP and the historical IT management style, application workflows were quite isolated from one another. This included both the applications within each specific business group as content moves from designers all the way through to resellers, and the applications across business groups resulting in a heterogeneous mix of formats, information models and platforms.

Success criteria

The Acumen team needed to find a way to aggregate information across this heterogeneous and extremely active publishing landscape without hampering or compromising ongoing operations. The criteria for success were organized into four broad functional groups:

1. **Prepping content for licensing:** simple, reliable and consistent formats and metadata fields needed to be defined, agreed upon and implemented in such a way that internal and external authors and editors could contribute without undo burden. Without their consent and cooperation, the raw content would likely be too inconsistent to aggregate and reassemble into personalized content products.
2. **Internal taxonomy:** a single taxonomy was required that was flexible enough to capture salient information across usage profiles (financial services, technical buyers, technology suppliers, analysts, etc.) and simple enough that it could be populated, searched and navigated by target audiences.
3. **Categorization accuracy:** content is often categorized into multiple categories, e.g. a story on a software company's latest release could be categorized under technology supplier, the markets they serve, etc. Categorization accuracy is not as simple as

avoiding incorrect categorization (also important). To ensure categorization accuracy one must capture as many relevant associations/memberships as possible per content object. Without these links, it is often very difficult for an individual to properly express the filtering they are willing to pay for.

4. **Minimal maintenance effort and service disruption:** ongoing publishing workflows must be leveraged and no additional maintenance resources could be allocated. Further, CMP is moving toward specific commercial product and technology standards. Acumen must leverage these corporate standards wherever possible and do nothing to undermine these efforts.

The bottom line for success was a rapid launch of a profitable online content licensing business that

- Could efficiently and consistently provide custom content products, and
- Positively alter the typical online content licensing sales process to shorten sales cycle, increase margins and reduce or eliminate end-user training requirements.

Solution Components

Product components and architecture

The resulting solution stack that operates, populates and presents the Acumen service is a combination of a commercial off-the-shelf software platform, integration software, and a customized application. The solution itself is offered as a managed service to both CMP Media (internal users) and Acumen content consumers (external customers).

