The Aragon Research Globe™ for Enterprise Content Platforms, 2024

Generative AI and the Rise of Intelligent Content Assistants

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Topic: Enterprise Content Platforms (ECP), Intelligent Content Analytics

Issue: Who are the enterprise content platform providers and how will they evolve?

How will the intelligent content analytics market evolve?

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SUMMARY

Aragon Research releases its sixth Aragon Research Globe™ for enterprise content platforms. It examines twelve major providers in a market that is poised to reinvent itself in the age of Generative AI and Intelligent Content Assistants.

Key Findings:

Prediction: By YE 2025, 50% of large enterprises will reduce the number of ECP vendors in their enterprise by half (80% probability).

Prediction: By YE 2026, ECP providers who do not invest in Conversational Search risk will be replaced by those that offer a modern Generative AI-based approach to Search (85% probability).

Prediction: BY YE 2025, 60% of ECP providers will offer an Intelligent Content Assistant that includes Conversational Search (75% probability).

Prediction: By YE 2025, the combination of AI and content security requirements will lead to the replacement of legacy ECP providers who have not modernized their offerings (80% probability).

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Introduction

The age of AI is here and with aging content repositories enterprises now face both a challenge and an opportunity. The challenge is that many of their repositories have aged significantly, and innovation is not occurring. The opportunity is that some providers have modernized their platform and invested in AI, which is the future.

With the rise of generative content, the content market is changing, and enterprises have the opportunity to leverage more content-related applications than ever before. There is a challenge to understand content and the business opportunities that agreements and contracts represent. There is also the challenge to create content faster, and then act on it.

While Records Management is still a critical business requirement, the advent of content AI means that the landscape for enterprise content is changing. And with change comes the need to innovate.

Aragon continues to look at this market as one in transition from a focus on managing content to one of processing and automating content. This Research Note overviews the current state of the ECP market, defines the new shift to content platforms, and evaluates twelve vendors in the enterprise content platform (ECP) space.

The Strategic Value of Content to the Enterprise

One could say that information—and in this case large volumes of documents, images, and videos—is the fuel for AI. With new Content Assistants the ability to understand what is inside of all this content can be sped up.

Because content is now much more strategic, as it can be used as a catalyst to drive existing and new business, due to the fact that Content Assistants can look at and summarize content so much faster—the ability to find opportunities inside all of this information means that the content must be accessible. This means that some content stored in legacy ECM platforms most likely needs to be migrated to a modern offering.

Enterprise Content—The Day of Reckoning Is Coming for Legacy Providers

Aragon feels there is a day of reckoning coming for enterprise content platform providers who are not modernizing their offerings. Given the consolidation that's occurred, some product platforms are not being updated, and enterprises need to start asking the question about the value of continuing to pay maintenance dollars versus the value of migrating to a newer offering.

While there is still expected to be some consolidation in the ECP market, the new battle cry is about innovation and all the potential disruption that generative content represents. Today, Hyland and OpenText have done most of the consolidation in this market. The fastest way to add content AI to an ECP platform is to partner with existing AI providers, such as Google or Microsoft, which is what many have done.

Content Management Vendor Rationalization Is Overdue

Content AI, content security, and the need to improve outdated processes and content workflows are all reasons to consolidate ECP vendors. There are also just too many ECP providers—a consolidation is needed. Even in 2023, a majority of enterprises often have twice the number of content management platforms they need.

Outdated processes with legacy ECP offerings and the need to transform content processes are only part of the reason that a reduction in the number of providers is needed. In the course of digitizing their content processes, enterprises still have the opportunity to reduce the vendor footprint and retire vendors who are not innovating their content platforms.

Prediction: By YE 2025, 50% of large enterprises will reduce the number of ECP vendors in their enterprise by half (80% probability).

The Race to Offer Intelligent Content Assistants

Aragon is predicting the rise of Intelligent Content Assistants, and today, providers are racing to introduce new products and services that are focused specifically on content generation. This is a race. and there is not an end at this point.

In the short term, Intelligent Content Assistants are well-equipped to summarize long documents and create emails. There is work underway to create a more compelling contract-focused one, but we are in the early stages. Regardless, Aragon feels that rules-based WCA will be augmented and enhanced by Generative AI over the next five years.

In the long term, custom generative content models (e.g. Custom LLMs) that leverage bring-your-own-data will be the focus of content automation. By utilizing their own data, organizations can create models that are tailored to their specific needs and requirements. This will enable them to create highly customized and relevant content, which will further enhance the overall quality and effectiveness of their content automation efforts. Google's Gemini LLM platform and Microsoft Copilot both allow for the creation of custom models.
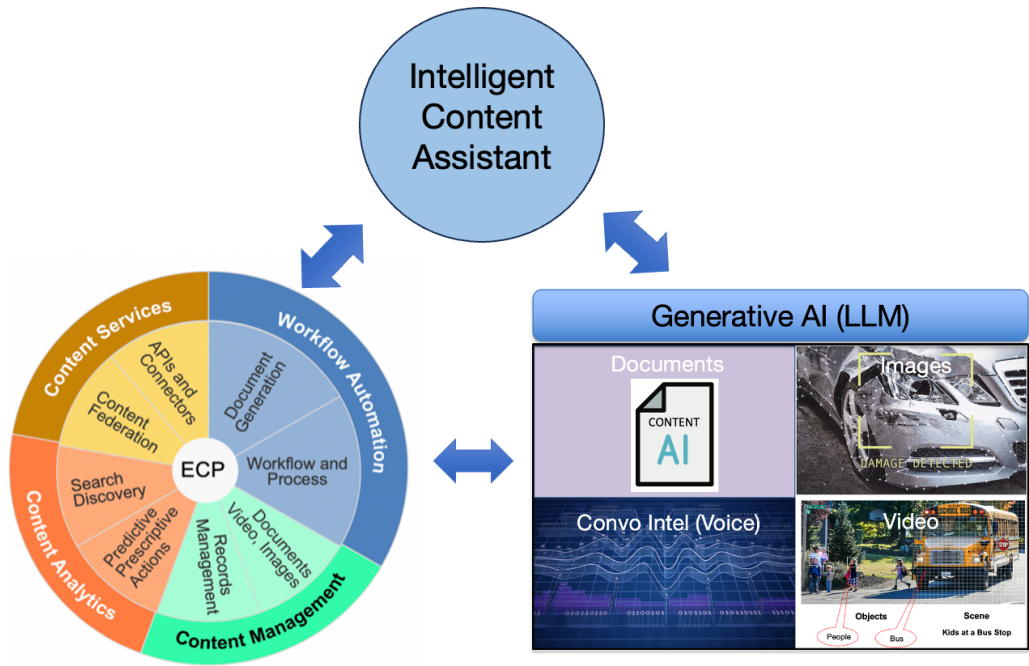
Figure 1: With an Intelligent Content Assistant, enterprises can unlock valuable insights and summaries from existing content and also leverage it to generate new content

