Ovum

Ovum Decision Matrix: Selecting a Content Services Solution, 2019–20

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Summary

Catalyst

The enterprise content management (ECM) market has evolved into content services, which provides a more enterprise-friendly way of selling content management solutions. Gone are the huge portfolios of separate but tightly integrated technologies that attempted to support the entire lifecycle of content via a single platform and its associated technologies. These have been replaced by much leaner content services platforms that provide core features as well as a content repository and integration capabilities. Additional technologies and more granular applications (content services) that interact with the content in the repository are available from the vendors and third parties. Effective management of the lifecycle of content, which still accounts for approximately 80% of enterprises' total data, is an important element of digital transformation, and enterprises should consider content services platforms as part of that transformation. The need for modern intuitive systems that are less complex and quicker to implement with low-code development tools means that enterprises need to change the way in which they think about managing content. Implementing a content services platform may be simpler than using a legacy ECM system, but more notice needs to be taken of the complementary technologies that are required. It is no longer necessary to rip and replace the entire system. Enterprises should consider retaining technologies that are working well and continuing to address requirements. In a way, this makes the selection of a platform more difficult, because the technologies that differentiate the vendors are no longer in the platform itself. *Ovum Decision Matrix: Selecting a Content Services Solution, 2019–20* will help enterprises select a content services platform by comparing the platform and content services offered by leading content services vendors.

Ovum view

The evolution of ECM to content services with the slimming down of the large ECM portfolios has, from a technology perspective, resulted in similar core functionality in content services platforms. This means that differentiation comes largely from the content services offered by vendors for both horizontal tasks and vertical markets. The products featured in this Ovum Decision Matrix are all very mature, and all the vendors come from the ECM space. There is an adjacent set of vendors in the document and records management market that are also moving into content services. However, Ovum felt that they were not yet sufficiently mature in the content services space to be included in this Ovum Decision Matrix.

Many enterprises have begun digital transformation initiatives; however, it is not too late to start. Although the adoption of new ways of performing processes will go some way toward helping the transformation, new technology investments will be required. One area where technology can help is in the use of a content services platform.

Digital transformation relies on the effective management of content: allowing users to access the content they need to perform their roles quickly, reducing paper through digitalization, and providing access to content on the device and at the time of the user's choosing. It also means offering flexible deployment models, whether in the cloud, on premises, or hybrid. Large ECM platforms are no longer able to deliver on all of these requirements. ECM platforms are expensive and complex to implement.

They attempt to offer end-to-end management of the lifecycle of content, but in order for them to achieve this, multiple technologies are required.

Enterprises demand ease of implementation and rapid, low-code development tools to create applications quickly as well as integration with line-of-business applications. They do not want to have to rip and replace applications within an ECM platform that are working well and continue to meet the requirements of the enterprise. Most ECM vendors have adopted content services platforms to address many of the pain points felt by enterprises struggling to manage vast quantities of content.

There are two elements to a content services system. The first is the platform that delivers core content management features (such as document management, collaboration, and search) and repository and integration capabilities. The second element comprises the content services themselves, which are applications that interact with the content in the repository via the integration capabilities provided. Integration capabilities should include REST APIs, native connectors to commonly used business applications, and support for content management interoperability services (CMIS).

There are differences between vendors as to what features are included as part of the platform and which are available as content services. For example, some vendors provide enterprise file-sync-and-share-like capabilities as part of the platform, while others only include basic collaboration features, with enterprise file sync and share (EFSS) available as a content service. Capture and records management may also be included, either as part of the platform or as a separate content service. Most vendors provide some content services themselves, but they often rely on partners to increase the range of content services available for their platform. Low-code development tools should also be provided by vendors to allow enterprises to create their own content services.

The advantage of a content services approach is that the content services do not need to come from a single vendor. This flexibility allows enterprises to create their own best-of-breed solution. It also allows existing technologies to be leveraged, eliminating the need to rip and replace the entire ECM portfolio. When selecting a content services platform, check which features are included as part of the platform and which need to be added as content services. Select a platform that provides as many of the required features as possible but avoid platforms that include capabilities that will never be required.

Content services applications include several of the elements that are required for digital transformation. The ability to capture content in both paper and electronic formats helps enterprises to eliminate paper, which will help to reduce risk while aiding regulatory compliance. Improving efficiency is another key requirement, and capture solutions also support process automation, in many cases eliminating or at least reducing the need for human intervention. Compliance and governance are also important, and records management is an important element of content services. Some vendors provide basic features such as retention management as part of the platform, but if extensive capabilities are required, a separate records management application needs to be implemented.

Cloud is an important element of digital transformation, and the whole ethos behind content services is that they are cloud-native. This does not necessarily mean that the platform has to be implemented in the cloud; most vendors still support on-premises implementations, but this may be in a private cloud, managed by the vendor. Content services are typically cloud based; therefore, consider cloud adoption for at least some content management requirements. Implementing cloud-based content services is a good compromise if keeping the content repository on-premises is a priority.

Key findings

- Enterprises should consider a content services platform as part of a digital transformation strategy.
- Adopting a content services platform should make it easier to create best-of-breed solutions and eliminate the need to rip and replace all existing ECM investments.
- Most content services platforms are cloud-native, which offers flexibility of deployment model with a choice of on-premises, cloud, or hybrid options.
- The main differentiators in the content services market come from the content services offered by vendors, in terms of both horizontal applications to address common tasks and vertical industry-specific applications.
- Leading content services vendors are embedding artificial intelligence (AI) and machine learning (ML) capabilities throughout the platform and in the associated content services. It is therefore important to consider the AI and ML capabilities and roadmap when selecting a content services platform or applications.
- Capture is an important element of a content services system, and it is also a requirement for digital transformation. The choice of content services platform may therefore be determined by whether capture is included in the platform or is a content service.
- Limited records management capabilities may be included in the content services platform, but for heavily regulated enterprises, a specialist records management system will be required.

Vendor solution selection

Inclusion criteria

Given the broad definitions of content services and the consequent wide range of products and vendors that are positioned in this technology area, identifying those that would be appropriate for the largest number of Ovum's enterprise subscribers resulted in a tight set of criteria:

- The vendor had to offer a "platform" for content services, where all core functionality could be accessed and managed through a single interface.
- As a minimum, the platform had to include a content repository, document management and some collaboration tools, search, and integration capabilities.
- The content services platform had to be capable of being deployed in the cloud and preferably be cloud-native.
- The product had to have a significant level of recognition among enterprises, cover a range of verticals, and have a presence in multiple geographies.
- The vendor had to provide or include the ability to integrate with a wide range of content services.

Exclusion criteria

Vendors and products excluded from analysis in this report include

- those providing point solutions such as EFSS or records management
- offerings with a significant portion of core functionality delivered through third-party products
- those vendors whose presence was limited to a restricted geographical area.

