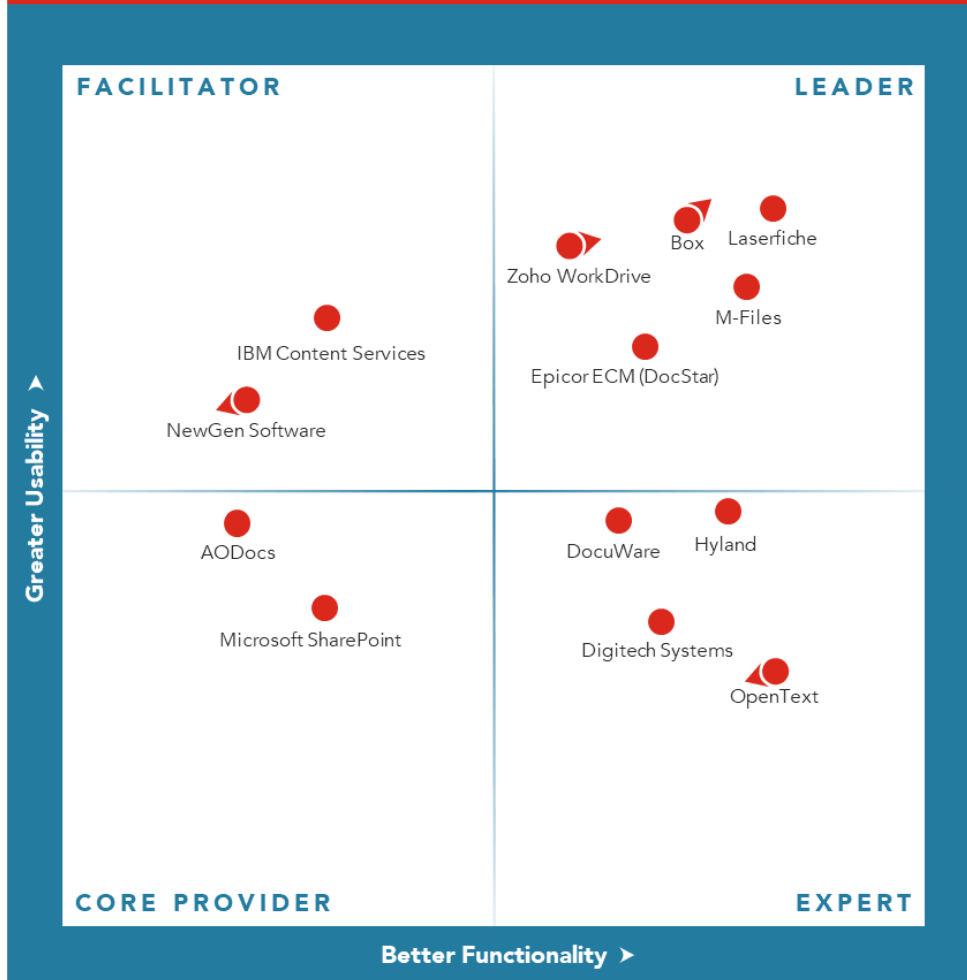**NUCLEUS RESEARCH**

CSC TECHNOLOGY VALUE MATRIX 2023

ANALYST
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THE BOTTOM LINE

Modern solutions for content services and collaboration remain a crucial element of maximizing efficiency across processes, departments, teams, and users regardless of physical location. As the prevalence of such systems grows, the CSC market continues to experience consolidation. Leaders in the space seek to redefine the standard for enterprise content management with increased investment in capabilities such as automation, collaboration, and artificial intelligence. Vendors looking to differentiate themselves must continue to invest in these emerging areas in a way that delivers applicable value, either through acquisition or native product development.