Automating Forms with Generative AI

With a Conversational Interface, the process of collecting information can take a significant leap forward. Intelligent Assistants for Content Capture is a great use case for applications such as onboarding, and Aragon expects data capture to become a fundamental capability of an Intelligent Content Assistant.

Aragon said the market was going to be at an inflection point last year, and in December 2022, that happened when OpenAI launched ChatGPT. Given the capabilities of Conversational Search, we see the ability to allow a Generative AI application to interview a human and capture the data to fill out a form.

The Need for a Conversational Interface via Generative AI

While we discussed Form automation earlier in this report, part of the revolution is the ability to use Generative AI via a Conversational Interface. Training of Assistants is still key to automation, but in some cases—the ability to kick off a process may now be accomplished with a Conversational Interface.

For forms, with the advent of a conversational AI interface, providers will gradually shift from a click-based interview process to one that is prompt-based to one that is fully conversational.

This also applies to the automation of the workflow process. Via an intelligent content assistant, a user will be able to state the people to whom an agreement needs to go, and the application can add them and then have the human approver sign off on them.

It is important to note that only now are Content Assistants emerging. Many providers are still testing their offerings. The low code era is definitely here, and complex coding of workflows is quickly becoming a thing of the past. All this means that enterprises should evaluate providers on both the ease of use and the local approach that the provider currently has offered and has on the roadmap for the future.

Conversational Search is Here: ECP Providers Must Respond

The search market just changed, and with it, the need for enterprise content platform providers to respond. Given Generative AI capabilities, it is clear that the market is shifting from a query-based search approach to a conversational one. Because of this, it represents a battle cry in the industry and a call to action.

For ECP providers, the time is now to make the shift to a conversational search function. It does not mean the end of query-based search, but it is the beginning of the end. For

enterprises, asking providers for a roadmap to a full Conversational search is an action for the balance of 2024. For providers that do not have a roadmap, that suggests that a re-consideration of the continued investment in that provider is in order. Note that there may be ways to add conversational search to that existing repository, but migrating that repository is an action to consider.

Prediction*: By YE 2026, ECP providers who do not invest in Conversational Search risk will be replaced by those that offer a modern Generative AI-based approach to Search (85% probability).*

How Will Intelligent Content Assistants Emerge?

Intelligent Content Assistants are emerging. While text generation is available, the level of training is still in the early stages. Instead, the ability to read, summarize, and understand existing contracts is here. Conversational Search and retrieval are also available. So far, Adobe, Conga, and Ironclad have made moves to offer Content AI capabilities.

All that said, the concept of a content assistant for creation is coming—however, for different types of contracts different types of training will be required.

Prediction*: BY YE 2025, 60% of ECP providers will offer an Intelligent Content Assistant that includes Conversational Search (75% probability).*

With content assistants, the number of people doing content creation will go down. The cost of hiring and managing content creators can hold back a business in its development. Still, much of the support for autonomously generated content is in its early stages, and for certain kinds of content like video, the technology is not yet advanced enough to enable the rapid and scalable production of digital assets that are required for the modern enterprise.

Content Understanding and Summarization at the Core of Generative Content

The era of understanding means that enterprises can leverage unstructured documents in ways that were not possible before (see Figure 2 below). The vast majority of document data is unstructured, which means document understanding opens up a wide realm of opportunities for doing new things with document data. This means that large enterprises, or any enterprise with more unstructured content than its associates, have the time or ability to analyze; AI can reveal a previously unseen dimension of business content.

From Document Analytics to Document Understanding
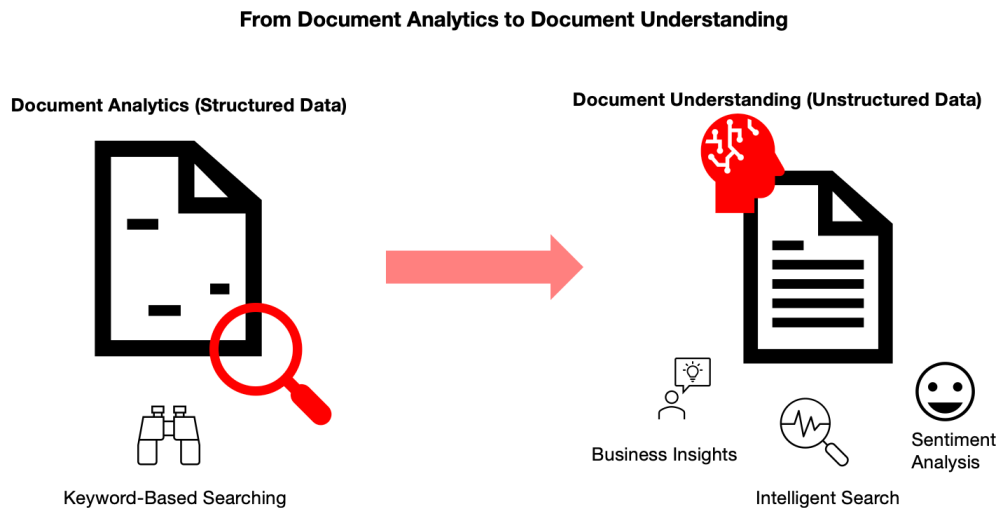
Figure 2: The keyword-based approach of the past and the intelligent approach of document understanding today.

The Race to Role and Industry Knowledge—Key for Assistants

Aragon feels that Generative AI and the Content Assistants will be productized—becoming increasingly role, topic and industry focused. To offer highly relevant content creation and content analysis, LLM models will need to be trained in both roles and industries.