Methodology

Technology assessment

In this assessment dimension, Ovum analysts develop a series of features and functionality that provide differentiation between the leading solutions in the marketplace. The criteria groups identified for content services platforms are described below:

- **Document management and collaboration:** The ability to create and edit content in a collaborative environment; collaboration capabilities may include file sync and share.
- **Search:** The ability to find content across the enterprise on local drives, on desktops, and in a wide range of repositories.
- **Content/text analytics:** How content is being used and who is using it; useful in assessing whether content has value to the organization.
- **Business process management:** The streamlining of processes by creating content-centric progressions that are often triggered by the receipt of an item of content.
- **Capture and scanning:** Capture from physical or digital media; importing information into a form that can be managed by the rest of the products in the platform.
- **Content services enablement:** Features to enable content services such as development tools and common integration mechanisms.
- **Cloud capabilities:** How the vendor delivers its products via the cloud, including the cloud services supported and the cloud models available.
- **Security, privacy, and governance:** Features and functions to ensure content is secure.

Execution

In this dimension, Ovum analysts review the capability of the solution in the following key areas:

- The stage that the product/service is currently at in the **maturity** lifecycle is assessed with relation to the maturity of the overall technology/service area.
- Ovum assesses the **interoperability** and how easily the solution/service can be integrated into the organization's operations relative to the demand for integration for the project.
- **Innovation** can be a key differentiator in the value that an enterprise achieves from a software or services implementation, and this is assessed in this dimension.
- Referring to a combination of assessed criteria and points of information, Ovum analysts provide detail on various **deployment** issues including time, industries, services, and support.
- Points of information are provided to show the **scalability** of the solution across different scenarios.
- The alignment of the solution within the potential enterprise is assessed for **enterprise fit** and the potential ROI period identified.

Market impact

The global market impact of a solution is assessed in this dimension. Market impact is measured across four categories, each of which has a maximum score of 10. The four categories are

- **revenue**
- **revenue growth**
- **market reach**
- **vertical penetration.**

In revenue, each solution's global ECM revenue is calculated as a percentage of the market leader's. This percentage is then multiplied by a market maturity value and rounded to the nearest integer. Overall global revenue carries the highest weighting in the market impact dimension. The second category is revenue growth. Each solution's revenue-growth estimate for the next 12 months is calculated as a percentage of the growth rate of the fastest-growing solution in the market. The percentage is then multiplied by 10 and rounded to the nearest integer. For market reach (or where the information is provided), Ovum is able to establish the geographical reach of the product in terms of both regional brand recognition and physical presence. Sales operations and provision of local support are also given merit. The final criterion measured is the number of vertical markets that the vendor and/or its partners provide prebuilt solutions for.

Ovum ratings

- The **market leader** category represents the leading solutions that Ovum believes are worthy of a place on most technology selection short lists. The vendor has established a commanding market position with a product that is widely accepted as best of breed.
- The **market challenger** category has solutions that have a good market positioning and are being sold and marketed well. The products offer competitive functionality and good price-performance proposition and should be considered as part of the technology selection.
- The **market follower** category solutions are typically aimed at meeting the requirements of a particular kind of customer. As tier-1 offerings, they should be explored as part of the technology selection.

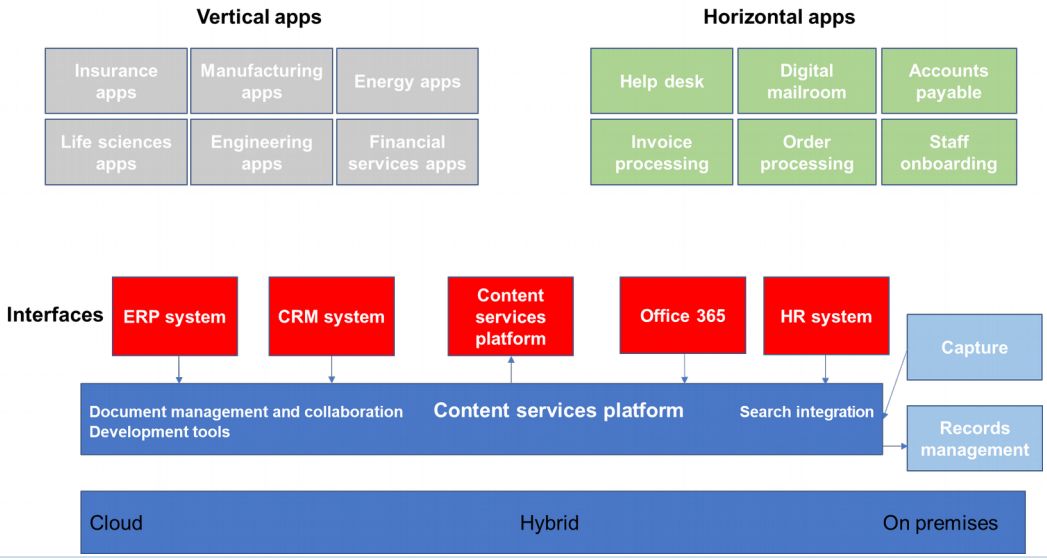
Ovum Interactive Decision Matrix

To access the Ovum Interactive Decision Matrix: Content Services, an online interactive tool providing the technology features that Ovum believes are crucial differentiators for leading solutions in this area, please see the Ovum Interactive Decision Matrix tool on the Ovum Knowledge Center.