CSC
Value Matrix | July 2023

NUCLEUS RESEARCH

FACILITATOR

LEADER

Greater Usability ▲

Box

Laserfiche

Zoho WorkDrive

M-Files

IBM Content Services

Epicor ECM (DocStar)

NewGen Software

AODocs

DocuWare

Hyland

Microsoft SharePoint

Digitech Systems

OpenText

CORE PROVIDER

EXPERT

Better Functionality ➤

MARKET OVERVIEW

Content services and collaboration technology, once reserved for more specialized use cases, has become essential to operating in the current work landscape. Whether an organization has a globally dispersed, remote, or office-based workforce, the benefits of CSC solutions have been made clear. This also pertains to cloud-based CSC solutions, as the prevalence of on-premises deployments has diminished over the past year. This can be attributed to vendors' commitment to investing in enterprise-grade security and compliance functionality, reducing barriers to migration for traditionally rigid verticals such as the public sector and healthcare.

Traditional areas of enterprise content management, such as document storage and security are now table stakes functionality, meaning vendors must look to differentiate in emerging areas including workflow automation, low code development tools, and AI for tasks such as document and form creation. Leaders also continue to add prebuilt integrations with third-party solutions, meeting users where they are to drive efficiency while cementing their respective platforms as an organization's central work repository.

Further consolidation in an already sparse market has made it harder to define clear differentiators, especially among vendors who have invested in cutting-edge capabilities at pace with close competitors. Some leaders have focused R&D on Generative AI, which has become popular across all SaaS applications. However, such capabilities must be underpinned by stringent security and compliance measures and have a realistic, applicable use case. For example, search, document generation, and document summarization.

For this Value Matrix, Nucleus evaluated content services and collaboration vendors based on the relative functionality and usability of their solutions, assessing the value that customers realized from the product's capabilities (Nucleus Research V67 – *Understanding the Value Matrix* – April 2021.) The Research is intended to serve as a snapshot of the Content Services technology market, inform customers about how vendors in the space are delivering value, and take stock of what can be expected in the future based on current investments.

LEADERS

Leaders in the Value Matrix include Box, Epicor ECM (DocStar), Laserfiche, M-Files, and Zoho WorkDrive.

BOX

The Box Content Cloud platform is built on a cloud-native global infrastructure that scales, with built-in security and compliance. The solution enables users to work securely with anyone on any device, with every file type within a single location. Functionality within Box includes built-in content capture, workflow automation, collaboration, notes and whiteboarding, e-signature, security, governance, and compliance. Additionally, the vendor offers add-on products such as Box Shield, Box Governance, Box Zones, and Box KeySafe to meet the needs of customers with more complex needs. Box Shuttle is another native feature that enables customers to quickly migrate data to Box. Box provides users with more than 1,500 pre-built integrations, enabling them to access all of their Box files regardless of where they are. The vendor's deep integration with other productivity suites from Microsoft,

Google, and Apple facilitates an open exchange of files between services and enhanced business processes.

The Box Trust Partner Program is comprised of a select group of security and compliance partners that extends the functionality of the Content Cloud. The Box Trust Center details the vendor's privacy, security, and compliance certifications including ISO 27001, ISO27018, ISO 27017, C5, TCDP, FedRAMP Moderate, StateRAMP, HIPAA/HITECH Act, and SOC 1, 2, and 3. The vendor also offers in-house professional services to help organizations drive more value with the Content Cloud, including standardized and customized consulting services along with the Box Consulting Accelerator Program.

Recent updates and announcements include:

- **Box AI.** The vendor recently announced the planned launch of Box AI, a new suite of capabilities that will natively integrate advanced AI models into the Box Content Cloud. The solution will make it easier for users to uncover and share insights, receive timely answers to questions, and create content based on existing data in Box. Box AI will provide cutting-edge generative AI technology to customers while all customer content remains subject to its enterprise-grade security, compliance, and privacy standards. Guided by the vendor's AI Principles, Box AI will be governed by built-in permissions, designed to keep customers in control of their data, only allowing users to see and interact with the files and content they have permission to access. In the future, Box plans to embed Box AI across the Box product suite and expand the capability to drive more complex use cases. For example, customers will be able to leverage Box AI to automate workflows and tasks, automatically classify files, and give developers access to custom APIs.

