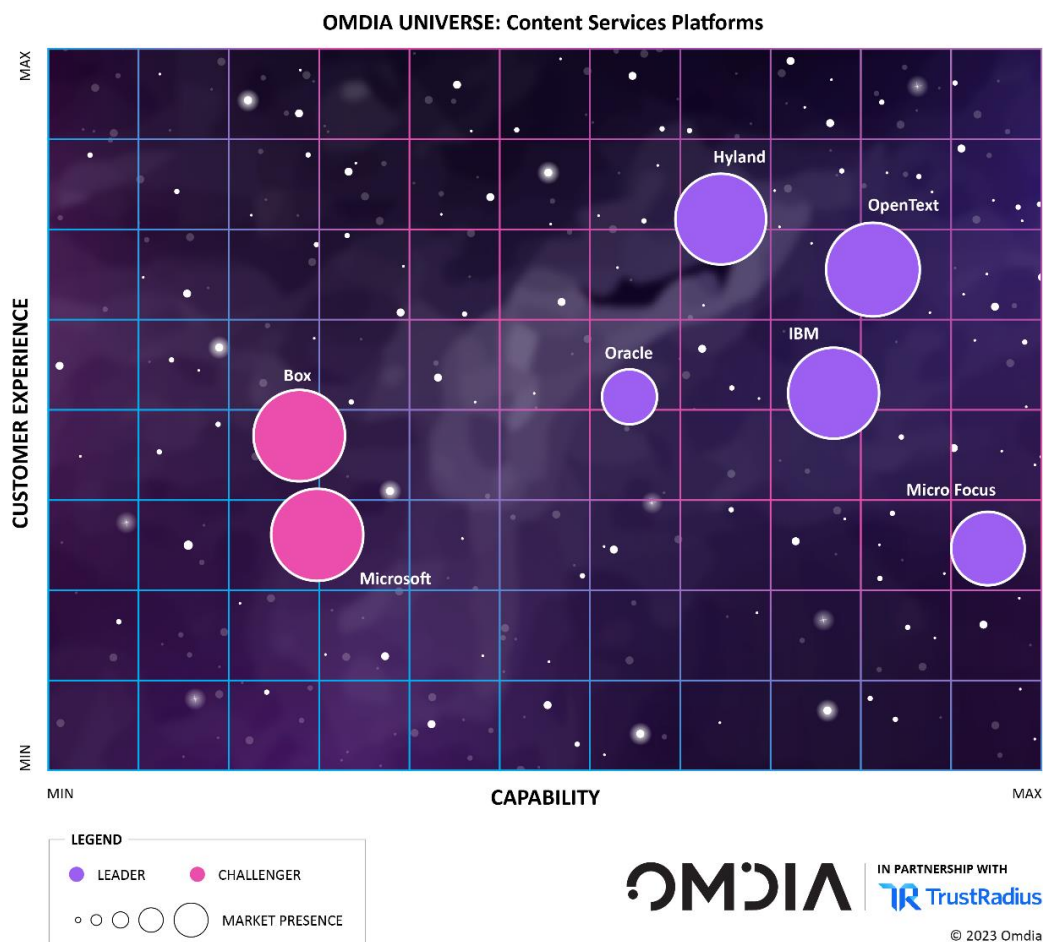# OMDIA

UNIVERSE

Content Services Platform Solutions, 2023

OMDIA

Summary

Catalyst

During the COVID-19 pandemic, enterprises needed to adapt and demonstrate agility to survive. In 2023, they will face further challenges as a downturn bites, with some countries set to be hit harder than others. This means seeking cost-savings and efficiencies by implementing solutions such as content services platforms. This report compares the solutions from leading content services platform vendors and will help decision-makers to draw up a shortlist of products to consider.

Figure 1: The Omdia Universe for Content Services Platforms

Source: Omdia

Omdia view

Over the past three years, enterprises have been forced to adapt and become more agile in order to survive during the COVID-19 pandemic by becoming more efficient. One of the ways this has been achieved is by accelerating digital transformation initiatives by replacing legacy applications with modern, agile applications and by adapting their systems and infrastructure to support a largely home-based workforce. Now we are learning to live with the pandemic, enterprises must face a new threat—that of a downturn and increasing costs, which is expected to hit enterprises hard in 2023 and will require more changes. Digital transformation initiatives will continue, but there will be an emphasis on rationalization and optimization by making efficiencies and cost savings, which will largely be achieved in the content management space through technology.

One area where technology can help is by automating manual processes. Where these manual processes are mundane and highly repetitive, robotic process automation (RPA) may be an option, and some content services platform vendors have added RPA to their portfolios. Another way of building automated processes is to use the business process management (BPM) tools provided by many content services platform vendors. It will be the enterprises that are able to adapt to this latest challenge that will ride out the recession.

During a downturn, it is inevitable that some reduction of headcount will be required, but by using technology effectively and taking advantage of the features and functions that the content services platform vendors provide, including cloud implementation options, enterprises can survive. A downturn or even recession can provide a good opportunity to implement new systems, so enterprises that are yet to commence their digital transformation journeys should do so now. Omdia *IT enterprise Insights 2023* shows that only just over 6% of enterprises surveyed have not yet started a digital transformation initiative in the area of exploiting business information. The good news is that the survey shows that budgets are increasing in the post-COVID-19 era, with the number of enterprises significantly increasing their budgets, rising from 20.84% to 25.54%.

Content services platforms should form an important part of a digital transformation strategy as they manage the 80% of an enterprise's data that is not transactional and stored in a database. Although there are different approaches to content services platforms from the vendors, all platforms comprise a number of core capabilities that include:

- The repository

- Document management and collaboration

- Search

- Workflow (at least basic)

- Integration capabilities

- Development tools.

The differences occur in the additional features provided. Some solutions include basic records management capabilities that are included with the platform, while other vendors have full records management platforms that are available as add-ons and may incur an additional cost. The former option may include the ability to declare content as records, manage access rights and set retention and disposition schedules, and possibly create legal holds, which will suit many enterprises that require light records management capabilities. The standalone records management option will be preferable for enterprises in highly regulated industries that require a robust records management system that is certified against standards such as the Department of Defense (DoD) in the US. Other differences include the availability of content services applications, with some vendors providing many horizontal and/or vertical applications while others only provide a few. Selecting the appropriate content services platform depends on matching the enterprise's requirements against the features provided by each vendor.

Analyzing the Content Services Platform Solutions universe

Market definition

In this assessment, Omdia analysts have developed a series of features and functionality that would provide differentiation between the leading solutions in the content services platforms marketplace. The criteria groups identified are as follows:

- Content Services Platform. This category includes the content repository, document management and collaboration, workflow, integration, and search capabilities. Some platforms provide additional capabilities, such as records management and analytics.

- Document management and collaboration. The ability to create and edit content in a collaborative environment; collaboration capabilities may include file sync and sharing.

- Search. The ability to locate content across the enterprise on local drives, desktops, and a wide range of repositories, including those that are cloud-based.

- Content analytics. Tools that analyze how content is being used and who is using it, which is useful in assessing whether content has value to the organization.

- Workflow and BPM. The ability to create content-centric processes that are often triggered by the receipt of an item of content. These may range from simple approval processes to complex processes that involve interactions between multiple applications.

- Content services. The features that are included to enable content services, such as development tools, common integration mechanisms, and prebuilt horizontal and vertical industry applications and components, as well as the content services applications themselves, such as records management and capture.

- AI and ML. How AI and ML capabilities are embedded throughout the product in areas such as document management, content analytics, BPM, reporting, and search. Also, how enterprises can use the capabilities provided in the platform when building their own applications.

- Development and integration. The provision of low-code and no-code tools, components and widgets, and horizontal and vertical applications that are provided for developers to create applications that interact with content as well as the methods by which the content services platform can integrate with other applications, including the availability of prebuilt connectors

to common third-party applications including analytics, enterprise resource planning (ERP), and other content services platforms.

- Cloud. The various options for cloud deployment include the cloud options available; which public clouds are supported; the ease, cost, and speed of migrating content to the cloud; and cloud security.

- Governance and security. Features and functions included that help to ensure that content is secure and managed appropriately.