Market and solution analysis

Ovum Decision Matrix: Content Services, 2019–20

Figure 1: Content services architecture

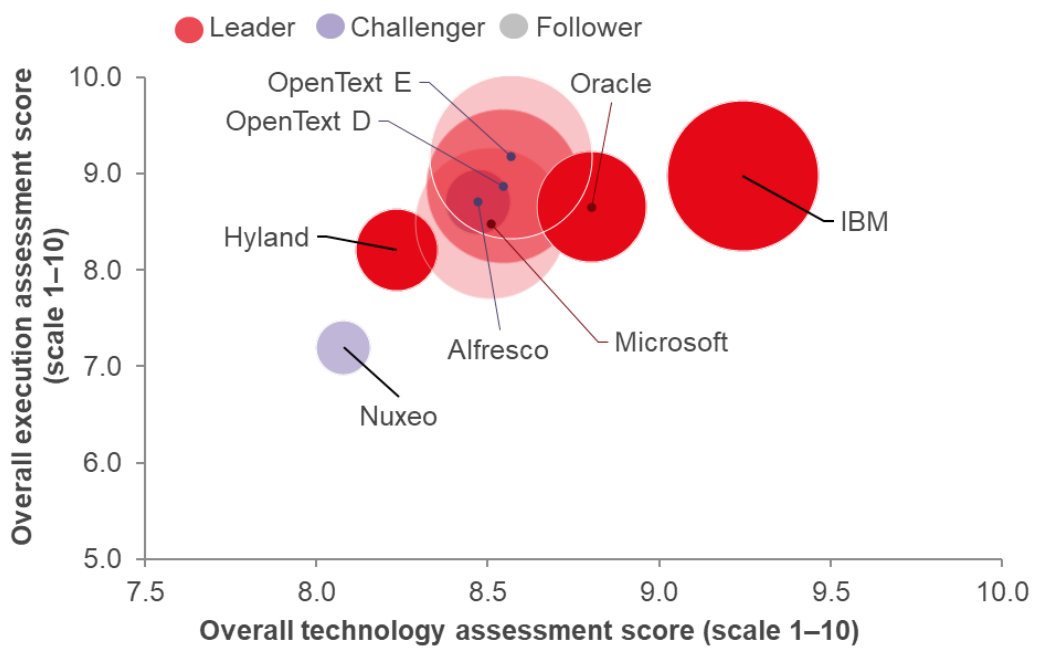


Source: Ovum

Content services is very different in composition from ECM. Figure 1 above shows a simplified content services architecture. Content services platforms are much smaller than the huge ECM platforms, which were extremely complex to implement and often resulted in enterprises implementing functionality they would never use. The platforms include core capabilities required for managing content such as document management and collaboration. Some may include basic records management features including record retention and disposal within the document management capabilities. Some may also include capture capabilities as part of the platform. It is therefore important to check the features offered by vendors when considering a solution. There are many vendors in the content services space: large multiple product vendors, specialist ECM vendors, and document and records management vendors that have evolved to offer content services platforms. Content services platforms should be capable of managing content in situ, removing the need to migrate content into the content services repository. This allows enterprises to retain existing ECM systems but bring the content under the management of the content services platform. Other features required of the platform include a search capability, which should be capable of searching multiple repositories, and integration capabilities adhering to common standards such as REST APIs and CMIS.

The overall positioning of the solutions evaluated is shown in Figure 2.

Figure 2: Expanded view of Ovum Decision Matrix: Content Services, 2019–20



Bubble size represents market impact

Source: Ovum

Table 1: Ovum Decision Matrix: Content Services, 2019–20

Market leaders	Market challengers	Market followers
Alfresco Hyland IBM Microsoft OpenText Documentum OpenText Extended ECM Oracle	Nuxeo	

Source: Ovum

Market leaders: Alfresco, Hyland, IBM, Microsoft, OpenText, Oracle

Alfresco is a cloud-native, open source vendor with a well-established content services offering that is part of its Digital Business Platform, which includes other core services comprising process management, governance, search and insights (analytics), intelligence services (AI and ML), low-code modeling, a rapid app development framework, open standards, and a broad range of APIs. Alfresco's modern architecture and strong open source community allow it to compete against much larger proprietary vendors. In terms of ECM revenue, it is a relatively small vendor but one that is growing rapidly year on year.

Hyland's rapid growth over the past few years is due in part to organic growth but more significantly to acquisitions. The most significant recent acquisitions are OneContent, in April 2018, and the Perceptive business unit from Lexmark, in July 2017, which has added a number of capabilities to Hyland's portfolio including enterprise search, intelligent capture, and customer communications management. This acquisition has further expanded its reach into EMEA (through Saperion) and healthcare (through OneContent, Acuo Vendor Neutral Archive [VNA], and NilRead). The company also has a standalone secure sharing and collaboration product in its portfolio. This provides cross-selling opportunities between ShareBase and Hyland's portfolio.

IBM is one of the largest ECM/content services vendors in terms of revenue. It has embedded AI and ML throughout its portfolio using IBM Watson Analytics. As well as a content services platform, IBM also has collaboration, integration, intelligent capture, and workflow capabilities. IBM benefits from a large professional services arm, which enables it to help enterprises implement its content services platform and develop their first content services applications. It also partners with global systems integrators.

Microsoft is the largest ECM/content services vendor in terms of the revenue it generates from SharePoint. 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 as 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.

OpenText is the only vendor with two products in this Ovum Decision Matrix. Extended ECM is the evolution of OpenText Content Suite, and Documentum was acquired by OpenText in 2017. OpenText Documentum provides vertical solutions for the energy, engineering, and life sciences sectors. Documentum also includes case management, enabling enterprises to build their own use case applications, and its records management capabilities make it well suited to enterprises in heavily regulated industries. It features integrations with both SAP ERP and Microsoft's Office 365 as well as REST APIs for integration with other applications. In addition to its strength in lifecycle management, OpenText Extended ECM is differentiated from Documentum by the level of integration with third-party business applications, which allows users to access content in the context of the business process or third-party application being used. Integrations include SAP ERP, SAP SuccessFactors, Salesforce, Oracle, and Office 365, and there are extensive REST APIs for integration to other applications as well as vertical-specific solutions for energy and government.

Oracle is a large vendor in terms of overall revenue, but its ECM/content services implementations often form part of a larger Oracle ecosystem with the vendor also providing enterprise applications that exploit ECM capabilities. Oracle has differentiated itself from other vendors by developing a single repository for internal and external-facing content as well as for digital assets. Oracle Content and Experience provides an intelligent, cloud-based content platform. Its single content hub is used to create, manage, and publish all content including digital assets, user-generated content, web content, and business documents.

Market challengers: Nuxeo

Nuxeo is a small content services vendor that is experiencing high percentage growth year on year, which means it has grown rapidly in terms of revenue over the last couple of years, experiencing

higher percentage growth than any other vendor in this Ovum Decision Matrix. It specializes on the content services platform and in some areas includes more capabilities in its platform than some of its competitors (e.g., document management, case management, and digital asset management). However, it does not provide records management and capture services of its own, but its integration capabilities mean that third-party content services can easily be implemented.