- **Box Canvas.** Box Canvas is an intuitive visual collaboration and whiteboarding experience natively within the Box Content Cloud. The feature provides users with infinite space, unlimited canvases, and a toolset to drive collaboration and gives users the ability to create visual formats or host interactive workshops or meetings securely from anywhere.

- **Box Notes.** The all-new Box Notes includes enhancements for real-time collaboration and organization, such as new content creation capabilities, additional display and formatting options, more ways to organize content, and in-line cursors to help users keep track of collaborator edits. With this new functionality. Box Notes is able to support a broader range of content collaboration activities, such as co-editing of documents, internal and external collaboration, and more.

- **Content Insights.** Content Insights provides users with insight into how each piece of content is being used, who is using it, and when it is being accessed with intuitive visualizations. With Content Insights, users can track content efficacy, filter by activity

type or search by individual, view the number of previews, people, and downloads over specific time intervals, download insights via CSV file, and view an event list of users that accessed the content with time stamps of access.

- **Security Enhancements.** Box has expanded customer options for encrypted key storage and management with the vendor's KeySafe offering by enabling GCP and AWS as storage options. The vendor also launched new Shield classification reports in Box Shield, offering greater visibility into the state of classified content. Box Shield's Ethical Walls are another recent addition, which enables admins to segregate users based on their business units and prevents users from accessing content belonging to business units with conflicts of interest. Additionally, Box Shield Malware Deep Scan leverages deep learning technology to better inspect content and identify new, emerging, and unknown threats.

- **Compliance.** Box recently introduced modifiable retention policies in Box Governance, enabling organizations to better manage their content lifecycle by leveraging flexible retention schedules. The vendor also announced the release of its Legal Hold export feature in Box Governance, giving admins the ability to identify, preserve, and collect content that is stored in Box and ensure that content relevant to litigation can be found based on a user. Retention reports are another new capability for users, which exports details of a particular retention policy, along with a list of all of the file versions the policy covers and the disposition date for each version.

- The vendor recently launched its integration with GovSlack, a digital HQ to support secure government work. GovSlack is now featured in its directory of curated applications. Box and GovSlack users will be able to take advantage of this connection to better support public sector security requirements.

- **Box Zones** recently expanded by adding an additional Zone location in France. Box Zones help organizations to support their data residency needs by enabling them to store content in the geographic region of their choice. Today, the vendor has Zones in Australia, Canada, France, Germany, Japan, the US, and the UK, with secondary storage location options in Singapore and Ireland.

- **Box Sign enhancements.** Box recently released enhancements to its core e-signature set, including batch send, ready-sign links, custom branding, multi-document package support, signer attachments, revise signature requests, document template tags, and keyboard shortcuts. The vendor also added Box Relay integration, Box Sign request restriction in Box Shield, and Template APIs.

EPICOR ECM (DOCSTAR)

The Epicor ECM (DocStar) platform is available on-premises or web-based and includes functionality for document management and automation of business processes across areas such as sales orders and accounts payable. Specific capabilities of the solution include smart data capture, buildable workflows, electronic forms, analytics, integrations, disaster recovery, and mobile accessibility. The vendor also provides customers with pre-built workflows for AP, HR, Sales, and more, allowing for more streamlined processing and collaboration. This accelerates time-to-value by quickly removing manual repetitive tasks and associated errors while providing an extra layer of validation of information and approval routing based on specific criteria. Epicor ECM (DocStar) deeply integrates with the vendor's Industry ERP Cloud solution to facilitate efficiency across use cases such as invoice processing. It is also sold as a stand-alone service that is ERP agnostic.

Recent updates and announcements include:

- Epicor ECM recently enhanced its low-code Automation Studio Gateway in partnership with IPaaS provider, Workato. Epicor ECM workflows can invoke "Recipes" and their related connectors to thousands of enterprise systems and services. With this new functionality, customers can easily connect apps and automated processes between previously siloed systems without requiring high levels of technical expertise.