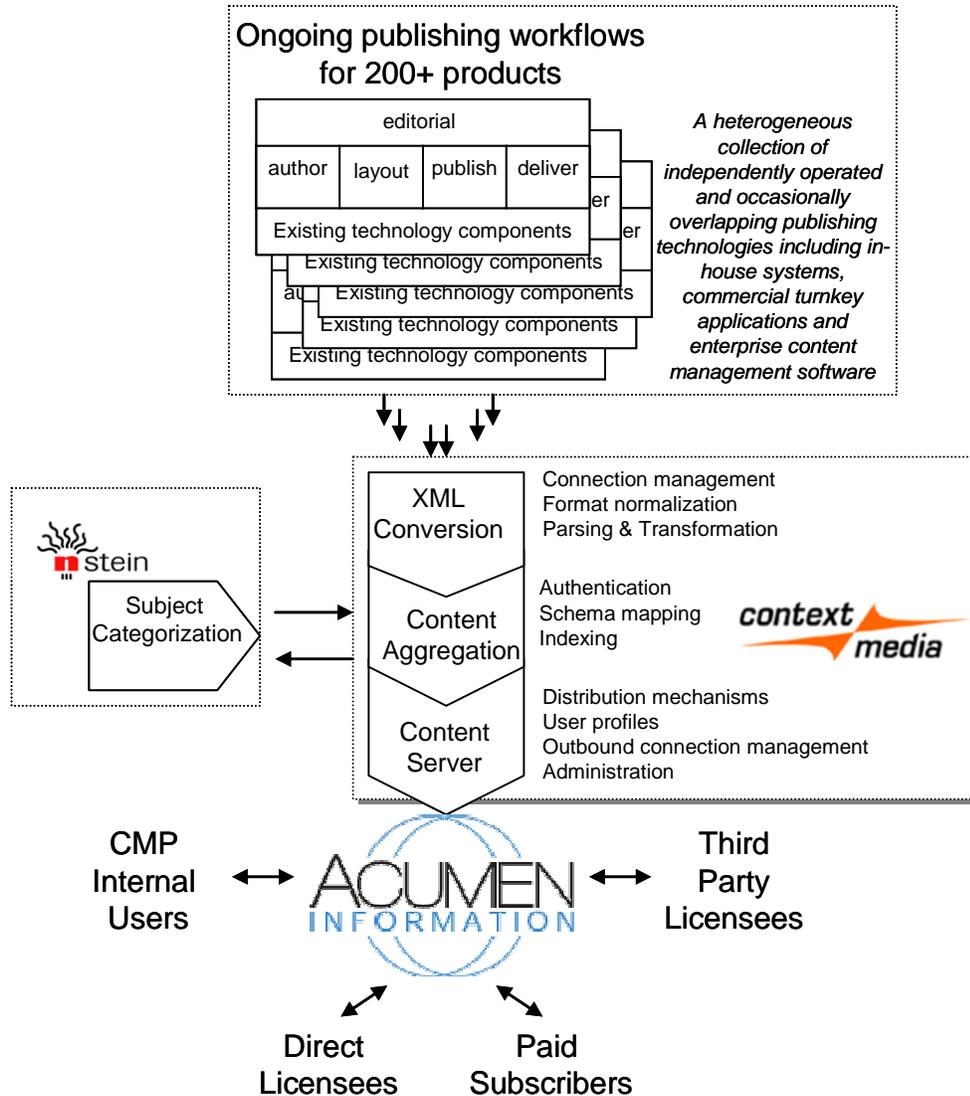


Figure 1: Acumen high level architecture and workflow

The primary commercial ingredient of Acumen is Context Media's Interchange Suite. This product platform provides the broad framework and generalized machinery for content aggregation, content normalization, taxonomy representation and content distribution.

CMP Media used Context Media interfaces and API's to ingest the broad spectrum of content being published through existing publishing workflows and to interface with the other commercial building block within Acumen, nstein's nserver, which combines linguistics, statistics, and artificial intelligence to extract concepts and assign document categories.

The resulting content is populated and organized into over 1,600 technology-specific topics and subtopics. The following are the primary topics and the relative number of subtopics in each:

- Business, Finance & Careers: 150+ subtopics
- Electronics: 240+ subtopics
- Hardware & Networking: 230+ subtopics
- Internet & E-Business: 140+ subtopics
- Legal & Government: 100+ subtopics
- Security & Privacy: 100+ subtopics
- Software & Software Development: 300+ subtopics
- Telecommunications: 120+ subtopics
- Vertical Industries: 100+ subtopics

Custom content products can be designed from within this taxonomy and further filtered by targeting specific companies, organizations or individuals.

The resulting product can then be delivered through

- **Internet:** personalized content is accessed easily through a secure server. Users can browse, search, sort and customize presentation through a browser interface.
- **Email:** relevant technology intelligence is filtered, packaged and delivered via email.
- **Intranet:** Acumen content streams can be included in company intranets. Using minimal IT resources, Acumen delivers technology intelligence throughout an organization utilizing established portal conventions and exposing content as a web service.
- **Extranet:** Deepen relationships with customers and partners by making Acumen content available through an extranet or externally focused portal.