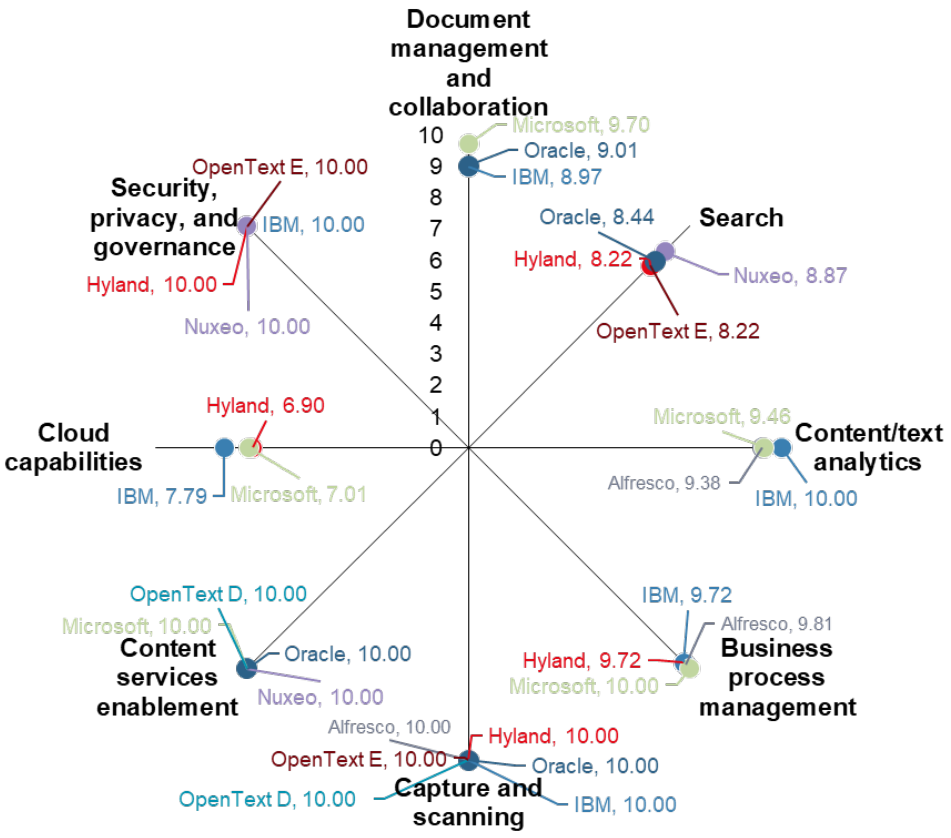
Market followers

No solutions fell into this category.

Market leaders

Market leaders and challengers: technology

Figure 3: Ovum Decision Matrix: Content Services 2019–20, technology



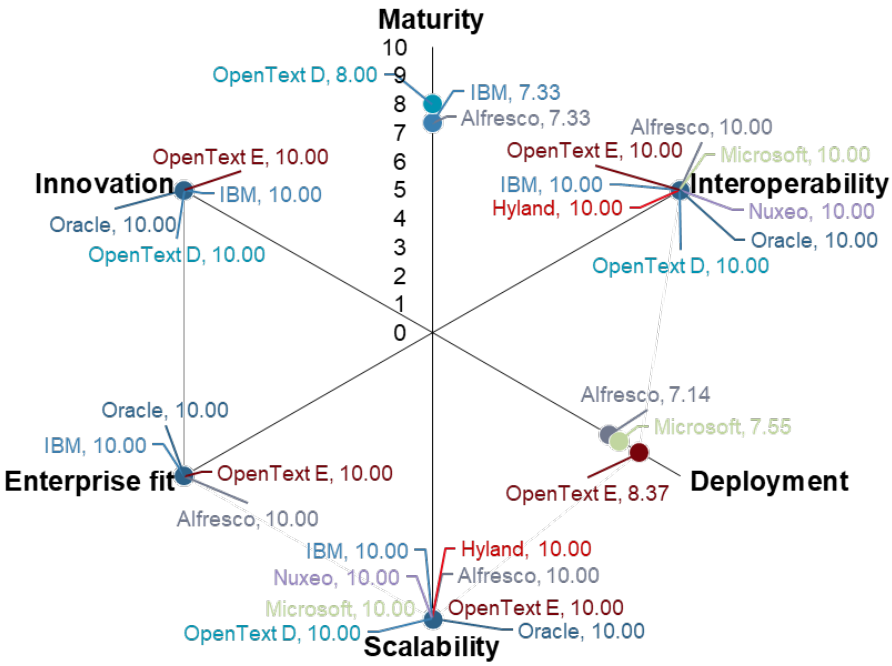
Source: Ovum

There is no single vendor that emerges as the leader in every technology area; in fact, every vendor in this Ovum Decision Matrix appears in the top three in at least one category (see Figure 3). This means that an enterprise considering implementing a content services platform should examine the features and functions of each vendor during the decision-making process in order to select the platform that provides the closest fit to the enterprise's requirements. All vendors scored well for

document management and collaboration capabilities, which provide many of the core features of a content services platform. Most vendors scored highly in capture and scanning, with the exception of vendors that do not provide these capabilities themselves and that integrate with third-party products. The ability to capture and automatically process content is an extremely important element of digital transformation. Business process management is another important facilitator, because it enables enterprises to build their own content-centric content services.

Market leaders and challengers: execution

Figure 4: Ovum Decision Matrix: Content Services 2019–20, execution

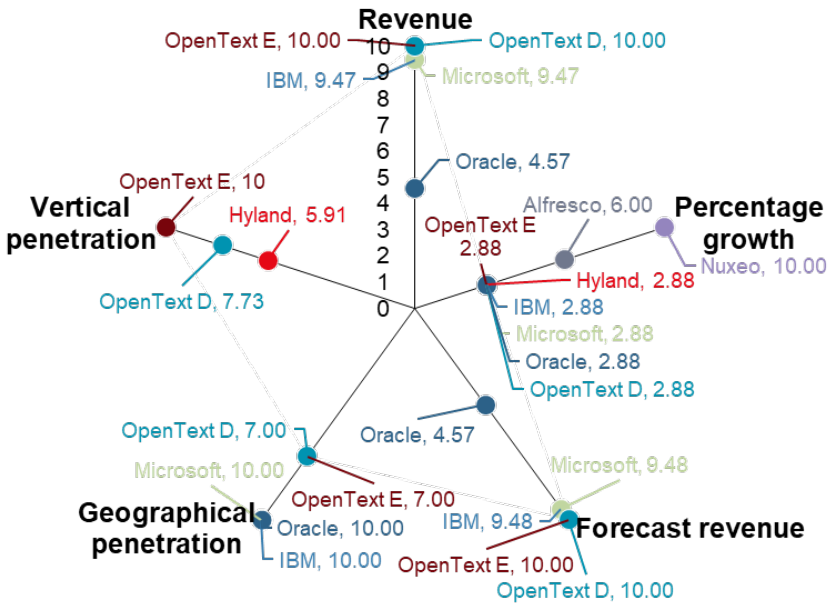


Source: Ovum

All the vendors are grouped relatively closely in terms of execution capabilities, with no single vendor standing out from the crowd (see Figure 4). In the important areas of scalability and interoperability, all vendors score maximum marks, making all these solutions suitable for large deployments. All the products are extremely mature in terms of functionality, but content services architectures are a relatively recent innovation. The area with the largest difference in scores is deployment, which includes questions about the vertical markets that the vendors provide solutions or widgets for. This could be an area of concern for enterprises that want to build their own content services quickly using prebuilt components.