For example, an ICA in healthcare must have key contract knowledge and understand the interrelationship of different clauses in a contract. The same thing goes for insurance and banking.

Additionally, the ICA for a user may be different than the Assistant that is offered to a manager or Supervisor.

Content AI—The Secret Sauce behind the Curtain of Generative AI

The race to use Generative AI as an interface is here. However, many users forget that GenAI Assistants are only as good as the algorithms and the training of understanding when it comes to content. To generate content, it must first be understood.

In content AI, there are four key types—voice, video, image, and documents. The advent of the ability of algorithms to read and understand documents opens up an entire repository for increased levels of understanding as well as new revenue opportunities. For example, with a Content Assistant, documents could be reviewed, and contracts that were undersold could be targeted for an upgrade campaign.

With Generative AI, Content AI has taken on new levels of importance. Only now is the ability to look at text and images coming online. This capability is referred to as multi-modal. There are similarities in image and video analytics due to the need to recognize objects. Today, most providers are partnering for their artificial intelligence capabilities. See Note 1.

Content Management: Edge Computing and Why Some Content May Stay Local

Edge Computing is the new battle cry. Part of the reason is that there is a realization occurring when it comes to modern IT infrastructure. First, many Cloud providers cost too much for legacy content, so Hybrid Cloud has emerged to offer the opportunity to keep content in local data centers and upgrade the instance to a managed service.

Second, for many future AI use cases, particular for image and video—the content needs to be local, as does the AI. For example, for Video content applications, live video feeds—the AI actually runs on the camera. Only 20% of the AI processing is done in the cloud.

Note 1: Understanding Content AI algorithms

1. Content AI and Document Understanding

Documents—document analytics, also referred to as Content AI, is the ability of machine and deep learning applications to read and understand documents. There are tremendous opportunities in the document creation phase, particularly for contracts, as close analysis can provide a success or failure prediction on whether a clause should be used or not.

In the past, it was just about keyword tagging and indexing. Now, with deep learning and generative AI, we have entered the age of document understanding. Content AI goes beyond indexing to understand entire documents. With a Generative AI interface the ability to know more about entire document libraries is here now.

2. Computer Vision (Images and Video)

Computer vision is basically object and scene detection. Image analytics represents an opportunity for enterprises simply because images can be processed faster. Image analytics saves hours and hours of human intervention, and it can open new areas of revenue for the enterprise. For example, being able to tell if an image is real or fake can help to either approve or deny an insurance claim. Being able to verify someone's identity using a picture can also speed up customer onboarding.

Developing a Future State Enterprise Content Architecture with a View of AI

While many enterprises have aging infrastructure for their existing content management repositories, developing a content management architecture has to be a top priority.

Given the rise of AI and the fact that not all AI will run in the cloud means that Hybrid approaches to content management may be cost effective. The opportunity for enterprises in to containerize installations and shift to a managed service. Many providers offer options for legacy on-premise installations, but keeping the content in the data center remains an attractive option.

Kubernetes has continued to mature and has become a de facto standard for hybrid cloud options. Enterprises should look to evaluate the roadmaps of providers for their hybrid service offerings for ECP. Given small and large language models and the rise of open source LLMs, some AI processing can be done at the edge of local data centers. We encourage content architects to work with providers on a future state approach given that for some applications, Edge AI may be more attractive and cost-effective than full-on SaaS Cloud.
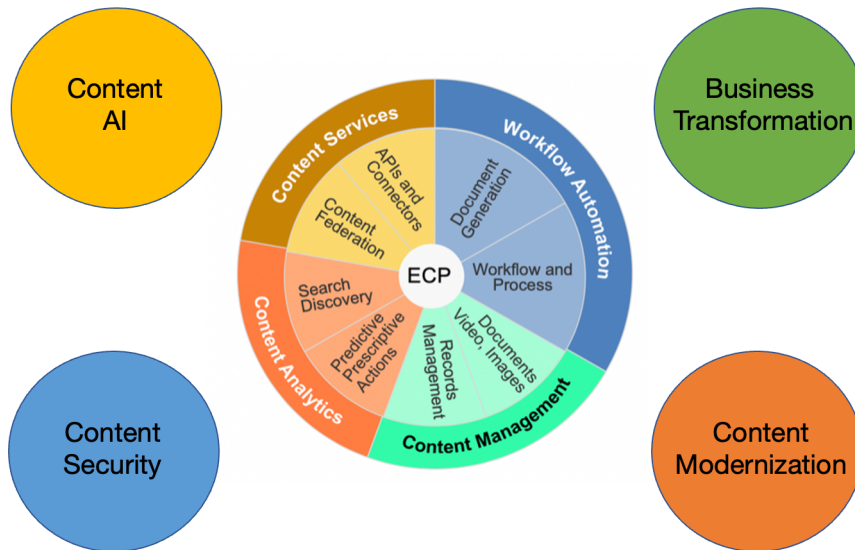

Figure 3: The ECP market is evolving, and there are four imperatives to focus on for 2024.

Content Security in an Age of Content AI

Content security is becoming increasingly important, and more providers are adding more levels of security to their offering. The reason for this is that there are growing security threats around specific documents and the need for better document level security is here (see Note 2).

Deal rooms (now often called data rooms) are still used for sensitive content because of security and distribution concerns.

While there are numerous attributes related to securing both on-premise content repositories, including access management, there is a growing need for real-time threat intelligence as well. Two of the providers in this report, Box and RPost are doing innovative things when it comes to content security.

As the issue of content security becomes a mainstream issue, look for more analytics around access—both threats and suggested mitigation—to become a standard set of features.

Prediction*: By YE 2025, the combination of AI and content security requirements will lead to the replacement of legacy ECP providers who have not modernized their offerings (80% probability).*

Content Management Modernization Is Priority One

While records management and retention used to be the battle cry, now many aging repositories represent security risks due to their aging architecture.

This suggests that the retirement of legacy ECM repositories is now a top priority. Years of ignoring the spread of content management platforms in the enterprise have led to the realization that a majority of enterprises often have twice the number of content management platforms they need.

Line of business managers, chief digital officers, and CIOs need to look at legacy content platforms in the enterprise and make decisions about keeping or replacing them. Table 1 has

Note 2: Key Content Security Requirements

Below is a set of content security features that need to be evaluated.