- The vendor recently added a new integration with Microsoft Dynamics 365 Business Central to help dual customers manage incoming invoices.

- Epicor's Intelligent Data Capture (IDC) engine has been enhanced to provide the ability to parse large files that include multiple logical documents into individual documents and attachments. The engine automatically identifies data fields and sub-records on a page and enables users to provide additional guidance to the system to improve the accuracy of future documents.

- Epicor's Workflow Designer has undergone a UX refresh, with modern flowcharting elements and user interface controls. The vendor has also improved UX for Line-Item Details, enabling users to interact with line-item details in pop-out windows to provide them with more usable screen space.

- The vendor's form-building capability now allows forms to be themed to fit specific needs using custom CSS.

LASERFICHE

Laserfiche is a provider of enterprise content management (ECM) and business process automation solutions with underlying data analytics, security capabilities, and a range of productivity tools leveraging artificial intelligence. Laserfiche is provided on a multitenant SaaS platform called Laserfiche Cloud. Laserfiche can also be deployed in the customer's cloud, on-premises, or hybrid environments.

The vendor's Solution Marketplace is a key differentiator, providing customers with industry- and department-specific templates that enable users to quickly build, customize and deploy automated workflows. Customers can also build automated workflows from scratch using Laserfiche's developer toolbox which includes more than 150 no-code activities to aid integrations and other backend processing tasks including bots, AI-enabled capture, decision tables, and automated document creation.

The drag-and-drop capabilities within the content repository across web and mobile interfaces allow for simpler upload and organization of data. Additionally, the platform has built-in records management which stores content according to lifecycle rules and can include the Laserfiche Vault feature to adhere to specific regulations.

Recent updates and announcements include:

- **iPaaS Platform Integrations.** Laserfiche has released connectors for iPaaS platforms including MuleSoft and Boomi to enable Laserfiche workflows to exchange data with dozens of other enterprise applications.

- **Community Submissions to Solution Marketplace.** Now, any member of the Laserfiche community can submit a solution to be vetted and posted to the solution marketplace. Over the past 12 months, more than 200 new solutions and integrations have been added to the Laserfiche Solution Marketplace.

- **Conditional Validation of Fields.** Laserfiche users now have control over the validation of fields using values set in other fields. For example, they can configure validation to guide users to choose an end date that is after the start date set in a previous field.

- **Paged Form Tables.** Users completing a form can now more easily read data in a table by paging through it or searching for data within the table.

- **Task Reminders.** Users can now receive task reminders through scheduled e-mail, with the ability for administrators to resend these emails when monitoring processes.

- **Process Automation Project Security.** Script rules, database access, web requests, and application connections can now be grouped into projects governed by granular access control. A new Team Developer role has been added to limit who has access to edit processes.

- **Laserfiche API Client Libraries.** New client libraries on GitHub make it easier for professional developers to call the Laserfiche API from Java, TypeScript/JavaScript, and .NET.

M-FILES

M-Files is a global provider of information management technology, leading with its metadata-driven document management platform. The M-Files platform enables knowledge workers to instantly find the right information in any context, automate business processes, and enforce information control.

M-Files leverages artificial intelligence and machine learning to find and create connections to documents across platforms and repositories. The M-Files platform is available via desktop and web apps, as well as through embedded UI with integrations with solutions such as Microsoft 365.

Workflow automation functionality within M-Files increases the consistency of work and reduces errors by automating key business processes within day-to-day tasks. The vendor keeps enterprise-level security at the forefront of its investment, ensuring that documents and data do not get duplicated outside of the platform. Relevant information can be shared securely to manage compliance with laws, regulations, and rules governing client interactions.

In 2021, M-Files acquired Hubshare with the goals of bolstering external content collaboration and delivering an improved digital client experience. With M-Files, organizations can share the right information with the right people in real-time, enabling a robust collaboration culture with customized workspace portals. The vendor's acquisition of Hubshare has also extended internal and external content collaboration functionality.