Market leaders and challengers: market impact

Figure 5: Ovum Decision Matrix: Content Services 2019–20, market impact



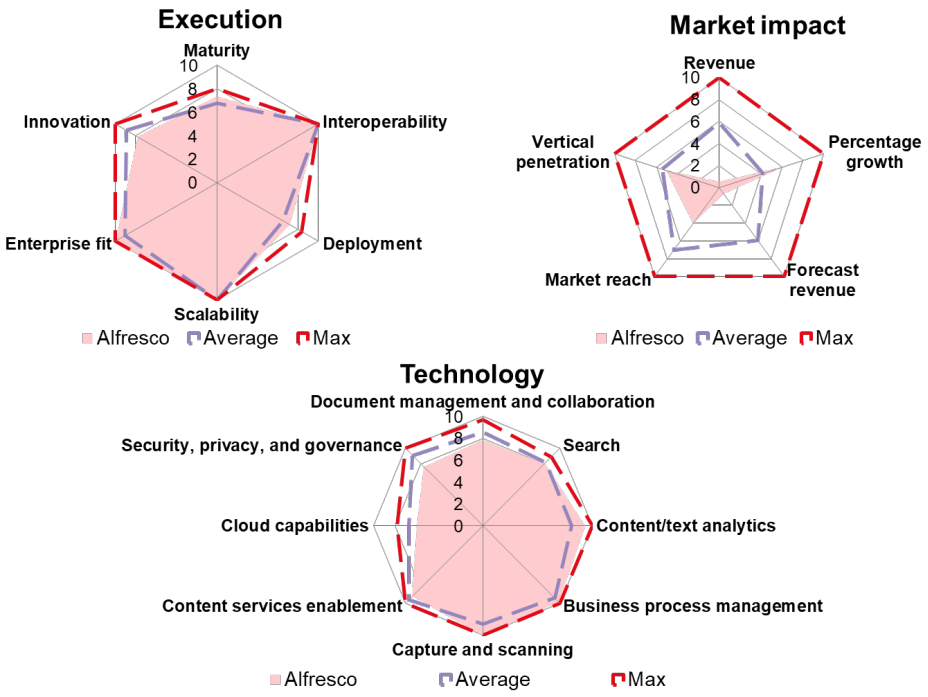
Source: Ovum

Because of the array of vendors in the *Ovum Decision Matrix: Selecting a Content Services Solution, 2019–20* and the broad spread in terms of revenue size and profile, the market impact dimension shows the biggest spread of scores (see Figure 5). For example, Nuxeo and Alfresco generate a fraction of the revenue from content services of OpenText and IBM. Microsoft, although a giant in terms of SharePoint revenue, is much smaller when only revenue from content services deployments is taken into consideration. However, when it comes to percentage growth, it is the smaller vendors Nuxeo and Alfresco that have the greatest annual growth rates, albeit from a much lower base. In terms of market reach, the smaller vendors do not have the resources to locate offices in every country and have to carefully target their resources in the areas they believe offer them the greatest sales opportunities. Because of this they have a lower market profile.

Vendor analysis

Alfresco Digital Business Platform, Alfresco Content Services 6.1 (Ovum recommendation: Leader)

Figure 6: Alfresco Digital Business Platform, Alfresco Content Services 6.1 radar diagrams



Source: Ovum

Ovum SWOT assessment

Strengths

- **The Alfresco portfolio provides a wide range of core capabilities and content services.** The Alfresco Digital Business Platform provides core services through Alfresco Process Services, Alfresco Content Services, and Alfresco Governance Services. Alfresco Content Services provides ECM capabilities that are required for document and case management, project collaboration, and compliant records management. Tight integration is provided with Alfresco Governance Services, which is US DoD 5015.02 CH2 and CH3 certified. Alfresco Governance Services' meeting the DoD 5015.02 standard means that agencies in the US government can now manage all their content – classified and unclassified – in a single unified digital business platform that offers content, process, and governance on a modern open platform. Enterprises can manage records in place, negating the need to move records created by other applications into the Alfresco repository.
- **Alfresco offers containerized development based on Docker and Kubernetes.** Using containers helps developers accelerate development and deployment of content services from the test environment through a staging system to production. It also makes it easier to migrate applications between on-premises and the cloud.

- **Alfresco Intelligence Services allows enterprises to gain valuable insights from their content.** Alfresco Intelligence Services is an extendable and highly scalable cloud-based framework that seamlessly integrates discrete third-party AI services such as AWS's AI services for natural language processing (Comprehend), image analysis (Rekognition), and the ability to extract text and data from images (Textract). This framework can also integrate AI services from other providers. Alfresco Intelligent Services normalizes and stores the output provided by multiple AI and ML services, enriching documents, scanned images, videos, and photographs. These services can be called automatically from the Alfresco platform without any expertise in AI technologies, increasing AI adoption and reducing time to value for customers. An important differentiator here is that Alfresco Intelligence Services retains the enriched AI data (as an AI rendition), allowing enterprises to leverage the enhanced intelligence without recurring costs. It also allows customers to further reference AI analysis results across large volumes of content with tools that detect potential patterns, trends, and correlations.
- **Alfresco Digital Workspace built on top of the Alfresco ADF provides modern, out-of-the-box applications for end users.** Alfresco Digital Workspace is an out-of-the-box, user-friendly, rapid app development capability for the Alfresco Digital Business Platform. It is built with the Alfresco Application Development Framework (ADF), which provides reusable Angular-based user interface (UI) components and services, command-line tooling, and JavaScript APIs. It is delivered with more than 150 reusable components, development tools, and highly automated test coverage.

Weaknesses

- **Although Alfresco utilizes many AWS features, it does not currently have this level of functionality for other clouds such as Azure.** Alfresco provides support for many AWS features including Amazon S3; Amazon Aurora; Amazon MQ; Amazon CloudFormation; Glacier; AI Services such as Amazon Comprehend, Amazon Rekognition, and Amazon Textract; IAM roles; key management; and RDS. However, it does not yet provide the same level of support for Azure features, although this is on Alfresco's roadmap, because customer demand makes it a priority.