- Encryption
- Encryption key management (optional)
- Digital identity verification (mainly via multi-factor)
- Remote and/or offline viewing
- Recall
- Watermarking
- Content wiping (selective or full)
- Content retention policies
- Audit trails of content sharing and access

three critical considerations that may dictate the development of an exit strategy for one or more vendors.

Current ECP Provider situation	Suggested Action
Minimal or No Roadmap for AI	Develop exit strategy
Minimal or No Roadmap for Conversational Search	Look to third parties while also developing an exit strategy
No Roadmap for extended content security	Third party offerings may help in the short term, but an exit strategy is also in order

Table 1. Three important decision criteria for evaluating whether to keep or exit an ECP Provider.

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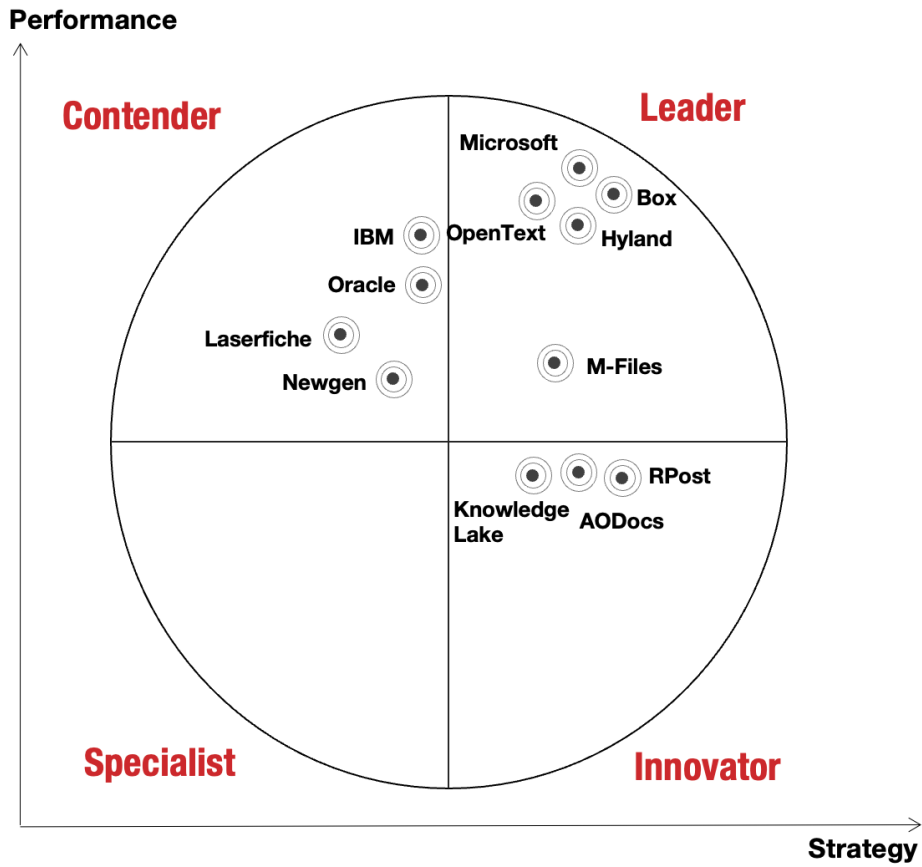*(As of July 31, 2024)*

Figure 4: The Aragon Research Globe™ for Enterprise Content Platforms, 2024.

<u>Leaders</u>

Box

Box, led by Co-founder and CEO Aaron Levie, has been growing in part due to the robust and continuous innovation of its Box Content Cloud platform, including Box AI and the acquisition of Crooze in January 2024. Box is entering a new era as a company with a focus on AI and automation to help enterprises fully tap into the value of their content. It has completely reinvented itself with a focus on corporate content and applications that help enterprises transform to modern content-based applications. The Box platform family includes Box Governance, Box Shield for security, Box Sign, Box Canvas for visual collaboration, Box Relay for workflow, Box Zones, Box KeySafe, Box Hubs (beta) to curate and publish content faster, Box AI for Notes and Documents, and Box Shuttle for content migration.

In May 2023, Box unveiled Box AI which changes the way people use Box on a daily basis. The Box architecture for AI has native security, ensures model isolation, works on multiple content types, supports leading AI models, and offers granular access controls.   Box's enterprise-grade AI features Box AI for Notes, Box AI for Documents, and most recently, Box AI for Hubs (beta with GA expected in 2024). In July 2023, Box announced interoperability with Copilot for Microsoft 365, which allows Microsoft Copilot to interact with Box content via the Box connector for Microsoft Graph*. This means that Box customers can use either Box AI or Microsoft Copilot for M365—or both.

In security and compliance, Box has ethical walls to help keep sensitive content separated between different user groups. In addition, there are enhanced malware deep scan capabilities and watermarking as part of Box Core Security. The latest integration partnership between Box and Crowdstrike further enhances advanced endpoint protection. The Box platform offers fully custom applications and user experiences, with more than 150,000 developers creating custom applications, new APIs, and SDK enhancements to streamline development processes and application creation, and Box AI Dev Zone to enrich interactive experiences (summer 2024). Box has featured integrations with Google, IBM, Microsoft, Salesforce, ServiceNow, Slack, Zoom, Crowdstrike, and 1600 others. The industries that Box focuses on include Education, Financial Services, Government, Healthcare, Life Sciences, Media and Entertainment, Professional Services, and Retail.

The company's Box Shuttle solution helps customers migrate seamlessly to the cloud, while its highly-rated Box Consulting services strengthen their implementation, simplify their tech stack, and create effective adoption plans. Given its focus on innovation in products and a complete focus on security, AI, and automation , Box is well-positioned for the future.

<u>Strengths</u>	<u>Challenges</u>
• Brand recognition	• On-premise options
• Native video support	
• Native content security and compliance	
• Secure collaboration across the extended enterprise	
• 1,600+ integrations with major LOB and productivity apps	
• Cloud focus	
• Industry focus	
• APIs	
• Install base	

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Hyland

Hyland, a leading global provider of intelligent content solutions, <u>recently announced</u> a new President and CEO, Jitesh Ghai, after current CEO Bill Priemer announced his retirement. Hyland is on the march to its next-gen, cloud-native platform, Hyland Experience, as well as a growing focus on AI.