Recently, in February, M-Files announced its acquisition of Ment, a leading no-code document automation technology vendor based in Finland. With this acquisition, M-Files is now able to deliver strong document automation capabilities that enable new and existing customers to quickly automate their own documents. The creation of new customized documents can be completed in minutes while maintaining full compliance with a company's own rules and best practices.

Other recent updates and announcements include:

- **UX Enhancements.** M-Files has enhanced its user interface across its Desktop, Web, and Mobile applications to ensure a superior layout for an effortless document management experience. This includes better information layering, less distraction,

and enhanced readability meticulously crafted to ensure effortless navigation and optimized functionality.

- **Expanded Integrations.** The vendor's add-on for Microsoft Teams ensures a single source of record for all content types, including documents, and offers effortless collaboration with non-M-Files users, quicker search, and access rights for security. Additionally, the M-Files Advanced Outlook integration enables users to track important documents, capture email threads as conversations, and find information stored based on context. The new M-Files for Adobe Acrobat Sign E-Signature Package provides real-time signature process updates in M-Files. The offer enables customers to easily deploy Adobe Acrobat Sign within M-Files without the need for a separate agreement with Adobe.
- **M-Files Links.** Links save time and effort when sharing documents with your internal teams. Now, users can create a shareable link that will work with their preferred M-Files client (Desktop, Web, and Mobile) and platform being shared (Microsoft Office, Outlook, and Teams.)
- **Process Maps.** Process Maps puts M-Files data into visualizations that are important and meaningful to key stakeholders, allowing for faster decision-making and an ability to detect human error or poor business decisions/practices in a timely manner.

ZOHO WORKDRIVE

Zoho WorkDrive is a cloud-based content management and collaboration application that can be accessed through the web and mobile and desktop apps. WorkDrive can be used across a broad range of vertical and departmental use cases. Features of the platform include internal and external collaboration, native e-signature capabilities, access permissions, file recovery and conversion, document archiving, data encryption, and real-time synchronization that enables users to work offline without losing their work. Administrators can also leverage Device Management capabilities within WorkDrive to provide visibility into total storage, usage, and device activity, as well as the ability to log users out and wipe WorkDrive content off of certain devices. Deep integration with other Zoho applications such as the Zoho Office Suite and Zoho Projects continues to be a substantial differentiator for Zoho WorkDrive, which also offers integration with third-party applications that an organization may be using. The solution provides the underlying document management system across all Zoho business applications, allowing for unified search and storage. Zoho WorkDrive meets industry-specific compliance standards including SOC 2 Type II and ISO27001. The solution is also GDPR and HIPAA-compliant.

Recent updates and announcements include:

- **Productivity.** Recent updates to WorkDrive enable increased productivity, contextual editing, and better collaboration. With the WorkDrive Snap asynchronous communication tool, team members can now save time recording, audio and video and collaborate asynchronously through contextual comments, custom audio cover images, and Live Text.

- **Collaboration and data security.** The vendor introduced OTP authentication for externally shared links while providing external collaborators with the ability to comment, reply, tag users, and download, add, and rename files. This enhancement has made external collaboration more accessible while maintaining security measures. Additionally, the new WorkDrive Collaboration widget for Microsoft Office enables users to track what they are creating in Microsoft Office while keeping them synchronized with WorkDrive via the TrueSync widget. TrueSync allows users to have their files on their PC anytime, even if the WorkDrive app is not open.

- **Data Administration.** Zoho's new data administration features enhance usability while building upon the vendor's existing data security functionality. Now, administrators can manage all shared items from a central location and transfer file ownership to active users.

- **Integrations.** To bolster the interoperability of its product offerings, the vendor launched three new in-depth integrations with Bigin by Zoho CRM, Zoho Cliq, and Zoho Mail. Administrators can also classify team folders based on integration.

- **UX Updates.** Zoho WorkDrive now features tree-based navigation for search, the ability to copy and move files with keyboard shortcuts, and customizable themes and fonts for individual accounts.