Opportunities

- **Digital transformation is driving the need for IT modernization, which Alfresco can help provide.** Agile development, microservices, DevOps, and containerized deployments are all required elements of a modern IT architecture, and Alfresco delivers on all of these. Cloud is also an important component of modernization, particularly when combined with mobile access to content, and again, Alfresco is able to offer flexible deployment models, assisting enterprises moving to the cloud in an orderly manner.
- **Open source is gaining in popularity as enterprises turn their backs on proprietary systems.** The use of open source is growing in popularity, especially since several governments have recommended that public sector bodies implement open source solutions where possible. Alfresco is ideally positioned with a strong customer presence in the public sector and government agencies. The Alfresco Digital Business Platform offers the ability to seamlessly integrate records management into business processes and automate the complete record lifecycle from capture through retention to final destruction. Of importance is the fact that Alfresco is the first open source vendor to offer US DoD-certified records

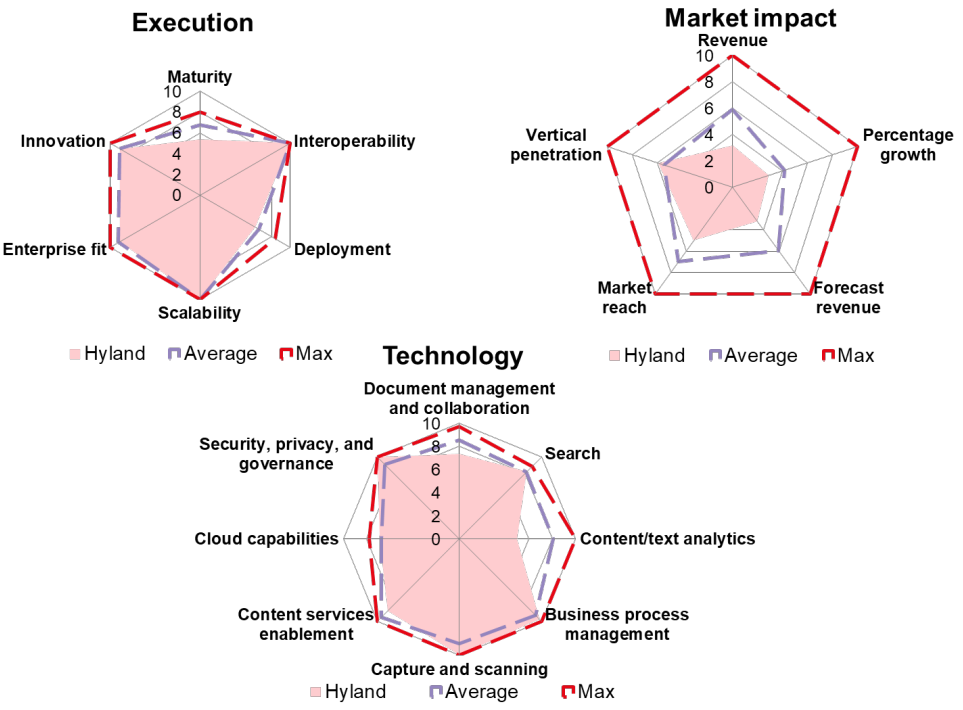
management, a requirement for many government departments as well as local and regional governments.

Threats

- **A small minority of enterprises will always associate open source with free "lightweight" software.** Alfresco provides fully featured ECM/content services software with a full range of professional services and support. It is also increasing the differentiation between its free and licensed versions to ensure that those that pay for the solution receive maximum value from their investment. Although the perception is changing, with many organizations taking an open source–first approach, there is still a small minority of enterprises that consider open source to be inferior to proprietary software, and this poses a potential threat to Alfresco.
- **Alfresco's size may deter some prospective customers.** Alfresco is a rapidly growing vendor, but it is still relatively small when compared with some of the large proprietary ECM or content services vendors. This may deter some enterprises from considering Alfresco, even though it competes favorably with solutions from larger vendors in terms of functionality and innovation, often replacing large proprietary legacy systems when enterprises refresh or consolidate their ECM or content services platforms.

Hyland Content Services Portfolio (Ovum recommendation: Leader)

Figure 7: Hyland Content Services Portfolio radar diagrams



Source: Ovum

Ovum SWOT assessment

Strengths

- **Hyland provides extensive content services capabilities enabling enterprises to manage the entire lifecycle of their content from back-office processing to case management.** Hyland provides an extensive range of content services capabilities including document management and collaboration, case management, digital process automation, records management, enterprise search, video streaming and management, customer communications management, capture, and secure cloud-based document sharing, integrations, and collaboration for internal as well as external users.
- **Hyland provides a low-code development platform to enable developers to rapidly build content-enabled business applications.** Hyland provides a number of tools to help build content services solutions with minimal reliance on custom code or scripting. Capabilities include drop-down menus, checkboxes, and radio buttons to configure and change solutions. Developers are able to automate processes, create forms, build applications, or integrate with other applications or systems.
- **Brainware powers Hyland's intelligent capture capabilities.** Brainware, an intelligent data capture platform, includes a neural network comprising several proprietary ML algorithms that support automated document classification and information extraction. When used with OnBase, Brainware can leverage critical multichannel capture capabilities in OnBase to import any file type from other systems. OnBase multichannel capture capabilities include simple desktop scanning, production document imaging, mobile capture, COLD processing, and multiple points of capture via integrations with Microsoft Office and email applications.
- **Content-enabled case management solutions are available.** Hyland offers case management capabilities that allow developers to create roles- and rules-based processes that combine related content, contextual data, and business activities in a single interface. Applications can be created to address specific use cases. Hyland supplies a number of prebuilt applications for both horizontal and industry-specific use cases, and its case management capabilities also include widgets to help developers build applications rapidly.

Weaknesses

- **Hyland currently provides limited text and content analytics capabilities.** OnBase does not currently include extensive text or content analytics. Users are able to identify different types of content and analyze whether content is being used at all, how it is being used, and who is using it. Contextual discovery is also supported. However, OnBase does not include features such as sentiment analysis, understanding concepts, and concept-based classification or a wide range of search techniques such as language queries, trends analysis, predictive analytics, and lexical analysis. Although Hyland does offer a wide range of search techniques with its Enterprise Search product and offers the ability to work with a third party via a custom-built integration, Hyland needs to add these capabilities to its portfolio to help enterprises gain insights from their content.

Opportunities

- **ShareBase provides cross-sell and upsell opportunities.** Hyland's portfolio includes a secure sharing and collaboration product, which can be implemented as a standalone solution. This provides cross-sell opportunities between ShareBase and Hyland's portfolio.

Currently, ShareBase integrates with OnBase, allowing enterprises to extend the collaboration capabilities. ShareBase is Hyland's born-in-the-cloud offering and delivers enhancements and new innovations through a continuous software delivery model. Users can store, access, search for, collaborate on, and share content from anywhere via a web browser. EFSS vendors often claim their products are ECM systems when at best they can be described as lightweight version, but ShareBase may provide a starting point for content management for some organizations, allowing them to progress to OnBase as their requirements evolve.