Hyland unveiled two upcoming additions to its suite of Hyland Experience services – Hyland Experience Automate (Hx Automate) and Hyland Experience Insight (Hx Insight). Hx Automate, launched in April, helps organizations integrate digital content across systems and enables users to efficiently build, deploy and manage content-centric automations in the cloud. Anticipated for release later this year, Hx Insight powers the synergies between generative AI, content, processes, and data to augment the human workforce and accelerate decisions and processes. Hx Insight leverages generative AI and the information hidden in enterprise content to generate answers to questions in natural language and supports our view of analytics shifting to conversational search.

While innovating on the Hyland Experience roadmap, Hyland currently offers and adds capabilities to four ECPs, Alfresco, Nuxeo, OnBase, and Perceptive Content. Additionally, Hyland launched Hyland Intelligent Document Processing (IDP) in October 2023. It includes an intelligent capture product with online learning, process automation and a low code interface.

Hyland primarily serves its core industry verticals and has a multi-product portfolio, offering a full range of deployment options, including on-premises, private, and public cloud environments, and SaaS and PaaS. Hyland's OnBase platform offers tailored industry solutions and purpose-built integrations with core line-of-business systems, such as Epic, Guidewire, and Duck Creek.

Hyland continues to offer the Nuxeo platform, which is good for high-volume applications, digital asset management, and product asset management use cases. Hyland's Alfresco platform is cloud-native and can run on Amazon Web Services and Azure. It delivers capabilities to address collaboration, process automation, and content governance.

Hyland's healthcare software solutions address patient access, health information management, enterprise imaging, and revenue cycle management. Hyland also focuses on government, higher education, financial services, and insurance industries. Hyland is modernizing content management and is doubling down on AI and this positions it well for the future.

Strengths	**Challenges**
• Brand recognition	• Balancing multiple product SKUs
• AI capabilities	
• Healthcare focus	
• Back office	
• Open source	
• Accounts payable	
• Capture	
• Case management	
• Global partner channel	

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M-Files

M-Files, based in Finland and Austin, Texas, and led by CEO Antti Nivala, continues to offer its information platform with a growing focus on AI. With its acquisitions, M-Files now offers Ment, Hubshare, and the M-Files Platform. Hubshare offers the ability to collaborate on content for both internal and external audiences. Capabilities include a client-facing portal, intranet capabilities, task management, and a data room for sharing large amounts of data.

The M-Files platform comes in three editions: M-Files Base, which is on-premise only, and M-Files Team and Business editions, where the customer can choose on-premise, cloud, or hybrid.

In 2024, M-Files also announced improvements to its generative AI offering, M-Files Aino. Aino enables users to collaborate and generate insights from enterprise data with the help of a virtual assistant. It possesses a number of integrations that make it a seamless addition to many business technology stacks. M-Files Discovery can classify, categorize, and identify PII that is often contained inside documents.

From a content AI perspective, M-Files still focuses on Smart Classifier and Discovery. Its Aino generative AI suite also enables knowledge work automation, providing users with a platform for optimizing task workflows that emphasizes security. M-Files offers industry-focused solutions, including Professional Services (Accounting, Tax and Audit, Management, Legal, Financial Services, Contract Research Organizations, Scientific and Technical Consulting, etc.) as well as solutions across Manufacturing, Construction, Energy, Public Sector, and Real Estate. M-Files integrates with Adobe Sign, DocuSign, Google, Microsoft, and Salesforce.

Strengths	**Challenges**
• Hybrid ECM (cloud and on-premise)	• Balancing user requirements in multiple markets
• Integration of content and data	
• AI-based content analytics	
• Configurability	
• Use cases	
• Mobile support	

Microsoft

Microsoft, based in Redmond Washington, offers Microsoft SharePoint Content Platform as part of its Microsoft 365 offering. Microsoft SharePoint is also offered as an integral component of its Employee Experience platform Microsoft Viva. Many small and large enterprises leverage Microsoft SharePoint as their de facto content repository. SharePoint continues to have one of the broadest partner ecosystems, which is one of the reasons for its continued success.

Microsoft made a big move in 2023 with the rollout of its Microsoft Copilot assistant for Microsoft 365. Microsoft Copilot is separate and distinct from Microsoft Copilot, but the key thing is that Copilot content within SharePoint can be used to allow Copilot to respond to users with answers; Microsoft Copilot can also be used in SharePoint to rapidly translate presentations and documents into fully-featured websites with high-fidelity images and style.

Microsoft Syntex is a full Document AI offering that can not only index a document but can read and understand a document Microsoft Syntex's capabilities include content assembly and processing, contract management accelerators, annotations, and extended language support, with more features to come later this year, including e-signature, backup and archiving, and repository-as-a-service. Enterprises may lean into using Copilot for basic conversational search needs vs using Sytext.

Microsoft also offers on-premise editions of SharePoint that include SharePoint Server 2013, 2016, 2019, and Subscription Edition. Increasingly for Workplace usage, SharePoint is offered inside of Microsoft Teams and Microsoft Viva.

Microsoft continues to offer SharePoint Workflow Manager (SWM), which replaces Service Bus and Microsoft Workflow Manager. SWM will work with SharePoint Server 2013, 2016, 2019, and Subscription Edition, and enterprises can upgrade to it soon. It also announced that SharePoint Embedded would be available across its 365 applications, providing users with an API for SharePoint that enables increased developer flexibility.

Microsoft has continued to expand SharePoint use cases, and it has made it easier to leverage content stored in SharePoint with other Microsoft applications. Besides Microsoft Teams, Viva represents a new way to sell its capabilities to business users. With its continued focus on AI and on SharePoint, Microsoft remains one of the enterprises that is committed to enterprise content.

Strengths	Challenges
• SharePoint install base	• External video support
• Content AI focus	
• Brand recognition	
• Microsoft 365 momentum	
• Intelligence delivered by Microsoft Graph	
• Partner ecosystem	

OpenText

OpenText, based in Waterloo, Ontario, and led by CEO Mark Barrenechea, continues to focus on content and information management—with a continued focus on content automation and AI with the OpenText Aviator Platform. OpenText now offers the OpenText Content Cloud, the Business Network Cloud, the OpenText Experience Cloud, the Cybersecurity Cloud, the Analytics Cloud, the DevOps Cloud, the IT Operations Cloud, and the OpenText Developer Cloud. Recently, in 2024, OpenText acquired managed detection and response provider Pillr to enhance its cybersecurity portfolio.