Market dynamics

Over the past three years, the market dynamics in the content services platform space have been driven by the COVID-19 pandemic, which has resulted in accelerated digital transformation initiatives. One of the major changes has been to working practices, with most employees being forced to work from home during the height of the pandemic. Although many have now returned to the office for at least part of the week, there has been a permanent change with many enterprises having to manage both office and home workers, with the additional requirements and security measures required to manage a blended or hybrid workforce.

In 2023, market dynamics will be dominated by increases in costs and a downturn, forcing enterprises' focus to change to become more efficient and sustainable to achieve cost savings. Modernizing legacy applications will be important, as will continuing with digital transformation initiatives, but the focus will be on modernizing and retaining applications that are deemed to be working well. This fits well with the content services paradigm, where the content repository is separated from the applications that access the content, allowing third-party applications to integrate easily with the platform. This means that implementing a content services platform is no longer a case of rip-and-replace, and an added advantage is the fact that modern systems are generally more cost-effective, especially if they are implemented in cloud environments.

Many enterprises will also be forced to make cost savings by reducing headcount, which calls for more automation to enable enterprises to do more with less. Vendors such as Hyland and IBM have already anticipated the growing importance of automation. There are many examples of mundane, highly repetitive, manual content-centric processes that are ripe for RPA applications, and these vendors have added the technology to their portfolios and made it available to their content services customers. Such tasks include document processing—which also provides the benefit of making enterprises more sustainable by reducing their paper usage by eliminating the need to print documents. However, RPA is not the only way to automate processes, and most content services platform vendors also include BPM capabilities allowing enterprises to build process-centric applications that automate manual tasks. Vendors that provide prebuilt applications for content-centric tasks such as content capture will be at an advantage over those that do not when enterprises are considering platforms. Over the next few years, more content management vendors are likely to acquire RPA capabilities.

There will also be more consolidation in the content services platform space, with OpenText expected to complete the acquisition of Micro Focus in the first half of 2023. This will reduce the

number of content services vendors in the marketplace, and it shows a growing trend of vendors that have multiple content services platforms in their portfolios, as this will bring OpenText's total to three, Hyland with four distinct content services platforms, and IBM has two.

Cloud is also growing in popularity, although there is a difference in approach by vendors. Some—such as OpenText and Micro Focus—still have many on-premises customers, in some cases because it would be a complex undertaking to migrate to the cloud and in others because of security concerns of moving sensitive content off-premises. Other vendors, such as Hyland, are investing heavily in the cloud and have a high cloud take-up among their customers. There are vendors that have their own cloud services using their own data centers, and this group includes IBM, OpenText, and Oracle. Finally, there are platforms that were created in the cloud, and Box is one such vendor. Although some customers will invariably remain 100% on-premises, there are indications that cloud is continuing to gain traction in the content management space. Omdia data shows that 35.6% of enterprises have deployed content management technologies as SaaS, with only 13.4% still using on-premises systems.

Figure 2: Vendor rankings in the Content Services Platforms Universe

Vendor	Product(s) evaluated
Leaders	
Hyland	Alfresco Digital Business Platform, Nuxeo Platform, OnBase, Perceptive Content, Hyland RPA
IBM	IBM Cloud Pak for Business Automation 22.0.1; IBM Cloud Pak for Business Automation as a Service (SaaS); IBM Content Services—multi-tenant SaaS on AWS (launched October 28, 2022); IBM Watson Discovery—available as SaaS offering and in Watson Discovery on Cloud Pak for Data 4.5; IBM App Connect—available as SaaS offering and also in App Connect 12.0 and Cloud Pak for Integration 2022.2
Micro Focus	Content Manager 10.1, File Analysis Suite 3.4, Structured Data Manager 7.6.5, File Reporter 4.0, File Dynamics is v6.5 Control Point, IDOL 13
OpenText	Documentum Platform 22.4, Documentum D2 22.4, Documentum xCP 22.4, Documentum Advanced Workflow 22.4, Records Manager, Retention Policy Services, Trusted Content Services, Documentum Reports, Extended ECM Documentum for SAP, Extended ECM Documentum for Salesforce, Content Connect, Magellan, InfoArchive, Brava!, AppWorks, Intelligent Capture
Oracle	Oracle Content Management, Oracle Integration Cloud, Oracle Visual Builder
Challengers	
Box	Box Drive, Box Relay, Box Shield, Box Governance, Box KeySafe
Microsoft	SharePoint, Microsoft 365, SharePoint Syntex, Microsoft PowerApps and Power Automate, Azure Cognitive Services, and Microsoft Search

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Source: Omdia

Market leaders

Hyland is a leader due to its extensive features in all technology areas, although not all of these may be available in a single platform. Because it has several platforms, the capabilities of each are targeted at specific customer types, meaning that it has a platform that will suit the vast majority of vertical industries and company sizes. Hyland is particularly strong in the areas of search, document management, and its content services platforms. It is an ideal solution for enterprises that have processes that are ripe for automation using RPA, or prefer a modern, open-source platform.

IBM is a leader because it scored highly in all technology areas, including content services platforms, document management and collaboration, and search. It benefits from its Watson portfolio of products, some of which can be used with its content services platform. It will suit the requirements of enterprises that are looking for a platform with a broad portfolio of products.

Micro Focus has moved from being a Challenger in the last Omdia Content Services Platform Universe to a leader in this report. This is because it has expanded its capabilities enabling it to score highly across all technology areas, including document management and collaboration, search, and artificial intelligence and machine learning (AI/ML). It is suitable for enterprises in heavily regulated industries that require a content services platform that provides secure content management and governance.

OpenText is a leader due to its high scores in all technology areas. Three of its strongest areas are its content services platform, document management and collaboration, and search capabilities. OpenText Documentum is suited to enterprises in many vertical industries, but is particularly suited to energy, life sciences, and healthcare, where it has produced industry-specific solutions. It will also appeal to enterprises that want a platform with extensive capabilities and tight integration with SAP, Salesforce, and Microsoft.

Oracle is a leader due to its extensive capabilities across all technology areas. It is particularly strong in the areas of content services platform, cloud, and development tools and integration. Oracle is particularly suited to enterprises that have already invested in Oracle technologies or wish to become Oracle-centric. With its own cloud and the Oracle Cloud@customer option, the solution will also appeal to enterprises that want to self-provision and manage their own software instance in a cloud environment.

Market challengers

Box is a Challenger as it has fewer capabilities than the leaders, although it addresses slightly different requirements. It is strong in the areas of content services platform, development tools and integration, and cloud, and also has extensive document management and collaboration capabilities which will appeal to enterprises that have a strong focus on collaboration and sharing content outside the enterprise. Having been built for the cloud, it is also ideal for enterprises that favor a cloud solution.

Microsoft is a challenger as it is missing a few capabilities that we would expect to see in a content services platform such as capture. However, Microsoft benefits from a huge ecosystem of partners who provide complementary applications that extend the capabilities of the platform. Although SharePoint and Microsoft 365 are widely deployed, they tend to be used as content services platforms at the departmental level or in midsized organizations, which makes them an ideal solution for these types of organizations.

Market prospects

There were no vendors in this category in this report.

Opportunities

Although a recession can be a difficult time for organizations, it can also provide an opportunity for vendors if they are flexible in the way in which they engage with customers that may be struggling during the worst of the recession. A recession is actually a good time to implement new systems as employees are not quite as busy as they would be during more prosperous times. There is more time to put together the strategy project plan and talk to employees about their requirements from a new system to ensure that the implementation is optimized. Vendors should consider adding more

out-of-the-box capabilities, such as prebuilt applications for common tasks to enable enterprises to get up and running more quickly, and reduce the requirement for professional services.

Another opportunity comes from RPA, with those vendors that already have the technology in their portfolios at an advantage. Building solutions to automate mundane, repetitive tasks such as document capture will help enterprises that are struggling to reduce costs do more with less. Vendors that do not already have RPA in their portfolios should consider adding it, as there are many content-centric tasks that are still being undertaken manually that are ripe for automation.