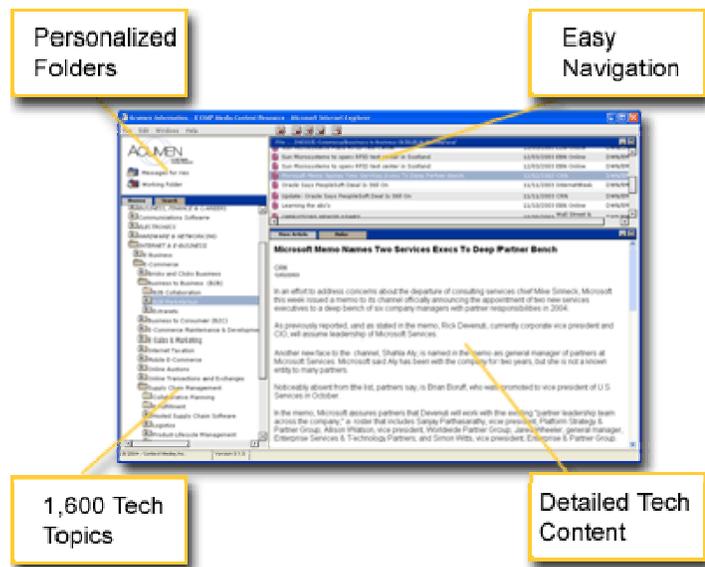


Figure 2: Sample Acumen Internet access screen

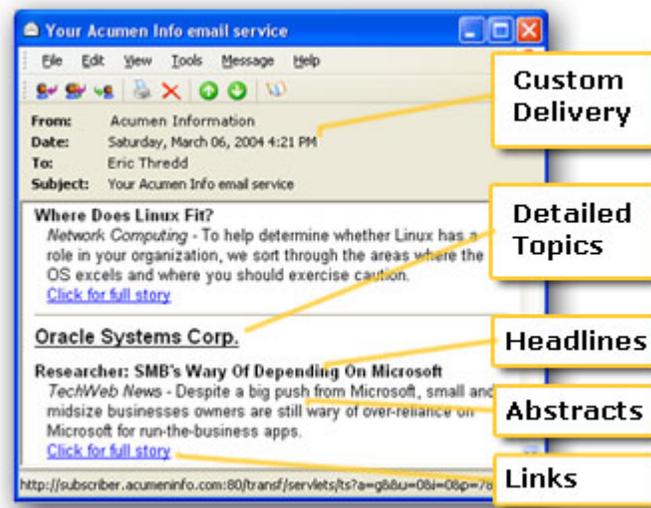


Figure 3: Sample Acumen email content

Best practices and organizational changes

Acumen represents an entrepreneurial venture that arose from the ashes of the Internet boom and bust. CMP Media, like every technology publisher, found itself having to scrutinize and justify every investment, marketing strategy and existing product. Acumen needed to almost immediately demonstrate profitability while minimizing risk to ongoing operations from its very inception. In order to achieve these two equally challenging and intuitively contradictory objectives, the following steps and strategies have been identified as essential ingredients for success:

- **Managed Service:** In many ways, Acumen was initially developed as a stealth or skunk works project under the radar of corporate IT funding and support bureaucracy. While the process and infrastructure that was in place was essential to managing large and sophisticated publishing processes, it was not set up to foster these kinds of start-up projects. By pursuing a managed service approach, the Acumen team was able to avoid asking for corporate IT support and by extension, its business practices.
- **Commercial Technology:** The Acumen team invested the bulk of its own intellectual efforts in developing the workflow and detailed use case requirements. Without having technology suppliers like ContextMedia to work with and count on to deliver the underlying software services, it would not have been possible to develop a viable business in the timeframes and cost constraints that were required.
- **Taxonomy Investment:** The development of a well-formed taxonomy that was derived from, but not cut and pasted from, existing taxonomies in use across CMP Media publishing units proved to be essential in ensuring a scalable, predictable and repeatable publishing process. Existing taxonomies were either overlapping with one another, too detailed as measured by use and content population, or simply ambiguous.
- **Automatic Categorization:** Given the thousands of items being published, the hundreds of categories and the requirement to avoid dependence or to create additional demands on existing resources (like editors and authors), it was quickly determined that automatic categorization was an essential ingredient for Acumen's success. After careful testing on CMP Media content and the production taxonomy, it was determined that nstein's technology worked best. It should be stressed that the Acumen team has identified its level of tolerance for inaccuracy – both false positives and negatives –

and that without having actual content, categories and clarity on tolerance levels, it is not possible to accurately evaluate this kind of technology.

- **Secondary Market Focus:** The organizing design principle and the litmus test for all of the work that followed was the realization that massive content aggregation at one end of the workflow had to be balanced by precise customization and personalization at the other end. CMP Media realized that once the audience profile had to change to one of extreme personalization, the market focus had to change as well. The resulting focus on corporate librarians, researchers, financial analysts, and other individual users was the driving force behind smart process and technology choices and a sound business result.

Results

Acumen has found an audience in both individual professional and corporate markets. The following examples illustrate CMP's ability to reach information consumers in new ways, generating revenue along the way.

Microsoft Corporation is using CMP content (from *Bank Systems & Technology*, *Optimize* and *Wall Street & Technology*) delivered through Acumen to help populate its Executive Circle site, which is targeted at CIO and similarly senior executive IT roles. Microsoft uses Acumen to sift the CMP content for particular topical stories and broad subjects of interest to this audience.