OpenText continues to have one of the largest portfolios of content management offerings in the industry, including OpenText Core Content, Extended ECM, Documentum, and several customer experience assets, including Exstream and Media Management. In May 2024, OpenText announced that it had divested its Application and Modernization business to Rocket Software (a Bain company) for $2.275B. Besides being a leader in content management, it offers a number of brands that focus on high-volume CCM.

In October 2023, OpenText announced the evolution of its AI efforts with the launch of OpenText Aviator, a full AI product family that leverages Generative AI. For Content, the OpenText Content Aviator, OpenText Aviator Search, and OpenText Experience Aviator will enable relevant content to be produced faster. The other OpenText Aviator offerings include DevOps, IT Operations, Cybersecurity, and Business Network. Its offering emphasizes flexibility, serving a variety of different AI models depending on the given task, as well as security and privacy, creating sandbox environments for safe experimentation.

With a complete focus on OpenText Cloud, in the form of Project Titanium and Cloud Edition 24.1, 24.2, and 24.3, OpenText offers customers new capabilities. In June 2024, OpenText announced that it has achieved "fully authorized" status by the Federal Risk and Authorization Management Program (FedRAMP®) for its Cloud for Government solution in the United States, which now includes OpenText Extended ECM and OpenText AppWorks, two core products within the OpenText Content Cloud portfolio.

OpenText has continued to partner with Google, offering its Solution Extensions for SAP applications in Google Cloud zones globally. In January 2023, OpenText completed its acquisition of Microfocus for $6 Billion.

<u>**Strengths**</u>	<u>**Challenges**</u>
• Brand recognition	• Reconciling number of product offerings
• Install base	
• Growing focus on AI	
• Workflow and integration with business applications	
• Content analytics	
• Records management and compliance	

Contenders

IBM

IBM, which continues to be led by CEO Arvind Krishna, has continued to support existing customers, such as those with IBM FileNet and Content Manager, while also refocusing on Cloud. IBM continues to offer IBM Cloud Pak for Business Automation.

FileNet continues to offer on-premise and, with its IBM Cloud Pak for Business Automation, the ability to modernize their existing FileNet deployments with workflow and AI while shifting the on-premise deployment to a containerized one. New features for FileNet in 2024 include a DocuSign plug-in, a bring-your-own Search capability, and a new framework for content validation and malware scanning. The bring your own search includes support for Elastic Search or Open Search.

IBM also offers IBM Content Services, an AWS Service powered by IBM, that offers a full SaaS ECP offering for those who want to migrate their content to the Cloud. Besides IBM Content Services, IBM continues to offer enterprise content offerings, including IBM FileNet, IBM Content Foundation, IBM Datacap, IBM Content Classification, and IBM Enterprise Records. IBM continues to offer a strong records management feature set, which is important in compliance-related enterprises.

IBM's new watsonx.ai product provides a studio for enterprise users to manage AI models through their entire lifecycle, from training to testing to eventual deployment. It features unique generative AI capabilities for content automation that cover a wide range of content modalities, including social media style content such as blog posts, and higher-stakes forms of content such as production-ready code for a landing page or application. IBM continues to invest in AI, with Watson Explorer as its flagship content analytics offering. Watson Explorer supports documents, voice, and video. It also continues its focus on AI, content, and knowledge with its Watson Discovery, Watson Orchestrate, and Watson Knowledge Catalog.

Historically, one of IBM's strengths is its ability to service large enterprises, particularly those in Financial Services and Government. IBM has several industry solutions for ECM that complement its large install base. Current use cases include sales, case management, customer service, and support. Given that IBM's support for modernizing its FileNet offering as well as its growing AI focus, enterprises should evaluate these offerings to modernize IBM legacy deployments while retaining control over data residency.

Strengths	Challenges
- Extensive security options - Content analytics - AI expertise - Support for on-premise and cloud - Install base	Balancing multiple content management offerings

Laserfiche

Laserfiche, based in Long Beach California and led by CEO Karl Chan, continues to offer its ECP platform—the Laserfiche Cloud. Laserfiche excels in imaging, document capture, and business process automation solutions. Besides its core document management and image and capture management offerings, Laserfiche also offers electronic forms and records management, which is DOD 5015.2 certified.

Laserfiche announced its new document summarization capabilities in April 2024. This is in addition to its intelligent capture and search for audio and video files stored in the Laserfiche cloud. Laserfiche also enables users to search through the document cloud and mine unstructured data for insights. Its document understanding toolkit captures document sentiment and enables the automation of processes for improved team collaboration. Documents can be analyzed through the proprietary generative AI system, which adapts to the way organizations manage information to streamline the delivery of key documents and knowledge.

Laserfiche has a number of reseller partners, including Ricoh, ImageNet, ThinkDox, Gestech, and others. Laserfiche has been expanding its integration capabilities via partnerships. Laserfiche continues to partner with Boomi and Salesforce MuleSoft to leverage their respective iPaaS connectors. In March 2023,

Laserfiche provides support for deploying to on-premises data centers, to IaaS virtual private clouds, or with SaaS, with scalable deployment options for government, education, healthcare, manufacturing, and financial services. With a growing focus on Content AI, Laserfiche is well-positioned for the future.

Strengths	**Challenges**
• Content management	• Awareness outside of North America
• Electronic forms	
• Growing focus on AI	
• Rich content support	
• Vertical solutions focus	
• Local government install base	

Newgen

Newgen, headquartered in India with its US office in Virginia, and led by its CEO Virender Jeet, offers its ECP platform, NewgenOne, which focuses on contextual content services, low code process automation, and omnichannel customer engagement. The Newgen product offerings includes the OmniDocs ECM suite, iBPS BPM suite, and OmniOMS CCM suite. In content AI, Newgen provides its Intelligent Document Classifier, which automatically classifies documents based on both document structure (image analysis) and content (text analysis).

In May 2024, NewGen announced its new AI based LumYm offering for the banking sector. LumYm uses Generative AI to find insights for Banks and its customers. It allows for better understanding of customer needs and the ability to offer upsells based on those needs.

