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INTELLIGENT CONTENT NETWORK

Three Challenges to Consider When Moving Beyond ECM

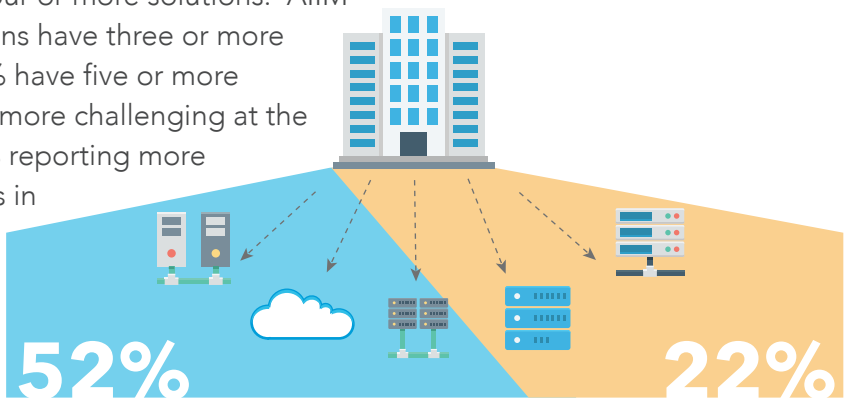
How did we wind up in this place? Why is a new approach to managing information needed?

In the late 1990s, Enterprise Content Management became a mainstream technology (at least for large organizations) by first focusing on early adopters eager to automate high-value, mission-critical, and document-intensive processes critical to gaining competitive advantage. Examples of these initial "breakthrough" processes include the new drug application process in the pharmaceutical industry, claims processing in the insurance industry, and check processing in the banking industry. User organizations able to successfully "cross the chasm" were able to leapfrog their competitors, and the ECM suppliers who supported them began to look for additional problems that could be solved by ECM.

Organizations (and the suppliers who supported them) next applied ECM platforms to solving core back-office automation challenges – like accounts payable, invoice processing, contracts management, and HR administration. Solutions were focused less on spectacular process breakthroughs, and more on driving back-office process efficiencies, cost reduction, and reducing information-related legal and compliance risk.

Over time, we began to think that ultimately, there would be a convergence in an organization around a single ECM platform. Many of us within the ECM world purported to have a clear vision of how such a universal platform should be applied across the enterprise, across multiple content types, and across multiple processes, managing the life-cycle of content from creation, through collaboration, distribution, process and archive, to eventual and defensible deletion. Ah, but the reality turned out to be something very different. **Here's how.**

The end of the single repository dream. Many have described ECM as an "enterprise layer," but the reality is that implementation is still driven by departments and the content "silo" problem has exploded. Both AIIM and Forrester surveys reveal the failure of the "single repository" dream. According to Forrester, 70% of organizations are using two or more ECM solutions, and 29% are using four or more solutions. AIIM reports that 52% of organizations have three or more ECM/DM/RM systems and 22% have five or more systems. The problem is even more challenging at the largest organizations, with 38% reporting more than five ECM/DM/RM systems in operation. Of course, the information that is officially in ECM/DM/RM systems is only part of the information management story in most organizations.



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SaaS solutions – silos on steroids. Things are changing dramatically in the world of back-end business processes. Beginning with Salesforce, over the past decade cloud-driven disruption began to redefine enterprise software models that had lasted for decades. Enterprise SaaS applications created the opportunity to extend first class enterprise capabilities to organizations that never had access to them before. Think about how Salesforce redefined sales automation. Or how Workday redefined HR solutions. Or Netsuite and ERP solutions. The list goes on and on.

When it comes to legacy ECM, organizations can't just throw the baby out with the bathwater. Where do you want to rip and replace and where do you want to leave things alone? How do you leverage your existing ECM investments? How do you allow existing mission-critical legacy systems to continue AND invest in new customer-centric initiatives? Most organizations have many more systems and repositories than they think. Understand the purpose of each major content system, how current it is, its cost, and whether there are opportunities to consolidate suppliers. As you consolidate, keep in mind the core functional requirements listed above.

New and modern cloud-based solutions can't just be slapped on to what you have now. . There is clearly a migration in the direct of cloud content management solutions, which means that organizations have a decision to make relative to the large volume of documents in existing legacy systems. The challenge is that organizations may have millions of documents. Which should be moved and which should stay where they are? What can be safely archived or deleted?

Saving everything still isn't the right answer. As storage costs have come down and continue to come down, there are those who say that it's not necessary to worry about what we save and where and why – just save everything and deal with it later. And while the absolute

cost of storage is declining rapidly, fully loaded storage management costs are not. These costs are only a minor part of the puzzle. The real challenge is that saving more and more information creates an ever-increasing number of potential points of failure across multiple areas -- compliance, e-discovery, and security being just a few.