Threats

While a recession can provide an opportunity to modernize legacy systems, it will also deter many enterprises from investing in technology as budgets are squeezed. It is important that vendors encourage reluctant enterprises to continue with digital transformation initiatives as this will enable them to optimize and rationalize their content management operations and has the added bonus of becoming more sustainable by reducing paper usage.

Another threat comes from the number of content services platform vendors competing in a tough market. There are different vendor types, with the first type comprising smaller specialist companies that just offer content services platforms and related products that mostly originated as electronic document management and records (EDRM) vendors; these include Objective. Multiple product vendors also largely originated in the EDRM space, but then evolved into enterprise content management (ECM) due to the large number of content management applications they provided. Hyland, IBM, OpenText, and Oracle are in this group. Box started life as an EFSS vendor. Microsoft SharePoint and Microsoft 365 are the products that all other content services platforms integrate with and compete against when Microsoft customers grow their content services platform requirements. In addition, vendors also compete with in-house built content management systems, as well as legacy systems. Vendors need to persuade enterprises of the benefits of migrating to a modern content services platform.

Market outlook

The content services platform market will continue to thrive. The next year or two will be tough, with a global recession beginning to impact the market. According to Omdia IT Enterprise Insights, the biggest business challenge for enterprises in 2023 is increasing revenue/budget growth, with increasing operational efficiency a close second. Both will be at least partially achieved through automation in the content services area. However, while modernizing legacy applications is a top priority for more than 17% of respondents, only 8.7% believe intelligent automation and AI—which are important elements of modernization—to be a priority. This is a worrying statistic as it indicates that there is a danger that some enterprises implementing content services platforms may not optimize their systems fully and therefore fail to achieve maximum value by not taking full advantage of all features, such as the ability to build automation into in-house created solutions.

IT Enterprise Insights also shows that almost a quarter of enterprises are well-advanced with their digital transformation initiatives. However, vendors may struggle to persuade enterprises to commit to implementing content services platforms among those enterprises that have not done so already, as only 22.6% of respondents plan major investments in document management, which is a major component of a content services platform. Interestingly, more than 24.5% plan major investments in records management, and for these enterprises that have not implemented a content services platform, deploying a platform from a content services platform vendor that has a full-featured records management solution would prove to be more cost-effective than implementing separate products.

Vendor analysis

Hyland (Omdia recommendation: Leader)

Hyland should appear on your shortlist if you have multiple, mundane manual processes that are ideal for automation using RPA, and/or you prefer a cloud-native, fully-featured open-source content services platform with strong AI capabilities

Overview

Hyland is a vendor that has grown hugely in recent years through acquisition, and it currently has four distinct content services platforms within its portfolio, comprising OnBase Perceptive Content, Nuxeo, and the open-source platform Alfresco. Each of these platforms provides slightly different capabilities, addressing the requirements of a different set of customers. Hyland has arranged its portfolio so enterprises can implement their platform of choice on-premises or in the Hyland Cloud (a managed, hosted offering). In the future, a common set of content services will be delivered through the Hyland Experience Platform. Services include Hyland Experience Capture, a web-based document scanning, classification, and data extraction tool that provides intelligent capture facilities. Hyland has added RPA and blockchain to its portfolio in the past couple of years. While it is easy to see how RPA will benefit enterprises in helping them to automate mundane, repetitive tasks, it is more difficult to see how blockchain will be used in the content management space as a whole, and Hyland is definitely ahead of the curve in this respect. In terms of market size, Hyland is one of the larger vendors in terms of content services revenues.

Figure 3: Omdia Universe ratings—Hyland

OMDIA UNIVERSE VENDOR SUMMARY

Hyland: Content Services Platforms

LEADER

Source: Omdia

Strengths

Hyland scored highly across most technology areas in this Omdia Universe. Some of its strongest areas are search, document management, and its content services platforms.

In document management and collaboration, users can operate seamlessly within their Microsoft Office and Google Workspace environments. Users can store and manage Microsoft Office documents directly within Word, Excel, and PowerPoint. Hyland functions are integrated directly into Office applications to allow documents to be saved, imported, retrieved, and edited. Users can also access Hyland user options, troubleshoot messages, and request profile diagrams directly from the file menu of these Office applications. Documents can be saved as revisions with or without

revision comments attached, and users are able to view previous versions of documents. Folder structures can be defined with many levels, and documents assigned to a folder will inherit the keyword structure of the folder. Documents can be organized in folders according to enterprise preferences. Comprehensive content lifecycle management and governance are provided from the creation or capture of an item of content to its final destruction or archive. Capabilities include document classification and retention rules, which are applied at capture, and time and event-based automated retention policies, including transfer, declassification, archival, and disposition. Legal holds can be applied, and exception management is available.

Hyland uses native technology in conjunction with third-party OCR and search engines such as Elasticsearch, OpenSearch, Apache SOLR, and dtSearch for its search capability. A unified interface is used for retrieving content and textual information stored in documents, and searches are conducted across structured and unstructured data. Document type, date, keyword, metadata, and full-text searches are available. The use of wildcards, exact phrase, stem, Soundex, fuzzy matching, Boolean, literals, negation, query templates, proximity, ranges, spans, term expansion, thesaurus, and near searches are all supported. Searches can also be conducted across external repositories, and Hyland supports content management interoperability services (CMIS), which makes it easier to find content in disparate systems. Results sets can be refined using a variety of criteria, including result score, document date, file type, document type, keyword values, metadata, plain text, ranges, and lists. Faceting filters can be defined on metadata fields, and the feature "moreLikeThis" is available in both Apache SOLR and Elasticsearch/OpenSearch engines. Indexing can be performed each time a change occurs, or it can be scheduled to take place at a predefined frequency, and document types can be configured to be excluded from indexing.

Hyland has many capabilities in its content services platforms, but because this report looks at the capabilities of the vendor rather than an individual product, not all the features may be available in all of the platforms, hence the reason they are targeted at different customer bases with a variety of requirements. Capabilities include capture, content management, governance, process automation, case management, collaboration, search, and analytics. Prebuilt integrations are provided to many enterprise and line-of-business applications, and REST and event-based APIs, as well as RPA, can be used to dynamically access content in external systems. In-place management is also supported with prebuilt capabilities for more than 60 leading business systems and content repositories, email systems, network drives, and CMIS-compliant repositories. Provisions also include records management that can be applied to external repositories. Storage options for cloud include standard storage such as S3 for live content, archival storage, and WORM storage. Enterprises can define where they store content, either by manually specifying through a workflow or action, or automatically by using metadata values. Viewers allow content to be viewed without the native application being present. The viewer tool also provides the ability to collaborate on documents in real-time, with all participants able to respond to comments and annotations immediately. A chat window is available for communication during the review process.

Limitations
An area where Hyland could improve its capabilities is if it were to provide prebuilt, customizable workflows that are provided out-of-the-box for common tasks. This would help enterprises to get up and running more quickly. Hyland does provide prebuilt workflows for its industry solutions, and not providing prebuilt workflows for horizontal tasks is a conscious decision taken by Hyland as it recognizes that no two businesses are alike and each has individual requirements. Additionally,

Hyland consultants will create custom-built workflows that are tailored to meet a customer's specific business needs. This service is provided as part of the regular deployment process using Hyland's workflow solution. However, providing a few workflows for common tasks that enterprises could adapt for their own requirements that would also act as examples would help enterprises that prefer not to use professional services to get up and running quicker.

While Hyland has a portfolio of feature-rich content services platforms that should suit the requirements of virtually all enterprises, there is a risk that some enterprises may be overwhelmed by this choice and may not select the option that best fits their requirements. Additionally, some may have a preconceived idea of the platform they would like, which may not be the optimum one. Hyland needs to ensure that its sales teams always assess the requirements of potential customers and steer them in the direction of the best platform for their needs.