NewgenONE Marvin is Newgen's generative AI suite, which works with documents and processes to enable knowledge automation across the enterprise. For content, Marvin features retrieval and automated document metadata filling. Its intelligent content management platform streamlines content management and enables dynamic content creation, which can serve customers unique experiences on-the-fly.

Newgen has always been strong in the banking and financial services space, with a library of applications such as account opening solutions. In 2023, Newgen announced, OmniScan 6.0, its enhanced document scanning solution. It also offers Intelligent IDXtract—used for classifying and extracting information out of identity documents, and Sentiment Mining, used for categorizing customer social media interactions such as posts, messages, or emails.

Newjen offerings can be deployed on Amazon AWS and Microsoft Azure, as well as other public and private cloud environments, giving it cloud options for enterprises. OmniDocs also includes records management that is DOD 5015.2 certified.

Strengths	**Challenges**
• Content management	• Market awareness
• Growing focus on AI	
• Mobile app support	
• CCM/doc generation	
• BPM	
• Strength in financial services	

![Aragon Research logo]

Oracle

Oracle, which is led by CEO Safra Katz, offers a full portfolio of Content Services under the umbrella of Oracle Content Management. The updated platform can serve the needs of the enterprise in ECP, content experience, and digital asset management. Key capabilities include document management, digital asset management, records management, and imaging. Its content AI focus makes finding and creating content easier.

Oracle now offers a suite of generative AI solutions through its Oracle Cloud Infrastructure Generative AI service. This new service combines a variety of foundation models into a single platform that allows business leaders to select models that meet the needs of their own use case. It also features fine-tuning that makes it possible to even more carefully tailor models to buyer needs.

Oracle continues to offer Oracle Content Capture, which is part of the document management offering. Video is a growing focus for Oracle Content Manager. Capabilities include storyboarding, video capture, and video content management. Oracle can also generate custom content forms to assist users with their content creation needs. Workflows and approvals are also built-in, along with strong versioning. Oracle is helping enterprises go mobile with its OC&E offerings, which support firms in multiple industries. Key use cases include accounts payable and life sciences.

Oracle is well-positioned to meet all of an enterprise's internal- and external-facing content requirements. Oracle's cloud focus has enabled it to offer an omnichannel and customer experience focus that can also leverage its own content analytics capabilities. Oracle offers one of the most integrated architectures that allows both internal content (ECP) and customer-facing experiences to be leveraged.

<u>Strengths</u>	<u>Challenges</u>
• ECM capabilities	• Balancing the breadth of the Oracle portfolio
• Mobile support	
• Records management	
• DAM and video support	
• On-premise or cloud offerings	

Innovators

AODocs

AODocs, based in Atlanta, Georgia, and led by CEO Stéphane Donzé, offers a low code Content Services Platform that also now includes eSignature capabilities and a growing ability to integrate with Google AI. AODocs offers full ECP features, including records management. It also is fully integrated with Google Workspace as well as Google Drive.

AODocs now leverages generative AI to improve its document management capabilities. Its integrated AODocs generative AI assistants communicate with users to catch mistakes, management document processes, and enhance knowledge worker productivity. Its assistants dynamically generate answer-based user content, tagging and prioritizing pieces of content that correspond to business needs.

AODocs integrates with both Google and Microsoft. In 2022, AODocs made integration with Microsoft 365 easier with integration with Microsoft 365 Groups. The low code capabilities from AODocs make it much easier for non-programmers to create complex workflows and automation, including the ability to create formulas in documents, similar to what is done in spreadsheets.

AODocs continues to focus on multiple industries, including life sciences, government, healthcare, manufacturing, and retail. AODocs also has a growing partner network, which, besides Google, includes Tata Consultancy Services, Accenture, PSIGEN Software, and Salesforce. AODocs has expanded its solution set, and with its low code capabilities and Google and Microsoft integrations, it is one to watch in ECP.

	Challenges
Strengths	
• Cloud offering	• Market awareness
• Growing set of integrations	
• AI	
• Microsoft 365 Integration	
• 21 CFR Part 11 support	
• Industry solution expertise	

KnowledgeLake

KnowledgeLake, based in St. Louis and led by CEO Ron Cameron, has a growing focus on AI for its portfolio which includes ECM, intelligent document processing, workflow automation, and RPA. They also announced Bart Peluso III as Vice President of Marketing. KnowledgeLake continues to be one of the go-to choices for document capture for Microsoft SharePoint. KnowledgeLake, which is now cloud-first, also offers support for document capture in the Microsoft Azure Government Cloud.

In February 2024, KnowledgeLake announced its Intuitive AI™ offering that can automate the classification and data extraction from documents without training. KnowledgeLake's StreamLine product series leverages emerging AI innovations to simplify the process of content management and business process automation. It makes the process of building a customer experience portal simple by integrating an AI assistant. Similarly, its workflow engine and Pro-Forms capabilities streamline workflow management and form delivery. KnowledgeLake's Intuitive AI system also leverages generative AI to interpret documents on-the-fly, enabling enterprise content understanding.

KnowledgeLake offers AI-based image processing on the inbound transactional content to extract and process unstructured content from the form or other document. That, combined with its proprietary robotic process automation (RPA), can help to automate the entire content process, from document capture to workflow to storage and archival.

KnowledgeLake, which is now cloud-first, also offers support for document capture in the Microsoft Azure Government Cloud. It also announced a new partnership with Carahsoft to focus on enterprise automation for education, government and healthcare firms.

Due to its cloud focus, KnowledgeLake offers enterprises migration services to the cloud and supports a growing list of on-premise providers it can migrate to the KnowledgeLake Cloud. Besides Microsoft, KnowledgeLake integrates with Amazon AWS and Box. KnowledgeLake focuses on Financial Services (including banks, credit unions, and wealth management), government, higher education, manufacturing, and supply chain.

Strengths	**Challenges**
- Cloud native - Intuitive AI and Workflow in the platform - Document Capture - AI-based Extraction - Proprietary RPA - Microsoft compatibility - Integrations - Focus in Financial Services and Government	Market awareness outside of the Microsoft environment

![Aragon Research logo]

RPost

RPost, based in Los Angeles and led by CEO Zafar Khan, focuses on secure content management, collaboration, transaction management, and content automation.