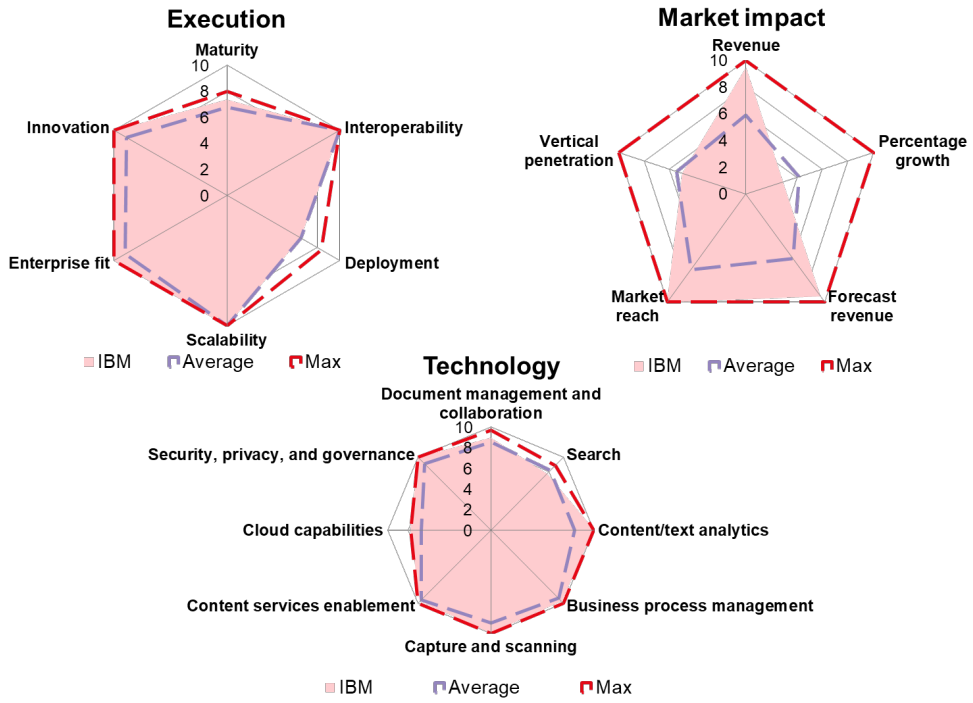
- **Enterprises' digital transformation initiatives are driving a requirement for modern content services–based content management systems.** Hyland can benefit from the current trend for digital transformation. Its portfolio helps enterprises to streamline their back-office operations using tools such as Brainware to enable intelligent capture and process automation and to improve customer service and productivity using its content services capabilities including case management and cloud-based document sharing and collaboration capabilities. Hyland also offers a number of cloud options including its privately managed Hyland Cloud to host content services solutions. Cloud is an important element of digital transformation and implementing content services in the cloud is a good way to test it out before committing to a full-scale migration.

Threats

- **Hyland, as a mid-sized company, risks being squeezed between larger and smaller content services vendors.** As a result of both acquisitions and organic growth, Hyland is a rapidly growing vendor in terms of revenue. At one end of the scale, it competes against products from much larger vendors that are often seen as high end, expensive, and complex to implement, while at the other end there are relatively small vendors that typically provide open source solutions that are increasing in popularity. Over the past few years, Hyland has grown to be a mid-sized vendor in the ECM market, and it now risks being ignored by some enterprises that have a preference either for products from the largest vendors in terms of revenue or for an open source solution from a small vendor.
- **The market is crowded with content services platforms.** The ECM market space has always been healthy. Although there has been much consolidation over the past few years, reducing the number of vendors offering full ECM portfolios, specialist document and records management vendors have now adopted content services, which means there are again a large number of vendors in this market space. Hyland can counter this by continuing to increase the range of vertical industry solutions it offers and making itself attractive to enterprises in specific industries.

IBM Digital Business Automation Enterprise & Express, 18.02 (Ovum recommendation: Leader)

Figure 8: IBM Digital Business Automation Enterprise & Express, 18.02 radar diagrams



Source: Ovum

Ovum SWOT assessment

Strengths

- **IBM Digital Business Automation Platform is available with flexible deployment options.** IBM Digital Business Automation Platform is available on-premises, in the cloud, or as a hybrid solution. IBM has its own cloud, IBM SoftLayer, which is IBM's preferred cloud for hosting its software, but Digital Business Automation Platform will run in any cloud including AWS, Azure, and Google Cloud. It supports Docker and Kubernetes to allow containerization and the rapid deployment of applications to the cloud.
- **Intelligent data capture is included in the portfolio.** Intelligent data capture allows users to capture, classify, and extract data from content, which can be received as structured or unstructured documents, electronic forms, paper documents that have been scanned, handwritten documents, or in other formats. It uses AI and ML capabilities to automate classification and help in the recognition of different document types. Data exceptions can be handled, and the integrity of captured content can be ensured through validation.
- **Automation is enabled through the ability to create workflows.** Workflows can be designed to allow complex content-centric processes to be automated. Point-and-click configuration enables nontechnical people to create business processes quickly and easily. Support for roles is provided to ensure that processes are directed at the appropriate personnel. Capabilities include process definition and modeling tools, a process engine, a

rules engine, and a set of out-of-the-box rules and actions. Also supported is robotic process automation to automate routine human tasks to free employees to perform higher-value work.

- **Analytics, ML, and AI are embedded throughout the platform.** IBM Digital Business Automation Platform includes an open framework. It stores operational data and business events in a data lake for dashboarding and analytics. This provides knowledge workers with insights and recommendations and business owners with insights into operational data and productivity. AI is embedded directly into the platform, with purpose-built capabilities tightly integrated with AI services. In addition, there is integration with AI APIs and models including IBM Watson, Google, and AWS.

Weaknesses

- **IBM requires a third-party solution for digital rights management.** IBM does not have the ability to prevent cut, copy, paste, and screenshot of documents. However, it has very advanced access control and security that prevents a person from accessing a document if they are not authorized to see it. Preventing screenshots may be important in some digital rights management use cases.

Opportunities

- **IBM Digital Business Automation will be attractive to enterprises that want to digitally transform content management.** Many enterprises are currently undertaking digital transformation initiatives. The management of content is one area that needs to be transformed. For example, physical documents should be digitized using capture and workflow capabilities to automate their processing; enterprises should at least be considering cloud options; and AI and ML also have important roles to play. IBM offers all of these as well as a modern flexible architecture.
- **IBM is investing heavily in AI to create greater insights from content, which will be attractive to prospective customers.** IBM has a vision to help its clients automate the greatest variety of work they can to enable them to grow their enterprises more quickly and deliver a superior experience. To this end, it is extending and enriching its automation platform with additional capabilities and intelligence through applied AI and ML. It recently brought to market IBM Business Automation Content Analyzer, which enhances its data capture system through cognitive self-learning capabilities.