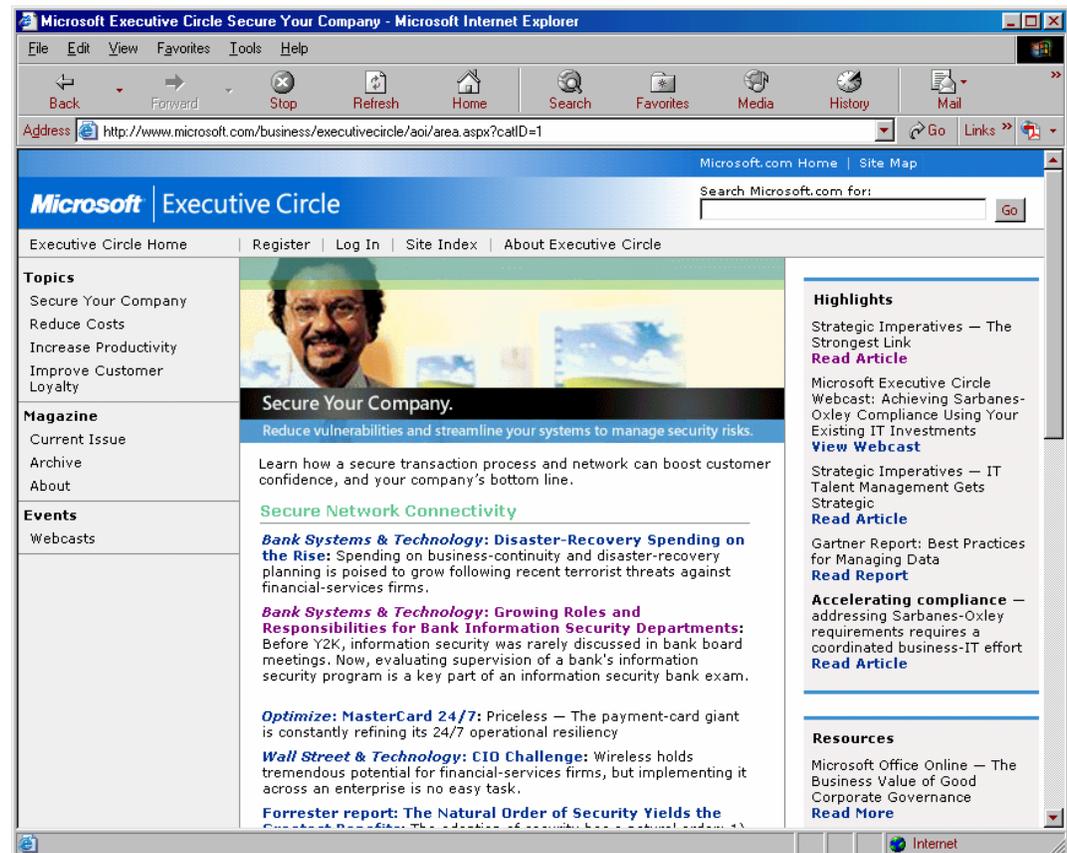


Figure 4: Sample screen shot from Microsoft Executive Circle web site

The University of Guadalajara, Mexico licenses content from Acumen Information for its Engineering and Business libraries. Students have unlimited 24/7 access to word searching across all of CMP's content and to viewing subject-related collections of content as defined by the librarians.

In addition to the more customized packaging referenced above, Acumen Information offers Acumen InfoPaks, a paid subscription email newsletter on eight subjects delivered daily. Content is aggregated, filtered, categorized and distributed by Acumen. Content is pulled from across CMP and formatted into email newsletters using the top and secondary levels of the Acumen taxonomy. Currently, CMP has secured roughly 200 subscriptions to this service.

The eight subjects currently supported are:

- **Outsourcing:** Includes content from the nuts and bolts of outsourced manufacturing, software and services to the political and legal issues surrounding this complex field.
- **Consumer Electronics:** Includes content from peripherals to cell phones, from telecommuting to entertainment.
- **Security:** Includes content intended to provide comprehensive coverage of current security issues – the latest security threats, best practices and policies, privacy concerns, legislative initiatives, and hardware and software solutions.
- **Mobile & Wireless:** Includes content covering wireless technology, standards platforms, hardware and software, as well as mobile platforms such as laptops and notebook computers, PDAs, and tablet PCs.
- **Linux:** Includes content covering core Linux, Linux applications, the open source marketplace and enterprise-wide deployment.
- **Advanced Technology:** Includes content covering the latest developments in materials, engineering and computing, including nanostructures, high-performance materials, microelectromechanical systems, intelligent machines, substrate engineering, optical engineering, and supercomputing.
- **Government & Military Technology:** Includes content that offers an In-depth perspective of government technology. Detailed coverage includes information on procurement, contracting, regulation, initiatives, e-government, homeland security and defense technology.
- **Supply Chain Management:** Includes content tracking radio frequency identification (RFID), logistics, e-fulfillment, hosted supply-chain software, collaborative planning, and product-lifecycle management.

Acumen Information is quickly establishing itself as a legitimate addition to CMP's portfolio of publishing products and validating the online publishing business model. While total revenues have not grown to the level typically required of traditional publications, the profit margins are in fact inline with successful print products. CMP Media is cracking the code of e-publishing and transforming the medium from an exotic into a mainstream offering able to justify its presence the old fashioned way – profit.

A Supplier's Voice: Context Media

Executives at CMP had a great idea: to create a product that would allow them to repurpose and capitalize on content from their 200 publishing properties by packaging it and offering it to companies through direct-to-enterprise licensing and subscriptions.