RPost has five product platforms, each centers on processing and sharing content in specialized ways, and each generates records surrounded by evidentiary metadata related to transmission or interaction with the content throughout its life. These five RPost product platforms are: RMail® email and file share security, Registered Email™ encryption, proof, and privacy compliance, RSign® eSignatures and digital transaction management, RForms™ click-build eforms and workflows, and RDocs™ document controls and rights management.

One of the significant innovations of RPost Intelligence is how RPost takes these content insights, maps them to a risk model, detects anomalous activity indicative of cybercriminal, human error, or internal leak threats, and automatically locks the exposed content to pre-empt sensitive information being leaked or a leak being a reportable breach. RPost calls this its AI Auto-Lock™ smart technology. By infusing AI auto-detection into its products, RPost is changing the way that companies can protect content and transactions.

RPost RForms also helps with data capture with click-wrap, pre-fills from related databases or CRMs as well as backfilling form field data into other applications, and overall workflow automation. In email, RPost offers Email Eavesdropping™ AI that can pre-empt cybercriminal GenAI powered-up business email compromise wire fraud lures, RMail® email encryption generates a privacy compliance record, Registered Email™ proof of delivery generates an authenticated original with a court-accepted record of who legally delivered what to whom and when, and RSign® eSignature services generate an advanced digital transaction record certificate for transaction authentication.

RPost also offers a full API Platform to allow native integrations with new and legacy applications. Out of the box integrations include Microsoft Office Word, Microsoft Outlook and Google Gmail and Docs, document management products like iManage and NetDocuments, as well as CRM providers including Salesforce and Bullhorn among many others.

RPost focuses on Financial Services, Insurance, Legal, Government, Healthcare, Life Sciences, and Real Estate sectors. With its strong security and cybercriminal eavesdropping detection and content auto-lock capabilities, RPost is seeing growing popularity in Financial Services and Government, including Swiss FINMA. With its growing product portfolio and holistic focus on content and content security, RPost is making it safer to manage content in high-consequence industries.

Strengths	**Challenges**
• Ease of use • Content Security • Document generation • eSignature • Secure Email • Integrations • Payments • Analytics	• Market awareness

Aragon Advisory

- Enterprises should conduct a strategic and tactical review of their various ECP providers and plan on exit strategies for those that do not have compelling product roadmaps.

- Enterprises should evaluate current providers for their AI capabilities, including Generative AI, and look to change providers if the focus on AI is not there.

- Enterprises need to evaluate the specific needs of the enterprise, as capabilities will vary for newer digital advancements, such as content analytics and video and image management.

Bottom Line

The ECP market is now AI-enabled, and with that comes new ways to leverage legacy content, as well as produce new content. The need to transform the enterprise means not standing still in enterprise content. Leveraging AI to understand what content exists as well as automate content processes can provide a strategic advantage now and in the future.

Aragon Research Globe Overview

The Aragon Research Globe graphically represents our analysis of a specific market and its component vendors. We provide a rigorous analysis of each vendor using three dimensions that enable comparative evaluation of the participants in a given market.

The Aragon Research Globe looks beyond size and market share, which often dominate this type of analysis, and instead uses those as comparative factors in evaluating providers' product-oriented capabilities. Positioning in the Aragon Research Globe will reflect how to complete a provider's future strategy is relative to their performance in fulfilling that strategy in the market.

A further differentiating factor is the global market reach of each vendor. This allows all vendors with similar strategy and performance to be compared regardless of their size and market share. It will improve the recognition of providers with a comprehensive strategy and strong performance but limited or targeted global penetration, which will be compared more directly to others with similar perspectives.

Dimensions of Analysis

The following parameters are tracked in this analysis:

Strategy reflects the degree to which a vendor has the market understanding and strategic intent that are at the forefront of market direction. That includes providing the capabilities that customers want in the current offering and recognizing where the market is headed. The strategy evaluation includes:

- Product

- Product strategy

- Market understanding and how well product roadmaps reflect that understanding

- Marketing

- Management team, including time in the job and understanding of the market

Performance represents a vendor's effectiveness in executing its defined strategy. This includes selling and supporting the defined product offering or service. The performance evaluation includes:

- **Awareness**: Market awareness of the firm and its product

- **Customer experience**: Feedback on the product, installs, upgrades, and overall satisfaction

- **Viability**: Financial viability of the provider as measured by financial statements

- **Pricing and Packaging**: Is the offering priced and packaged competitively?

- **Product**: The mix of features tied to the frequency and quality of releases and updates

- **R&D**: Investment in research and development as evidenced by overall architecture

Reach is a measure of the global capability that a vendor can deliver. Reach can have one of three values: *national*, *international,* or *global*. Being able to offer products and services in one of the following three regions is the third dimension of the Globe analysis:

- **Americas** (North America and Latin America)

- **EMEA** (Europe, Middle East, and Africa)

- **APAC** (Asia Pacific: including but not limited to Australia, China, India, Japan, Korea, Russia, Singapore, etc.)

The market reach evaluation includes:

- Sales and support offices worldwide

- Time zone and location of support centers

- Support for languages

- References in respective hemispheres

- Data center locations

The Four Corners of the Globe

The Aragon Research Globe is segmented into four sectors, representing high and low on both the strategy and performance dimensions. When the analysis is complete, each vendor will be in one of four groups: *leaders*, *contenders*, *innovators,* or *specialists*. We define these as follows:

- **Leaders** have comprehensive strategies that align with industry direction and market demand and perform effectively against those strategies.

- **Contenders** have strong performance, but with more limited or less complete strategies. Their performance positions them well to challenge for leadership by expanding their strategic focus.

- **Innovators** have strong strategic understanding and objectives but have yet to perform effectively across all elements of their strategy.

- **Specialists** fulfill their strategy well but have a narrower or more targeted emphasis with regard to overall industry and user expectations. Specialists may excel in a certain market or vertical application.

Inclusion Criteria

The inclusion criteria for this Aragon Research Globe are:

- *Revenue:* A minimum of $4 million in primary revenue for enterprise content platform software, or $8 million in a related market (ECM, cloud content management, portal, or collaboration).

- *Shipping product:* Product must be announced and available.

- *Customer references:* Vendor must produce a minimum of three customer references in each region that the vendor is a participant.