IBM (Omdia recommendation: Leader)

IBM should appear on your shortlist if you are looking for a content services platform vendor with a broad portfolio of products that extend the core capabilities of the content services platform

Overview

IBM is a well-established content services platform vendor that has FileNet as its core platform. IBM benefits from a large portfolio of products that extend the capabilities of its content services platform. For example, IBM Cloud Pak for Business Automation includes RPA, process mining and modeling, operational intelligence, document processing, workflow, decision management, and content services. Enterprises can select the capabilities they require. IBM also benefits from its Watson portfolio of products, including Watson Explorer and Watson Discovery, which can be licensed separately. Additionally, IBM has a huge global services arm, which can help with implementations. IBM offers a number of deployment options. IBM Cloud Pak for Business Automation as a Service is a single-tenant SaaS solution, which is managed in IBM Cloud. IBM Cloud Pak for Business Automation is a client-managed, private/public/hybrid cloud, designed to deploy within Red Hat OpenShift onto any Cloud Native Compute Foundation-certified Kubernetes platform. IBM Content Services is a multi-tenant SaaS hosted on AWS, managed by IBM, and running on Red Hat OpenShift for AWS, as well as a variety of AWS native services.

Figure 4: Omdia Universe ratings—IBM

OMDIA UNIVERSE VENDOR SUMMARY

IBM: Content Services Platforms

LEADER

Source: Omdia

Strengths

IBM is strong in all technology areas, including content services platforms, document management and collaboration, and search. IBM content services platform comprises part of a modular set of integrated software components, including content management, AI-based intelligent document processing, collaboration, content archiving, workflow/BPM, storage and repository connectors, content federation, records management, scan/fax and indexing, process mining, and RPA. IBM provides a number of tools for importing content into the platform: Datacap for scan, fax, email, and custom connectors; Content Collector for archiving documents from file systems, such as SharePoint, Exchange, and SAP; Content Integrator for federating metadata from a variety of repositories (OpenText, Documentum, SharePoint, databases, plus the ability to create custom connectors); and

a Bulk Import Tool for archiving images and metadata from filesystems. Connectors are provided in the UI. Integrations with backend systems include Salesforce, SAP, Microsoft SharePoint, Microsoft Teams, Microsoft Office 365 desktop applications, Microsoft Office Online, Microsoft Exchange, Box, App Connect, and IBM Content Navigator. There are also APIs for integration with other applications, and partners provide packaged integration solutions with a number of applications, including Guidewire. IBM Navigator is the UI, which can be customized to provide access to the capabilities that each user, group, or business unit requires. Developers can customize Content Navigator further by using plugins to create new menu actions, new features, customize and extend existing capabilities and integrate with external data sources. Custom UI apps can also be built.

IBM's document management and collaboration features are extensive with the ability to create new documents or edit existing ones in any desktop application from Content Navigator (IBM's UI). Editing in Microsoft Office is pre-configured, and administrators can configure other desktop applications such as Adobe Acrobat and Apple Pages/Keynote. Document templates can be registered, and documents can also be opened in Microsoft Office for the web, enabling collaborative, concurrent editing. Direct integration with Microsoft Office allows users to work within the Office Suite and browse the IBM repository, search, and open and edit documents. Documents can be saved to specific folders manually, automatically triggered by an event, using APIs, by integration with workflow, and with entry templates set to automatically file when used. Documents are associated with a document class when they are added to the system and are also assigned a major or minor version number. Automatic classification is enabled using AI/ML, and the document class also includes retention policies. IBM's records management component can be selected to provide stricter records management capabilities. A collaborative workspace called Teamspaces is provided for organizing projects and workflows to provide a focused view of documents, folders, and searches that a team needs to complete their tasks. Users can organize and share content, facilitate recurring work, and group-specific items such as documents, folders, and searches that are needed to work on a project.

Metadata, full text, and combined searches are provided with the platform. Users can search from the web application, mobile applications, or through custom applications via APIs. Searches can be undertaken across a single repository, repositories of the same type, and heterogeneous repositories (including IBM repositories, CMIS repositories, and Box). Users can enter text to search across indexed metadata and full-text content, and the results can be filtered using search facets. More complex stored searches can also be created where the search criteria are pre-specified and can be flagged as required, hidden, or "update-able" by the user at runtime. Access to Watson Explorer, Deep Analytics Edition, is included, which enables indexing and search, as well as content analytics, across an even broader set of content sources. A number of search methods are supported. For full-text search, IBM uses Lucene technology, which is included with the platform. Database search is used for metadata searches, and the metadata and full-text search results are combined to enforce access control. Other search methods include Boolean and natural language searches, which can be combined into a single search. Also available is hit highlighting. Searches can be initiated across metadata, full-text content, and tags, and users can refine the search with a set of filters that show values found in the search results. Indexing of documents occurs automatically when a document is added to the system. Administrators define which document types are indexed, and content can also be indexed after it has been added to the system.

Limitations

IBM does not have its own marketplace for the sale of connectors, which is a lost opportunity as it is something that other vendors have, and it would make it easier for IBM customers to integrate IBM's platform or applications with third-party applications. Instead, IBM connectors are available from the vendors that the connectors provide integration with, such as Salesforce.

Micro Focus (Omdia recommendation: Leader)

Micro Focus should appear on your shortlist if you are in a heavily regulated industry and require a content services platform that provides secure content management and governance

Overview

Micro Focus is a multiple-product vendor that includes a well-established content services platform in its portfolio. It is differentiated from the other vendors in this report in that its content services platform is part of its information management and governance product group. An important element of its content services platform is records management, which makes this solution ideally suited to enterprises in regulated industries with complex regulatory compliance requirements. Micro Focus benefits from IDOL—its AI-powered search and analytics engine. The inclusion of IDOL provides a differentiator for Micro Focus in terms of AI and ML features, as its capabilities are way beyond those of many of its competitors. Micro Focus provides secure content management, and its capabilities span discover, insight, protect, monitor, and manage. Micro Focus has boosted its capabilities since the last *Content Services Omdia Universe* in 2021, and it is now a leader in this latest Omdia Universe.

Figure 5: Omdia Universe ratings—Micro Focus

OMDIA UNIVERSE VENDOR SUMMARY

Micro Focus: Content Services Platforms

LEADER

MICRO FOCUS · · AVERAGE SCORE · · · MAXIMUM SCORE

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Source: Omdia

Strengths

Micro Focus is strong across all technology areas, including document management and collaboration, search, and AI/ML. Micro Focus is very strong in document lifecycle management, with the ability to manage documents from ingestion or creation to eventual disposal or archiving. Micro Focus also provides records management, which is an important element in managing the lifecycle of a document, particularly for enterprises in regulated industries. All Microsoft 365 tools are integrated with Content Manager, allowing users to save documents or have Content Manager actions applied to them without having to leave the Microsoft 365 application. Content can be imported into Content Manager, either individually using drag-and-drop, through the Office integration, or automatically in bulk.

Automated rules can be used to determine the best location or folder for bulk-loaded content. Document lifecycle features include document creation, editing, changing permissions as documents age or are declared as records, moving content between storage tiers, audit trails, provisioning of records management, retention management, and disposal. Content can be declared as records and is managed by a retention schedule until the end of its lifecycle. Multiple users can collaborate on documents, and documents can be checked in and out as new versions or revisions. Legal holds can be applied to documents, and there are also document storage encryption and compression options, as well as storage tier options, allowing less accessed data to be moved to a different tier. Areas of a document can be redacted, allowing security to be maintained while enabling multiple users with different access rights to work on the document. Built-in collaboration features are provided within Microsoft 365, One Drive, SharePoint, and other applications providing check-in and out, version control, composite documents, conflict resolution, and track changes. One-Drive integration provides real-time co-editing of documents.

Micro Focus provides extensive search capabilities with a Google-like full-text indexing and analysis engine and/or content metadata values and document content (including phrase, proximity, and Boolean logic). It can identify different versions of the same document utilizing built-in Micro Focus IDOL or Elasticsearch. It also provides federated searches between Content Manager and SharePoint, as well as all indexed repositories.

Both IDOL and Elasticsearch offer the ability to rank results by relevance, shading of large search indexes, and AI for indexing the most used metadata fields first. Both search engines support full content and metadata searches.