A decade of ECM change.

Today we are able to change what used to be "someday."

ECM 2007	ECM 2017
Driven by IT and specialists	Driven by end users and the business
Departments at large companies	Any size company
Usability and mobility an afterthought	Usability and mobility core
Cloud "someday"	Cloud now
Boundary-less clouds	National clouds
Security at the perimeter	Asset-based security
On-premise silos	On-premise + SaaS silos
Analytics "someday"	Analytics now
Dark data	Data insights
Hard lines between data and content	No one cares whether data or content
Customization, not configuration	Configuration, not customization
Big bang, boil the ocean deployments	Apps built on a consistent foundation
Collect data and information	Operationalize data and information

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The Need for New Thinking -- Understanding "Intelligent Content Networks"

Information management technologies servicing business landscapes using traditional technologies are failing. The impact of these burdens is becoming more evident and the pace at which this is occurring will only quicken.

Of course, ultimately technology is not the interesting point. Improving agility in engagement with customers and employees, creating competitive advantages and innovation flexibility, and compliance/security/privacy initiatives are core to why organizations should care about these issues.

Organizations need a new strategy for managing the intersection of four conflicting forces: 1) in the short-term, existing legacy systems are not going away; 2) in the long-term, organizations are driving toward more modern and agile cloud-based information systems; 3) the dream (nightmare?) of a single repository solution will never come to pass; and 4) the next generation of technologies (Blockchain, Artificial Intelligence, Machine Learning) are visible on the horizon. 5) solutions designs need to be fluid enough to keep pace with changing compliance and regulation requirements.

This means that organizations need to look strategically at these kinds of information federation questions:

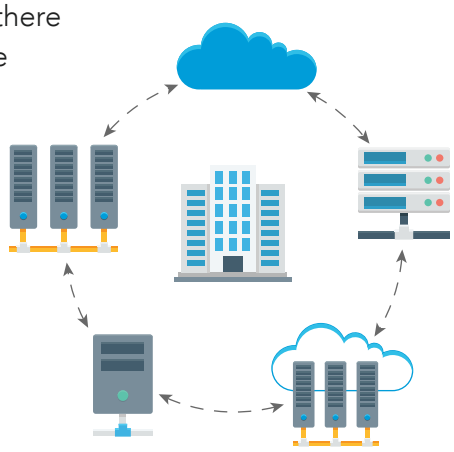
1. How can you access valuable content in a legacy system and still sunset the application itself?
2. Is it possible to create a common interface for all content regardless of new or legacy?
3. Is it possible to have virtual access to archived content in multiple repositories and real-time conversion of only the data that is needed?
4. Is it possible to reduce storage management costs across multiple platforms and repositories – and still preserve access to these archives when needed?
5. How can you access content from multiple repositories within an application and not create multiple versions of the same content?
6. How can you begin to understand – and manage – all of the "dark data" that is hidden away in long neglected or abandoned applications and repositories?
7. How can you leverage compliance initiatives to positively impact innovation.

We must put on different lenses when evaluating these kinds of strategic questions. Systemware refers to a concept of an Intelligent Content Network to describe this kind of "content federation" thinking.

Let's look at the challenges associated with developing a modern information management strategy through three filters; 1) Compliance and Interoperability; 2) User Experience; and 3) Enabling the Future.

Compliance and Interoperability

Many companies struggle with twin challenges: 1) how to make information available and understandable from a wide variety of silos so that knowledge workers can get their job done; and 2) stay in compliance while moving forward. In order for multi-repository enterprise systems to "play nice" together, there must be a layer of consolidation and abstraction across these silos to provide contextual and curated access to data and information.



There is a temptation given how quickly technology is changing to try to change everything at once, which is somewhat akin to attempting to rewire your house while the electricity is still on. For organizations at scale, this is simply not an option. Where do you want to rip and replace and where do you want to leave things alone? How do you leverage your existing ECM investments? How do you allow existing mission-critical legacy systems to continue AND invest in new customer-centric initiatives? Most organizations have many more systems and repositories than they think, and at a strategic level, only vaguely understand the purpose of each major content system, how current it is, its cost, whether there are opportunities to consolidate suppliers, and whether there are more modern and flexible solutions available.

One industry where this is a particular challenge is financial services. We spoke with one large bank that was losing millions of dollars every day due to legacy and under-performing information systems that were unable to communicate with each other or meet the basic needs of the business. Trying to find the right information at exactly the right time from among more than 80 petabytes of legacy data for one of more than 60 million customers in variety of processes ranging from audits to individual requests required a new strategy. The challenge was amplified by the fact that the bank's legacy systems were not just systems that they had originally implemented, but also systems they had inherited as a result of the wave of bank consolidations in the late 2000s.