EXPERTS

Experts in the Value Matrix include Digitech Systems, DocuWare, Hyland, and OpenText.

DIGITECH SYSTEMS

Digitech Systems provides customers with an end-to-end content platform that can be deployed on-premises, in the cloud, or in hybrid cloud environments. The solution's capabilities include data capture, content management and collaboration, secure content storage, and automated business processes that leverage patented AI algorithms to classify data. PaperVision Direct is the vendor's document digitization and upload tool, which works with PaperVision.com, the vendors' web-based cloud repository. The combination of solutions enables quick implementation and compliance with an organization's security

measures while capturing metadata to enhance future searches. PaperVision Folder Monitor is an automated service that instantly applied cybersecurity and access settings to uploaded files. The solution works with most scanners and eliminates manual data capture processes. Digitech also recently partnered with large format scanning provider, Contex. Dual customers can use PaperVision.com in tandem with PaperVision Folder Monitor to add cybersecurity measures to scanned images as they are captured from Contex large format scanners.

DOCUWARE

DocuWare's product portfolio includes content services solutions for document capture and management (DocuWare), business processing (DocuWare Workflow), and metadata management and content indexing (DocuWare Intelligent Indexing). All DocuWare solutions can be deployed in the cloud, on-premises, or in hybrid cloud environments, and offer secure integration leveraging pre-built connectors, custom API programming, and modern iPaaS app connectors. The vendor also offers preconfigured solutions for specific use cases, including employee management and invoice processing to accelerate customer time-to-value. DocuWare's WorkFlow Manager automates processes including document routing and approval, index data manipulation, and content archival. The solution can also copy workflows created in one department and configure them to fit other use cases. The drag-and-drop interface and Task Manager included in the WorkFlow Manager further reduce barriers to adoption for less technical users. The platform remains an attractive choice for small and mid-sized organizations that wish to take advantage of enterprise-grade content management and workflow automation capabilities. DocuWare solutions are available to users in more than 178 countries and territories globally with support for 24 languages.

Recent updates and announcements include:

- **DocuWare Connect to Teams.** The native integration between Microsoft Teams and DocuWare combines modern business communication with secure document archiving and easy sharing of documents.

- **DocuWare iPaaS Connector.** DocuWare released a connector on the Make iPaaS platform, making it simple to create business workflows across multiple cloud systems.

- The **DocuWare Recycle Bin** is a new feature that enables users and administrators to recover accidentally deleted documents by themselves within 30 days.

- **Intelligent Indexing for tables.** The Intelligent Indexing feature transfers complete data in table layout to DocuWare tables with one click.

- **Automatic calculations in e-forms.** Based on pre-defined formulas, a user input in a web form can be used in calculations. The result is immediately displayed in the web form and can be used to control the document in the workflow.

- **Workflow Management.** Improvements to Workflow Management in DocuWare enable users to transfer external data to DocuWare index tables and use it for further process automation.

- **Single Sign-On Expansion.** DocuWare now supports identity providers including Okta, Ping Identity, and OneLogin for single-sign-on functionality.

HYLAND

Hyland's enterprise content management platforms include cloud-native Alfresco and Nuxeo platforms, as well as specific solutions, based on OnBase, that are tailored to the needs of particular industry or departmental use cases. The vendor holds expertise in serving verticals such as the public sector, healthcare, education, financial services, manufacturing, and insurance. The offering of pre-packaged and configurable open-source solutions continues to differentiate Hyland from competitors, as well as its flexible support for on-premises, self-managed cloud deployments, and managed PaaS offerings for each of its platforms. With Nuxeo Insight and integrated Amazon artificial intelligence services, Hyland enables organizations to gain new insights to optimize business solutions. Support for federated content repositories enables Hyland customers to modernize their technology infrastructure by allowing them to federate legacy repositories and leverage their Hyland system as a centralized location for content search and access. Integrations between Hyland's content services platforms and other business systems remain a keen focus for the vendor, with deep UI integrations into business applications including SAP, Salesforce, Workday, and Epic.