IDOL is a proprietary NLP engine that extracts in context topics, concepts, entities, named entities, negation, tagging (spatial, temporal), relationship/network, data pairs with label/number/date/text, key phrase, relationships (who did what to whom) including hundreds of grammars, regulatory grammars including addresses, driver's license numbers, health IDs, passport numbers, names, national IDs, postal codes, phone numbers, tax IDs, and dates of birth for 31 countries. It supports 27 languages. Also extracted is sentiment, conversation, emotion, effort, intent, slot filling, and fact extraction, with sentiment analysis, with a sentiment score being returned for each phrase or sub-phrase where sentiment is detected. IDOL is used for reputation and political analysis, particularly across print and broadcast news, radio, and social media for entity analysis with sentiment scoring.

AI and ML capabilities are powered by IDOL, which provides a comprehensive insight engine utilizing natural language understanding, processing, and ML to surface insights, and uncover trends, patterns, and relationships in context across text, video, image, and audio system data. It has bi-directional access to more than 150 data repositories, supports more than 1,400 data formats and 154 languages, and has out-of-the-box bi-directional access to 150+ data repositories. It can identify PII, PCI, and PHI data and can report, block, or redact it (including plain text, image, video, and audio). It supports deep data analysis and enrichment with BI for human information that uses a concept-first approach to drill down concepts or qualitative/quantitative parameters and intelligent workflow automation and data discovery that dynamically optimizes data collections. IDOL uses unsupervised ML and deep learning (DL) for rich media analytics and recursive neural network ML to provide image analytics, video analysis, audio, and language recognition and classification, speech-to-text, speaker ID, redaction, and script alignment. Rich media training allows language models for audio, image, facial recognition, and object training in video. Speech analytics is supported in 29

languages prior to speech-to-text transcription. IDOL can identify and classify audio into sections of silence and dialogue; multiple speakers; voice emotion; sentiment analysis; speaker, gender, and language identification; classification; and redaction of audio sections.

Limitations

Unlike some competitors, Micro Focus does not supply horizontal content services for common tasks, but has a large network of partners that build content services for customers. Providing some out-of-the-box content services would help enterprises to get up and running more quickly. Additionally, Micro Focus does not have a marketplace for connectors. It supplies many connectors out-of-the-box and adds approximately four new connectors each year. It also builds custom connectors for clients. Providing a marketplace that partners could contribute to would extend the number of connectors that the vendor can supply.

OpenText (Omdia recommendation: Leader)

OpenText should appear on your shortlist if you are looking for a content services platform with extensive capabilities and tight integration with SAP, Salesforce, and Microsoft

Overview

OpenText is a well-established content services platform vendor with three platforms: Extended ECM, Documentum, and Core Content. Documentum is the focus of this report. OpenText has been a leading content management vendor for many years, but in recent years has expanded its portfolio and no longer plays solely in the content management space. In addition to Content Cloud (its content services portfolio), it also has Business Network Cloud, Experience Cloud, Security Cloud, Developer Cloud, AI and Analytics, and Process Automation. For many years, OpenText has claimed to provide end-to-end information management capabilities, but its portfolio means that it has now expanded out of that remit. Included in the Content Cloud is OpenText's e-discovery portfolio. OpenText Documentum manages high-volume content for organizations, many of which are in highly regulated industries. It provides applications for energy, life sciences, and healthcare and has partners that provide solutions for other industries. It has tight integrations and partnerships with SAP, Salesforce, and Microsoft.

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Figure 6: Omdia Universe ratings—OpenText

OMDIA UNIVERSE VENDOR SUMMARY

OpenText: Content Services Platforms

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Source: Omdia

Strengths

OpenText is strong across all technology areas, in particular content services platforms, document management and collaboration, and search. Its content services platform is feature-rich, with many capabilities that help enterprises to manage vast repositories of content. It includes the core library and protection services for the Documentum server; all APIs and access SDKs, Documentum Foundation Classes (DFC), REST Services, and SOAP-based Foundation Services (DFS); CMIS; management tools; developer tools; Document Workflow Manager; Documentum Workflow Designer; and search and indexing tools. Content can be imported into Documentum manually through drag-and-drop or import functions in the document clients, or bulk loaded. Content can also

be copied, moved, or linked from SharePoint, as well as being captured using OpenText's Intelligent Capture application.

Content Intelligence Services provides content analytics, analyzing textual content objects, offering three types of analysis: categorization, entity detection, and pattern detection. It automates classification by combining taxonomy-based categorization, NLP-based named entity recognition, and patterns-based metadata extraction. Prebuilt taxonomies, entities, and patterns are included out-of-the-box for various industries and roles. Content can be auto-tagged, and metadata and relationships between documents are generated based on the context and role of the document in the business process. Archiving is supported using OpenText InfoArchive, which is a long-term archiving system. OpenText Documentum Records Manager manages the entire lifecycle of corporate records from creation or ingestion to the eventual destruction or archiving of records.

In terms of document management and collaboration, users can save documents in Microsoft Office applications into Documentum repositories. Auto-filing means users do not have to locate where to save a document. Folders are virtual entities based on metadata, and documents can be linked to multiple locations in the repository. OpenText D2 UI operates on common internet browsers on desktop, tablet, and mobile devices. Multiple document lifecycles can be created, and documents can be automatically attached to lifecycles from the time of creation to archiving. Virtual documents comprise a collection of files that can be combined to create a large document. The complete document is the parent, and the individual files are the children. Files can be used in different virtual documents at the same time. Standard co-authoring tools can be used, and in the case of Microsoft Office documents, Microsoft Office Content Connect integration means that files can be checked out of Documentum into OneDrive for editing. Brava! Viewer includes an HTML5 client that provides a secure, zero-footprint, cross-platform option for viewing almost all documents, images, or drawings without having the native application present. Files can be viewed on PC, Mac, Linux, and UNIX platforms using any browser. Brava! allows documents to be collaborated on with the ability to view and annotate video files, merge documents, discuss content, annotate and redact documents, including metadata, and publish to PDF and TIFF. OpenText Core Share—a SaaS sync and share collaboration content services application—integrates with Documentum and allows Documentum users to send documents to internal or external users for collaboration. Documentum's integration with Microsoft 365 allows Office 365's collaboration capabilities to be used, and data can be arranged in personal or shared workspaces.

Tools bundled with Documentum for search are Documentum xPlore—an enterprise search tool that supports full-text and metadata indexing and searching on content stored in the repository; Documentum Content Intelligence Services (CIS), which provides content analytics with three types of analysis available, categorization, entity detection, and pattern detection; Documentum Federated Search Services searching content outside the repository (including the internet); and Documentum Contextual Content Engine (CCE)—an extension to xPlore search that provides a content recommendation system adding contextual intelligence to the search services. Simple and advanced searches, metadata searches, and full-text searches are all supported. Boolean, conditional, fuzzy, query form, faceted, natural language queries, proximity, suggested search or auto-complete, and related content searches are all available. Search expansion on significant terms allows weightings to be added to terms that commonly occur in a result set, allowing the search to be expanded to related terms. Result expansion with managed vocabulary allows search results to be expanded to include synonyms of the searched term using a built-in thesaurus.

Limitations

OpenText Documentum does not make specific provisions for information rights management (IRM). Enterprises are expected to use the solution of their choice, which means procuring a system (if it does not already have one) and integrating via Documentum's APIs. OpenText could partner with an IRM vendor to either embed the technology in Documentum or resell the IRM application to make it easier for enterprises to procure the technology.

At present, there are multiple entry points into Documentum, but on the OpenText Documentum roadmap is a single point of entry, which will improve the user experience and make Documentum even more attractive to users.

Oracle (Omdia recommendation: Leader)

Oracle should appear on your shortlist if you are looking for an established content services vendor that has already deployed Oracle products or if you want to deploy in a private cloud with the complete set of cloud applications, middleware, and infrastructure provided

Overview

Oracle has a major differentiator from all the other content services platform vendors in that it has a single repository system for digital experience management and content services. This makes it very easy to store and work with any type of asset, including digital assets. This allows Oracle to support multiple use cases within a single platform using common functionality in many cases. Content can be delivered to any internal or external channel. Oracle Content Management (OCM) supports the ingestion, management, and creation of secure delivery portals or sites within a single solution, and content and OCM functionality can be embedded in line-of-business applications using the embeddable UI, making it a flexible solution. OCM is 100% cloud-native, with two-weekly updates of functionality. Oracle benefits from a large portfolio of software that includes ERP and CRM, which allows it to embed OCM functionality in these applications to provide end-users with a seamless experience. Oracle OCM will be particularly beneficial to enterprises that already have Oracle products in their portfolios.