Clearly just ripping out all of these systems and starting over was not an option. At the same time, the bank did want to begin to rationalize their systems, reduce the number over time, and

begin a transition to more modern platforms. All the while maintaining operational continuity, the integrity of systems for audit, and creating a means to begin a long-term migration to more modern content management platforms.

By adopting a strategy focused on content federation, this bank reduced audit requests from weeks to seconds, saving more than $10 million annually. With content analytics thrown in, they also discovered new value in their information. Lastly, this content abstraction "layer" improved their compliance capabilities for and oversight.

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For the bank, compliance was not the number one driver initially. Rather, storage cost reductions -- not just the pure cost of storage media, which is obviously declining, but the cost of MANAGING increasing volumes of storage -- was critical to getting the project launched. Storage rationalization and compression of over 90% was key to selling the project initially. And from that starting point the bank moved on to recognize great compliance benefits.

The bank notes that the financial industry facing increasing geographically-defined compliance concerns (like GDPR). These challenges are made even more complex given that most banks must address multiple and often inconsistent regulations, coupled with under-performing legacy repositories from the mergers and acquisitions that swept through the banking industry in the late 2000s have added to the overwhelmed information landscapes. This means that the ability to apply access rights and records criteria must cut across geographies, applications, regulations, and on-premise and cloud systems. In many cases, this means that legacy systems need to ultimately be replaced -- but how do you do that without suffering dramatic business disruption?

User Experience

User experience is the Achilles' Heel for many ECM systems. An AIIM survey of experienced ECM implementations concluded that the number one challenge was usability, with over 60% citing this as an issue.

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This is not terribly surprising given the roots of most ECM implementations. Many ECM systems were implemented to solve mission-critical, document-intensive, and high volume process bottlenecks, and the users tended to be a fairly narrow set of specialists. This was fine for its time, and made a huge difference to many companies. But as time went on, and more and more knowledge workers began to touch content management systems, the usability weaknesses in many systems became apparent.

An important concept to keep in mind as organizations think about improving usability is that "usability" is not an abstract – it occurs in the context of specific workflows and processes. One large insurance company I spoke with was struggling with the process of how to automate a simple way to "package" documents for customers and to meet legal and audit requirements. Human error from manual document recreation contributed to high court settlements, unreasonable labor and production costs, and lowered customer satisfaction.

The "volume" question in this case – both in terms of the number of documents and the number of employees who need access to this capability – was daunting. The company manages over 210 billion document pages in multiple systems. Over 80 million images are in these multiple systems. Over the course of a year, 50 million back office documents are retrieved by over 100,000 associates.

By simplifying the user experience – by creating a simple method for packaging and distributing consistent documentation in sub second timeframes – the company was able to save more than $13 million. Even more importantly, once the core process of document "package" assembly was simplified and standardized, it opened up digital transformation opportunities across multiple processes that rely upon this core process.

Enabling the Future

The new world that is coming is all about Data AND Content, not Data OR Content. We've operated in the past with a convenient dichotomy between data management and content management. If this dichotomy ever made sense, it makes less and less as time goes on. The kinds of customer-centric problems that must be solved require competencies and technologies from BOTH the data management and content management worlds.

In the world that is coming, not everyone will need to be a data scientist, but a LOT of employees will need to be information entrepreneurs. As the worlds of data and content combine and collide, many organizations are realizing that the actual raw material needed to capitalize on exciting opportunities building upon new cognitive and analytics technologies is often locked up in legacy content management systems. This data is not only "big data" for most organizations, it is also "dark data." Many companies are eager to capitalize upon the

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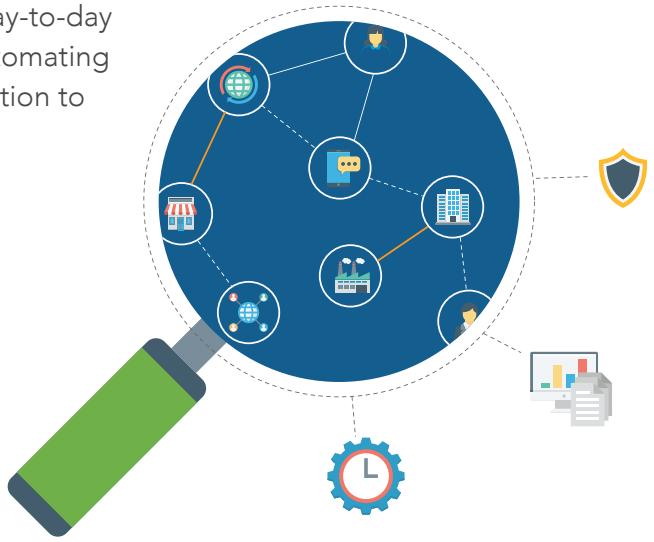
Digital Transformation opportunities created by cognitive and analytics technologies, but need a way to standardize how they manage, find, and organize this "dark" information scattered across multiple repositories and prepare for this exciting future.