Recent updates and announcements include:

- Hyland has enhanced its search capabilities by enabling enterprise-wide search for all customer environments, including support for managed cloud services and federated repositories outside of the content management platform.

- The vendor has delivered new user interface tools to enable customers and partners to create engaging desktop and mobile user experiences using modern design tools.

- Hyland introduced new web-based administrative tools that enable administrators to quickly configure content, process, and governance tools to meet complex business requirements.

OPENTEXT

OpenText's product portfolio includes several scalable solutions for content and information management. The vendor's solutions include preconfigured functionality for content management, enterprise governance, and records management, all with built-in analytics and reporting capabilities. OpenText's deep integration with an organization's existing business technology stack helps drive the selection of its products over competitors. For example, the vendor has a partnership with Google Cloud, making its Core Content solution a service on Google Cloud. The OpenText Core Content platform is a multitenant cloud offering quick deployment time and ease of configuration for a multitude of vertical and departmental use cases. In January 2023, OpenText closed its acquisition of information management provider, Micro Focus to help customers accelerate digitization initiatives while reducing technology costs. This move highlights OpenText's ongoing strategy to fill in functionality disparities through acquisition rather than through the development of native capabilities.

FACILITATORS

Facilitators in the Value Matrix include IBM Content Services and NewGen Software.

IBM CONTENT SERVICES

The IBM Content Services platform offers deployment on-premises, in the cloud, or in hybrid environments and includes functionality for document classification, intelligent document processing, metadata management, governance and security controls, and robotic process automation (RPA). Customers can leverage the solution as a configurable central repository to search, browse, view, and collaborate on content. IBM Watson, IBM's AI engine, is built into the vendor's Content Services platform to provide users with tools for automated document classification, mobile capture, visual search, and data extraction. For example, documents can be automatically classified, and the system can extract content and metadata, using the output of content and workflow events for data mining or data science applications.

NEWGEN SOFTWARE

Newgen Software is a provider of enterprise content management, business process management, and customer communication management technology. The vendor's contextual content services platform, OmniDocs, includes functionality for content capture, content management, workflow automation, RPA, content analytics, collaboration, records

management, remote imaging, and security and compliance. The platform is powered by AI capabilities that enable users to extract and classify content quickly and without error. For new customers moving off of legacy on-premises systems, the vendor provides a cloud migration service to migrate content and operations into a cloud infrastructure. This year, Newgen's OmniDocs platform has been made available on several marketplaces from vendors including AWS, Microsoft Azure, Salesforce, and Temenos.

CORE PROVIDER

Core Providers in the Value Matrix include AODocs and Microsoft SharePoint.

AODOCS

The cloud-based AODocs content services platform includes functionality for process automation, electronic signatures, file recovery and conversion, version control, OCR, collaboration, and compliance tracking. The solution also includes document management capabilities such as archiving, indexing, and retention. The AODocs Knowledge Management solution can be scaled across the base solution, leveraging AI to analyze content and ensure version accuracy. The vendor offers pre-built integrations with solutions from Salesforce, DocuSign, and Google Drive, and is part of the Google Cloud marketplace. Organizations in verticals including financial services, manufacturing, and the public sector can benefit from the specific capabilities of the AODocs platform.

MICROSOFT SHAREPOINT

The Microsoft SharePoint platform includes capabilities for document storage, collaboration, and content management. SharePoint's content management capabilities are also part of Microsoft's intelligent content services layer, SharePoint Syntex, which eases the access, creation, sharing, management, and security of content across an organization. The platform runs on Microsoft's cloud infrastructure, enabling customers to remain compliant with changing regulations and policies. SharePoint's deep integration with other Microsoft products, such as OneDrive for Business, Office 365, Microsoft Viva Topics, and Microsoft Teams, makes it an attractive choice for organizations with a significant presence of Microsoft products within their existing tech stack.