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OMDIA UNIVERSE VENDOR SUMMARY

Oracle: Content Services Platforms

LEADER

ORACLE ·· ─ ·· AVERAGE SCORE ─ ─ ─ MAXIMUM SCORE
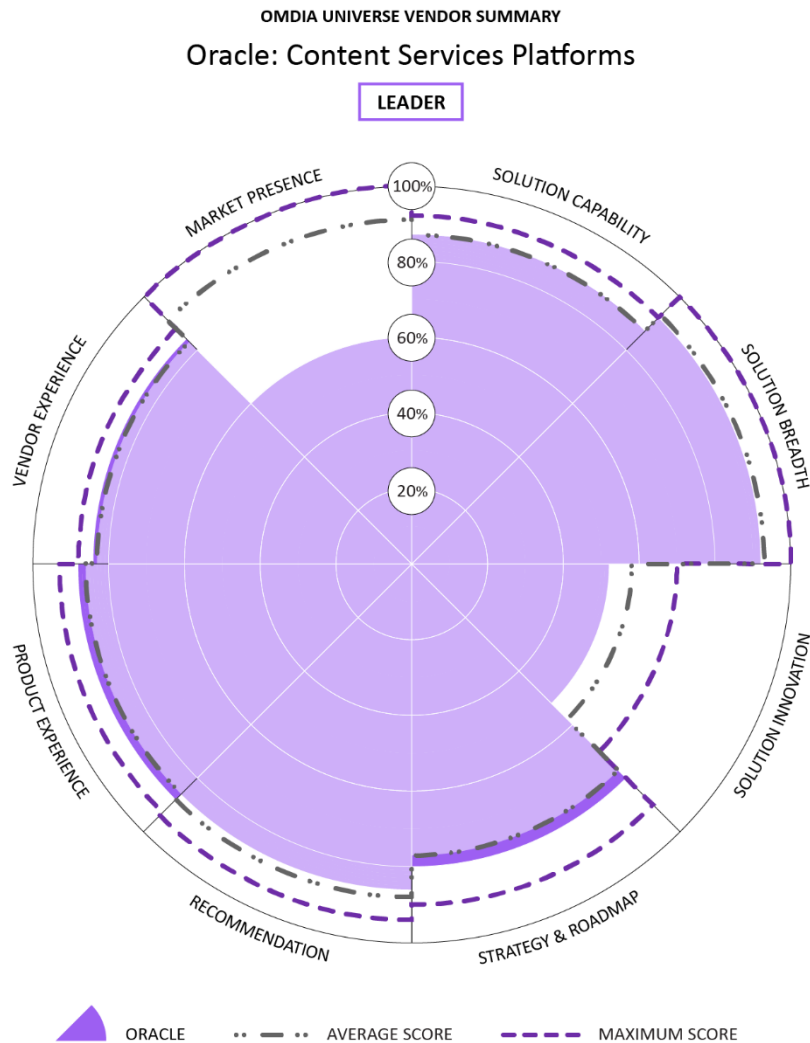
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Source: Omdia

Strengths

Oracle is particularly strong in the areas of content services platform, cloud, and development tools and integration. Its content services platform provides a common set of capabilities across all content and asset types, including connectors to third-party content systems for importing content, metadata, AI tagging and categorization, search, security, publishing, analytics, retention, conversations, flags, versioning, dependency tracking, audit logs, workflow, desktop sync, and more. Additional capabilities for content services include capture and forms recognition and for collaboration, such as file sharing and Office365 integration. Content can be imported using drag-and-drop, desktop folder and file sync; Office 365 integration; capture from scanning devices; email address; monitored folder or network location; and content connectors to third-party applications,

including SharePoint, Google Drive, Dropbox, Drupal, and Contentful. Content is generally managed in three groups: document folders, business assets, and digital assets. Document folders are used for document management and collaboration use cases. Documents inherit the classification and permissions of the parent folder. Asset types can be configured to include metadata. Business assets can be tagged, organized into collections, and associated with multiple taxonomies. The UI can be customized to provide users with a personalized home screen with recent content items, favorites, and access to workflow task lists, as well as any conversation flags.

Oracle provides its own data centers through which OCM is delivered as a cloud-native, multi-tenant SaaS. Customers can deploy instances of the service in any of Oracle's global data centers. The software can also be deployed in a private cloud via (Cloud@Customer). Customers manage their implementations, and many choose to use implementation partners. Customers self-provision and manage instances with updates deployed automatically every two weeks. A complete set of cloud applications, middleware, and infrastructure is provided by Oracle. Professional services are provided by Oracle Consulting Services as well as several certified Oracle partners. Oracle claims that for some use cases, such as document management and collaboration, OCM can be implemented in hours, but for larger, more complex use cases, it can take months. Oracle has data centers across the globe, which means enterprises can choose which data centers they want their data stored in to maintain data sovereignty. Connectors are provided to import content to OCM from other applications such as SharePoint, Dropbox, Google Drive, and Contentful. Oracle meets a broad set of international and industry-specific compliance standards for service deployments comprising GDPR Readiness, SOC 1, SOC 2, ISO 27001, ISO 27002, ISO 27017, ISO 27018, HIPAA, and PCI DSS by engaging with external assessment entities and independent auditors.

Oracle's development tools include a Site Builder allowing enterprises to build internal (or external) sites enabling them to quickly expose content. Customizable components are used within a drag-and-drop page builder with in-line editing. An embeddable UI allows developers to incorporate OCM content or functionality into applications, several JavaScript framework samples are provided for headless development, and support for GraphQL is included. For organizations looking to develop applications, Oracle provides Oracle Visual Builder, which is a low-code/no-code development platform integrated with OCM. Java is used for development, but REST Paid, Webhooks, and GraphQL are provided for integration with other applications. An application framework is available to accelerate time to market when solving content-centric business problems, and applications can be provided by Oracle, partners, or customers. Oracle provides a number of horizontal applications, including Sales Accelerator, which is a sales enablement portal; Brand Portal, a portal to deliver digital assets; and Video Hub, a portal that delivers streaming video. Out-of-the-box content connectors to Google Drive, Microsoft OneDrive, Dropbox, WordPress, YouTube, Microsoft SharePoint Online, Contentful, Drupal, Oracle WebCenter Content, and Oracle WebCenter Sites are provided. Application integrations consist of Oracle Service Cloud, Oracle Logistics Cloud, Oracle Marketing Cloud, Oracle Commerce Cloud, JD Edwards, and Oracle Integration Cloud with many more in development. The Oracle Cloud Marketplace provides connectors and integrations between OCM and third-party applications such as DocuSign. Listings in the marketplace are validated by Oracle.

Limitations

Oracle is very Oracle-centric, making it an ideal solution for existing Oracle customers or those wanting to implement multiple Oracle products. This does, however, mean that there is a distinct shortage of connectors to third-party applications in some technology areas, such as ERP and CRM. Connectors to third-party product applications in these areas would make OCM attractive to a wider audience. Additionally, Oracle has completely rebuilt its content management capabilities, and as such, there are some areas where additional capabilities will become available over the coming months, such as records management and a connector to an electronic signature application, which will extend the capabilities of the platform.

Nonparticipating vendors

All vendors included in the report were invited to participate in this study. Box and Microsoft did not participate. As a result, the vendors' evaluation in this report is based on publicly available information, analyst insights, and feedback from their customer base sourced directly via TrustRadius and Informa Tech audiences.

Box (Omdia recommendation: Challenger)

Box should appear on your shortlist if you are looking for a content services platform with strong document management and collaboration capabilities

Overview

Box is unique among the content services vendors in that it started life as an enterprise file sync and share vendor. Over the past few years, it has expanded its capabilities to offer a content services platform. Because its background is different from the more traditional content services vendors that have their roots in ECM, some of its capabilities are different. For example, it is not as strong in the records management area, although it does have some features, including the ability to create legal holds and set retention periods. It is certainly a case of work in progress as Box continues to grow its capabilities and extend its offering. In terms of revenue, Box is a large content services vendor. It has benefited from a strategic partnership with IBM, which provides the integration of IBM technology with the Box solution, providing a single location for managing, governing, and collaborating on content.