Context Media was given the opportunity to address a number of practical challenges that stood between CMP Media and its vision:

- Provide CMP personnel with tools and resources to develop new product offerings based on existing media assets without disrupting current publication schedules and workflow.
- Provide targeted content feeds to ensure that customers receive specific information at a reasonable cost and level of effort.
- Effectively manage the subscriber relationships

CMP selected Context Media's Interchange Suite to "virtually" integrate multiple content repositories, categorize and package content according to customer interest, and manage the syndication relationships between CMP and its Acumen Information subscribers.

Context Media provides Enterprise Content Integration (ECI) solutions utilizing a *Content Centric Application Platform* - offering significant value and content centric application use cases, not just for organizations in the Media & Entertainment industry like CMP Media, but also for Consumer Packaged Goods, Manufacturing and Financial Services-based industries as well.

Context Media's Interchange Suite provides a framework for virtually unifying and managing distributed content repositories and systems. Its components, the Interchange Integration Console™, Interchange Context Server™, and Interchange Distribution Console™, enable enterprise content to be accessed, organized, and distributed without replacing existing systems or current workflow practices. As such, Acumen Information was a perfect fit for Context Media's requirements.

Context Media's solutions impact the business needs of its customers by enabling their content to be shared throughout the enterprise, resulting in substantial return on investment (ROI) through positive impact on revenue, productivity and cost reduction. With the Interchange Suite, users are able to access, share, and reuse enterprise-wide content without replacing legacy systems or current workflow practices.

CMP Media had a clear vision, concrete criteria for success, and allocated resources appropriately. At Context Media, we are proud that this forward-thinking organization recognized our capabilities, value and shared passion for integrating diverse and distributed information sources to change the way we work and live.

Conclusions

CMP Media is capitalizing on legitimate and novel technology-inspired capabilities to create Acumen, a new class of publishing product. By leveraging enterprise aggregation and personalization, Acumen has grown beyond using the Internet as simply a new delivery mechanism and found an editorial voice that compliments and integrates nicely into existing publishing products and practices.

While internal usage was not an integral part of Acumen's initial justification, it should come as no surprise that this select constituency has grown to be an extremely enthusiastic group of users. As knowledge workers who are highly dependent on getting up-to-the-minute technology news and information, their embrace of Acumen is a strong indicator that it delivers on its promise to provide individual information and intelligence. While CMP employees do not have to pay for Acumen use, their increase in productivity and improvement in traditional publishing performance have contributed significant upside to this already profitable venture.

Yet, even as CMP is rolling out Acumen, a hosted, virtual repository that provides a single, unified lens into a broad array of disparate publishing operations, CMP is also rolling out a consolidated enterprise content management infrastructure to homogenize and more formally consolidate these very same disparate operations. The subtler lesson that CMP seems to have learned well is that each organization should consolidate as much as possible, but no more than that. In other words, there are a variety of sound business and technical reasons for consolidating enterprise content management, portal and delivery infrastructure. However, that approach was perceived, most likely correctly, to be too onerous and expensive to support Acumen's requirements to be quick to deploy, light on maintenance requirements and relatively inexpensive to license and to build. While the balance between enterprise content management and enterprise content integration may vary over time, healthy organizations will have a proactive IT strategy that incorporates both elements.

It is gratifying to see an organization whose business is predicated on preaching the value and importance of technology successfully practicing what they preach.

Partner Page: Behind the scenes at Gilbane CTW

When we first conceived of an initiative that would develop and distribute success stories that placed recipe over ingredients and favored no supplier, technology or computing standard, we also recognized that our most significant hurdle would be to recruit vendors to subsidize such an independent and open process.

Since the CTW program was first conceived in late 2003, we have sought out suppliers who were passionate about and committed to content technology as a game-changing force in the markets that they served and secure in the value of the products and services that they offered. The following vendors have literally put their money where their mouths are. They know that public, open and unfettered access to successful enterprise deployments, regardless of the technology mix, only benefit the commercial aspirations of organizations that offer material, dependable and predictable value.

Please join The Gilbane Report in thanking these diverse and often competing organizations for their generous support and sponsorship of the development, promotion and distribution of CTW material. They are an elite group. They are: [Software AG](#) (TECdax:SOW), [Sun Microsystems](#) (NASDAQ:SUNW), [Artesia Technologies](#) (Open Text - NASDAQ:OTEX), [Atomz](#), [Context Media](#), [Convera](#) (NASDAQ:CNVR), [ClearStory Systems](#) (OTCBB:INSS), [IBM](#) (NYSE:IBM), [Trados](#), [Vasont Systems](#), and [Vignette](#) (NASDAQ:VIGN).