In addition, many organizations are now realizing that Digital Transformation is not likely to occur via a Big Bang. Not every business process is a gigantic, millions of documents, straight-through process (in other words, a "traditional" ECM process). But all of these much more modest day-to-day processes are still information intensive, and automating these day-to-day processes is a critical precondition to digitally transforming the business. In order to capitalize upon these hundreds of process "moments of truth," individual process owners need access to information and data that is currently held captive in legacy systems.



One investor communications and outsourcing company we spoke with was wrestling with the problem of how to identify, connect, migrate, and control the information that their legacy systems held captive through vendor

lock-in. This included long lost content from tangled SharePoint implementations and file systems. They realized that a key to tackling this problem was to adopt a content federation strategy – creating an abstraction tier that allowed them to intelligently approach the question of multiple and inconsistent information sources.

They realized that they not only needed to correct their immediate content problems, but do so with a mind to positioning their company for a future that includes context intelligence and cognitive computing. In doing so, they were able to establish a framework to enable them to automate the multiple small process workflows that are so critical to customer engagement and satisfaction.

People, Processes and Technology

Organizations have long struggled with the magic "triad" of people, processes and technology. This struggle has remained constant through multiple generations of technology – from paper to microfilm to imaging to document management to enterprise content management and even now as we move beyond to new ways of managing our information assets .

The net result is that most organizations at scale now have multiple generations of technologies in place – and all of the multiple repositories that go along with this.

Organizations now face these core challenges at the intersection of people, processes and technology:

1. How do we adapt these systems to the coming wave of massive data?
2. How do we understand and utilize what is in these systems to solve the next generation of problems?
3. How do we strategically migrate from legacy content systems to more modern ones – and still keep the lights on?
4. How do we give our employees and associates the tools – and information – they need to delight their customers?
5. Our Fortune 25 banking customer notes that the maintaining the skills to manage and migrate legacy formats is increasingly a challenge.

The bank believes there are three key steps to a successful content integration initiative:

1. Get the BUSINESS to by in sooner rather than later
2. Understand that things don't happen overnight
3. Realize that these projects evolve over time, and spend a lot of time thinking about what you will tackle next after the current project is completed.

This means organizations need to create dedicated teams of end users, understand how they do there work and what information they need to do it, and better tools to achieve their business objectives.

Creating a strategy to federate access to content and information – a content abstraction tier if you will -- is central to this journey. Without it, organizations will continue to wander in the wilderness of multiple and inconsistent repositories, frustrated at their ability to optimize the vast quantities of information under their control.

About the Authors

JOHN MANCINI is the Chief Evangelist and Past President of AIIM. He is a well-known author and speaker on information management and digital transformation. As a frequent keynote speaker, John offers his expertise on Digital Transformation and the struggle to overcome Information Chaos. He blogs under the title Digital Landfill (http://info.aiim.org/digital-landfill), has more than 10,000 Twitter followers and a Klout score in the 60s. He has published more than 15 e-books, the most recent being: The Next Wave: Moving from ECM to Intelligent Information Management, Infonomics: How Do You Measure the Value of Information? Content Management 2020, Information Professionals: Where We Came From and Where We're Going, and Information Chaos vs. Information Opportunity. John can be found on Twitter, LinkedIn and Facebook as jmancini77.

ANDREA CHIAPPE is the Director of Strategy & Innovation with years of programming, R&D, and most importantly, real-life, in-the-trenches technical and business experience, her view is simple. Andrea appreciates that with a strategy, solutions can be intelligent curators of secure information for end users and systems while remaining flexible and easy. Andrea serves as the Director of Innovation and Strategy for Systemware, Inc. Her current focus is on the evolving complexities within the technical fabrics that comprise information ecosystems.

ABOUT AIIM

AIIM is a global, non-profit organization that provides independent research, education and certification programs to information professionals. AIIM represents the entire information management community: practitioners, technology suppliers, integrators and consultants. AIIM runs a series of training programs, and provides industry certification, including the Certified Information Professional. http://www.aiim.org/Training

ABOUT SYSTEMWARE

Our goal is simple. Empower you and your business with the right information while simplifying your job. We have designed a fierce intelligent content network, Content Cloud that curates and connects you with your information to help your businesses become better, faster and smarter; regardless of where your information might live.