Figure 8: Omdia Universe ratings—Box

OMDIA UNIVERSE VENDOR SUMMARY

Box: Content Services Platforms

CHALLENGER
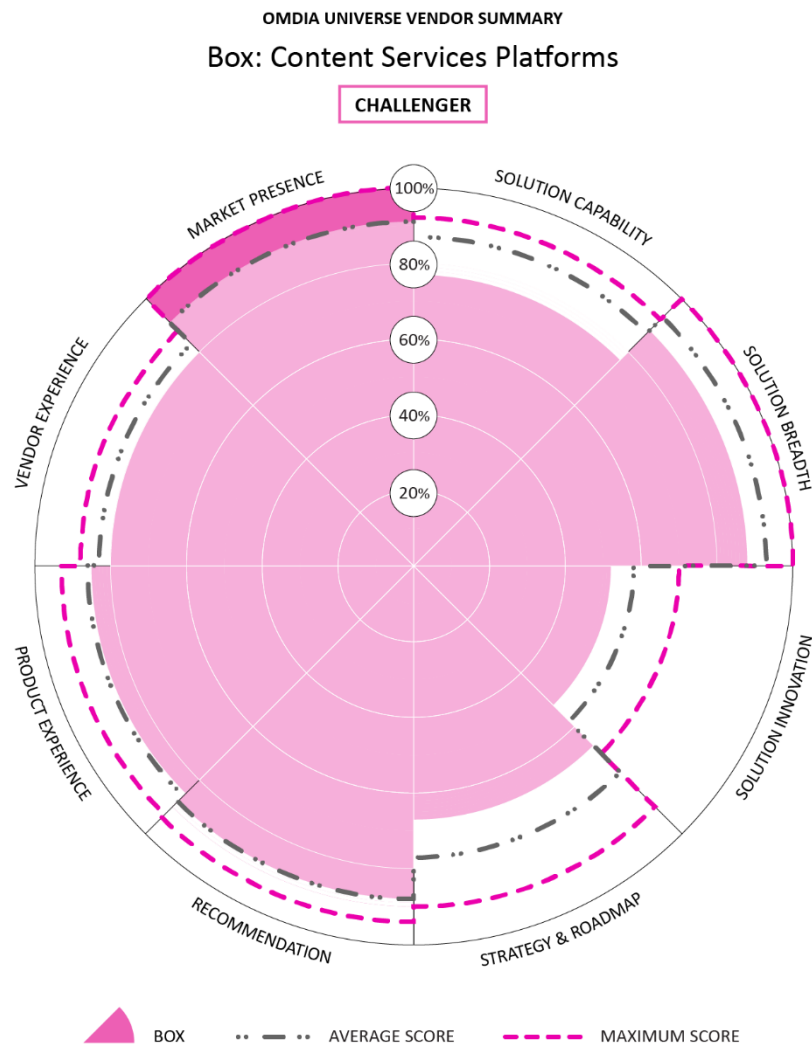
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Source: Omdia

Strengths

Areas of strength for Box are its content services platform, development tools and integration, and cloud. Box offers web, mobile, and desktop applications for cloud content management, with a platform that allows enterprises to build custom applications and industry-specific solutions. The platform includes an intuitive UI that can be used with little upfront training and provides access, sharing, and collaboration features. Users can securely access, manage, share, and collaborate on content using a wide variety of device types and operating systems. The preview capabilities allow users to view rich media assets such as video, AutoCAD files, and PDF, with the ability to annotate content directly within preview, and @-mention users for in-line collaboration. Multiple layers of security controls are deployed across users, devices, and applications, including the encryption of all

files stored in Box at rest and in transit. Box also has IRM features built-in to enable secure access and management of files by providing granular control over users' ability to access, view, download, edit, print, or share content. In addition, seven granular access permissions, the ability to expire shared links, and dynamic watermarking further extend the security of the platform. Box KeySafe allows further data security by maintaining control of the encryption keys, which makes the solution ideal for enterprises in highly regulated industries such as financial services, healthcare, government, and legal. Box Shield provides granular content controls and access policies that prevent accidental data leakage, as well as ML-powered threat and malware detection.

Box has been designed to be easy to use, with an intuitive UI, meaning it can be managed by business users with no development experience. Non-developers are served by 1,500 standard prebuilt integrations that do not require technical expertise to set up. However, Box integrates with several application development tools, including Mendix, Kony, and Out systems for low-code development, and there are also no-code tools, such as harmony, for line-of-business applications. Box supplies an extensive set of APIs comprising more than 180 public endpoints for accessing many of Box's core features, including file operations, collaboration, workflow, governance, eventing, user management, and legal operations. There is also a developer console that provides an application console to facilitate the creation and maintenance of Box applications and integration methods. Application governance provides governance controls for applications that include developer sandbox provisioning by administrators, as well as application approval requests, status updates, and authorization controls for administrators to manage custom-built applications. A range of SDKs (such as Java, .Net, Python, and Node) can also be used. Industry-specific offerings are available for a range of industries, including healthcare and life sciences, financial services, legal services, media and entertainment, retail, education, energy, and government. Box also provides tools for mobile app development.

Box was built to be cloud-only from the start, and there are a variety of pricing levels ranging from Business, which offers a limited set of features, to Enterprise Custom, which provides the full range of capabilities. Box provides a fully managed service with all regions covered, ensuring that enterprises can adhere to data sovereignty. Box Consulting provides a number of services, including content migration from a variety of source systems, including file shares, EFSS systems, ECM, and paper (including scanning), through the Box Shuttle service.

Box also has extensive document management and collaboration features with integration with content creation applications such as Microsoft productivity tools. Box Canvas provides workspaces allowing teams to collaborate on content. Box's background as an EFSS vendor means that it has very strong security features in all areas of the product. It includes some records management features allowing users to declare content as a record through the folder structure, security classification, or custom metadata. Box Governance supports retention at the enterprise, folder, and file level, with event-based retention also available. users can also specify what should happen at the end of the retention period. Legal holds can also be applied at the User or Custodian, Folder, File or File Version level, which applies to content in the "Trash/Recycle Bin" that has not yet been permanently deleted.

Limitations

Box's weakest area is AI/ML. Although there are no specific limitations in this area, there are not as many capabilities as some of Box's competitors. In addition, AI is not currently embedded in Box's native workflow solution, Box Relay, and AI/ML is not used to help sort and identify legacy documents for retention. In addition, third-party products are required to derive insights from content via Box Skills, which would be a useful feature for Box to provide natively. However, Box does provide native ML capabilities via its proprietary Graph technology, Box Graph. Box Graph is responsible for a variety of content and productivity intelligence features, including detecting anomalous usage patterns via Box Shield and flagging potential threats, auto-suggesting collaborators, recommending applications, and providing personalized search results based on the content and applications a user works most with.

Content analytics is another area where Box is weaker. For example, the ability to assess the sentiment within content, which is important in several scenarios, such as picking up negative comments about a product or brand, or identifying complaints in correspondence so a response can be prioritized.

Microsoft (Omdia recommendation: Challenger)

Microsoft should appear on your shortlist if you are a mid-sized organization looking for your first content services platform, or an enterprise looking for a departmental solution

Overview

Microsoft is the largest content services vendor in terms of the revenue it generates from SharePoint and Microsoft 365. However, not all enterprises that have deployed SharePoint are using it for its content management capabilities. Many enterprises that do use SharePoint as a content services platform are using it at a departmental level or on a project basis. Therefore, SharePoint is generally regarded to be a mid-market solution. In terms of content management, Microsoft benefits from a huge ecosystem of partners that provide complementary products that integrate tightly with SharePoint and extend its content management capabilities. In the past, many of these partner products would plug gaps in Microsoft's own functionality, but over time Microsoft has provided more features itself, so its reliance on third-party products for core capabilities has reduced. Most other content services platform vendors integrate with SharePoint and Microsoft 365 to enable enterprises to manage SharePoint file shares through their own content services platforms and use the office productivity tools as a content creation and editing environment.

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OMDIA UNIVERSE VENDOR SUMMARY

Microsoft: Content Services Platforms

CHALLENGER

MICROSOFT ···· AVERAGE SCORE ---- MAXIMUM SCORE
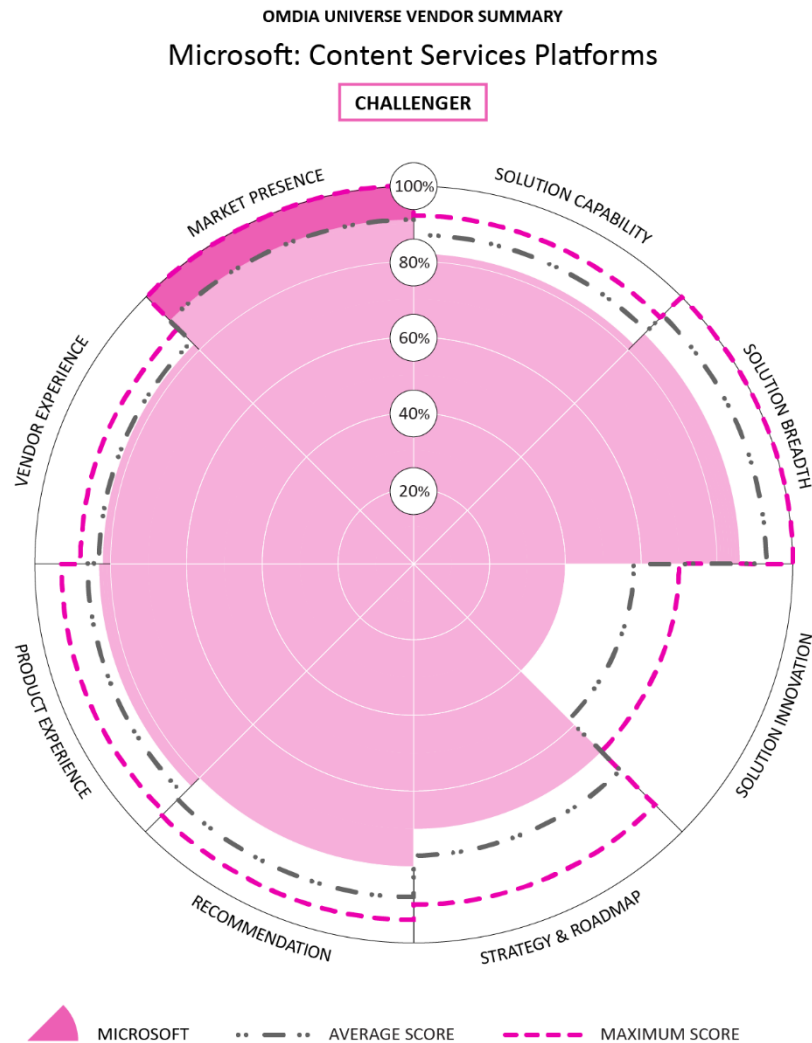
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Source: Omdia

Strengths

Microsoft's strongest areas are cloud, search, and document management and collaboration, and its AI/ML capabilities are also outstanding. SharePoint and SharePoint Online are generally deployed in Microsoft's Azure data centers, although Microsoft also supports third-party clouds. Azure includes many applications, with a large number in the area of AI/ML, including a bot service; analytics; various search options including image, news, and video search; cognitive services; a content moderator; an ML service; a translator service; linguistic analytics; document extraction services that understand forms; and text analytics. SharePoint users are able to benefit from these applications, many of which can be deployed as content services. With data centers located globally, Microsoft can guarantee data sovereignty with data stored in the location of the enterprise's choice. Microsoft

provides tools across a number of areas, including migrating content to SharePoint. For example, the SharePoint Migration Assessment Tool is a command line executable tool that scans the contents of a SharePoint server farm to help identify the impact of migrating a server to SharePoint and Microsoft 365. It works by scanning the environment and reporting on its progress in the console window. Once the scan is complete, the output files are available in the log's directory. Identity Mapping is used to generate reports of all user and group identities with access to the SharePoint environment attempting to map them to Azure AD user and group identities.

Microsoft search is used in applications such as Office, Outlook, SharePoint, OneDrive, Bing, and Windows. It provides a single, unified search experience using NLP, instant query predictions that help find documents that are relevant at a point in time, such as documents that have recently been worked on, people that are being worked with, and recommended documents that the person performing the search has been mentioned in. It also supports natural language queries and contextual results. Features include task completion, which includes the ability to guide the user through common tasks such as cropping and rotating an image. Searches can also be conducted for contacts in the organization, providing visibility of contact details of colleagues, conversations, events, and files that are in common, and Microsoft Teams conversations can be initiated or emails sent. The search capability works across applications allowing a search to be conducted in one application that returns results from another. Federated search is also supported through Microsoft Search in Bing. Search queries are de-identified, and logs are separated from public Bing search traffic, providing a level of protection. Privacy and security controls in Microsoft 365 are used to ensure that users only have access to content that they have permission to view. DL models are used to provide contextual results, and Microsoft Graph connectors for Microsoft search allow external systems to be indexed and searched.

Microsoft's document management and collaboration capabilities are centered around its Microsoft 365 suite of productivity tools. One Drive provides a cloud-based storage facility, but it also allows files to be shared. Microsoft 365 provides extensive document management capabilities, including templates for a variety of scenarios that can be downloaded by users. Metadata can be managed centrally, and Microsoft supports industry taxonomies. Tags can be applied to content, and the metadata terms that are available can be pre-defined as managed metadata, which controls how users add metadata to content. Where documents are stored, each stage of their lifecycle can be defined, and access rights and permissions can change as documents age. Creation, review, approval, publication, and disposition processes can be defined as part of the lifecycle. Documents can be organized in site collections, sites, and libraries, with features to organize and store documents provided by SharePoint. SharePoint Server includes workflows for common team tasks such as reviewing and approving documents, and users can also create and install custom workflows. Microsoft 365 supports simultaneous editing of documents, but users can also be forced to check out a document before editing to ensure that only one person can work on it at a time.

SharePoint Online, OneDrive for Business, and Office 365 include AI/ML capabilities. The Microsoft Azure Cognitive Services suite provides AI and ML APIs, which can be built into business applications. In addition, Microsoft Search, which features in both SharePoint Online and OneDrive for Business, is a combination of Bing's AI and the insights derived via the Microsoft Graph. It is a SaaS solution for intelligent search and can be supplemented for specialized needs with Microsoft's platform-as-a-service (PaaS) offering, Azure Search.

Limitations

Even though the content services paradigm means being able to adopt a best-of-breed approach and no longer having to rip and replace an entire content management solution when the existing system is replaced, there are still some enterprises that prefer to acquire an entire system from a single vendor. Because Microsoft has such a large ecosystem of partners that provide content services for SharePoint, enterprises may need to implement several third-party products to create an entire solution. In addition, Microsoft does not have its own capture solution—a core requirement for content management—but relies on partner products.

Methodology

Omdia Universe

The process of writing a Universe is long and time-consuming; it involves the following:

- Omdia analysts perform an in-depth review of the market using Omdia's market forecasting data and Omdia's enterprise insights survey data.

- Omdia creates a matrix of capabilities, attributes, and features that it considers to be important now and in the next 12–18 months for the market.

- Vendors are interviewed and provide in-depth briefings on their current solutions and future plans.

- Analysts supplement these briefings with other information obtained from industry events and user conferences.

- The Universe is peer-reviewed by other Omdia analysts before being proofread by a team of dedicated editors.

Inclusion criteria

- The solution provides a platform for content services, where all of the core functionality can be accessed and managed through a single interface.

- As a minimum, the platform has to include a content repository, document management, and some collaboration tools, search, and integration capabilities.

- Each content services platform has to be capable of being deployed in the cloud and preferably be cloud-native.

- The products have a significant level of recognition among enterprises, cover a range of verticals, and have a presence in multiple geographies.

- The vendors must provide or include the ability to integrate with a wide range of content services.

Appendix

Further reading

Fundamentals of Content Services Platforms 2021 (January 2021)

Fundamentals of Intelligent Content Management and Automation (September 2021)

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