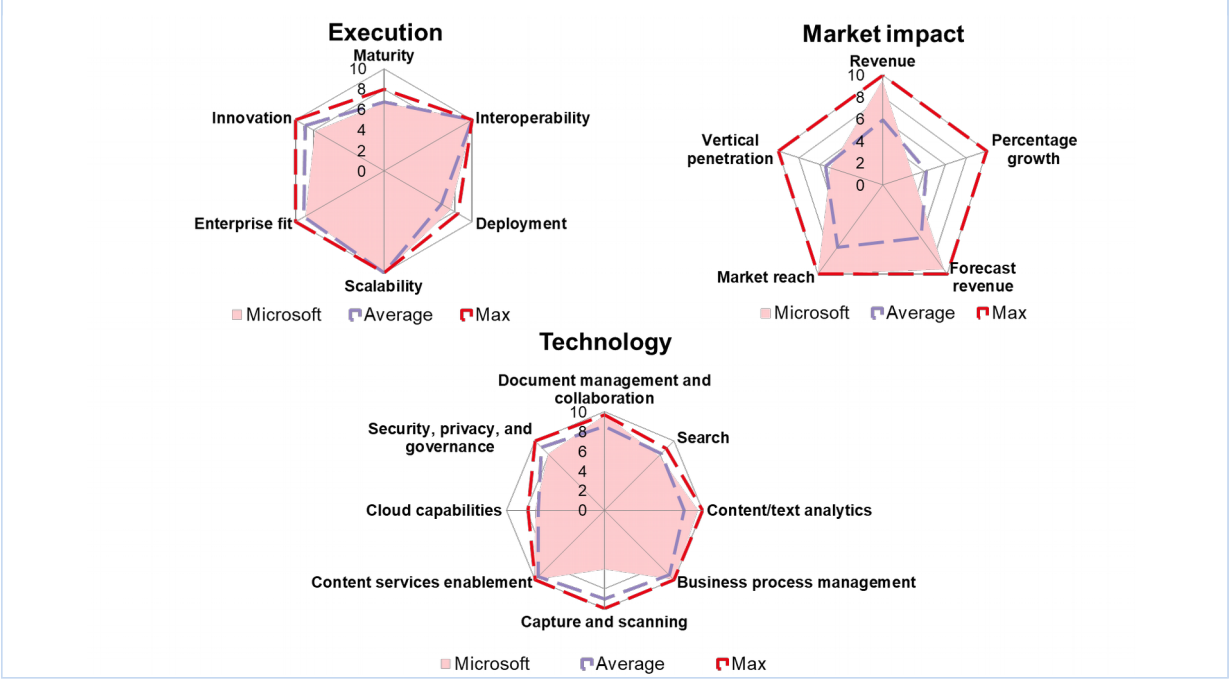
Threats

- **IBM is perceived as a high-end and therefore expensive vendor.** As one of the leading vendors in terms of both content management capabilities and revenue generated from the technology, IBM is often regarded as being very high end and therefore expensive. Its reputation in the past as a vendor that liked to rip and replace technology and infrastructure does not help this perception. However, IBM has now recognized that enterprises do not want to replace all of their technology, and its extensive integration capabilities mean that its content services platform can interact with third-party applications and systems, negating the need to rip and replace.
- **There are many vendors in the case management space.** The case management space is crowded with vendors. During the early part of the 2000s, there was a consolidation in the marketplace as several tier-1 vendors were acquired by other vendors, including FileNet by IBM. This left fewer ECM vendors, but there were still smaller document and records

management vendors that specialized, particularly in the government market. Now many of these vendors have adopted content services, meaning the market once more has a healthy number of vendors for enterprises to choose from, all of which provide competition for IBM.

Microsoft SharePoint Online and OneDrive for Business (Ovum recommendation: Leader)

Figure 9: Microsoft SharePoint Online and OneDrive for Business radar diagrams



Source: Ovum

Ovum SWOT assessment

Strengths

- **Many enterprises have already deployed SharePoint Online and OneDrive for Business.** SharePoint and OneDrive for Business have already been deployed by many enterprises that are not using their capabilities as an ECM or content services platform. It would be a relatively easy process to start using these products to manage the lifecycle of content, particularly as Microsoft has a huge ecosystem of partners that provide solutions to enhance the capabilities of the Microsoft portfolio. In addition, the Office suite of productivity tools is also widely used, and most third-party ECM and content services platforms support Office as an authoring environment in their own platforms.
- **Microsoft has its own cloud in Azure, which offers SharePoint users a large number of additional features.** SharePoint Online is 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 and ML including a bot service, analytics, cognitive services, a content moderator, a machine learning service, a translator service, linguistic analytics, document extraction services that understand form, text analytics, and various search options including image, news, and video search. SharePoint users are able to benefit from these applications, many of which can be deployed as content services.

- **Microsoft Flow and PowerApps extend the capabilities of SharePoint.** SharePoint supports direct extension via Microsoft Flow, which enables business users to create automated notifications, data tasks, and team processes. Through a web-based UI, users can connect triggers and actions from a library of nearly 300 different connected systems to fully automate content within SharePoint and OneDrive. Microsoft PowerApps is a no-code application builder that lets users create applications using content from Office 365. Users can also customize forms for SharePoint using the web-based editing tools of Microsoft PowerApps.
- **Extensive AI and machine learning capabilities are available.** SharePoint Online, OneDrive for Business, and Office 365 include AI and 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 system-as-a-service (SaaS) solution for intelligent search and can be supplemented for specialized needs with Microsoft's platform-as-a-service (PaaS) offering, Azure Search.

Weaknesses

- **Microsoft's reliance on third-party vendors to provide content services will not suit enterprises who want a one-stop-shop approach to content services.** Despite the fact that 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.

Opportunities

- **The success of Azure as a cloud platform for third-party vendors to run their applications on makes it easier to sell Microsoft's content services platform.** There are many vendors that run their products in the Azure cloud. A concern for enterprises is having the ability to integrate content stored in different clouds. Azure provides services beyond those limited to the Microsoft stack including support for Linux and open source database platforms. In addition, Microsoft has announced new support interconnect scenarios with Oracle, so customers can run Oracle database and enterprise applications on Azure. This interoperability partnership enables customers to migrate and run business-critical enterprise workloads across Microsoft Azure and Oracle Cloud, allowing Azure services such as analytics and AI to be seamlessly connected to Oracle Cloud services, such as autonomous database. Enterprises already using one or more applications in the Azure cloud may be more likely to select SharePoint Online and OneDrive for Business as a content services platform.
- **SharePoint can be used for departmental implementations and ad hoc users.** Even if SharePoint is not used as the corporate ECM or content services platform, it is still an ideal solution for a departmental or project-based implementation or for ad hoc or occasional content management users. Because almost all content services platforms integrate with

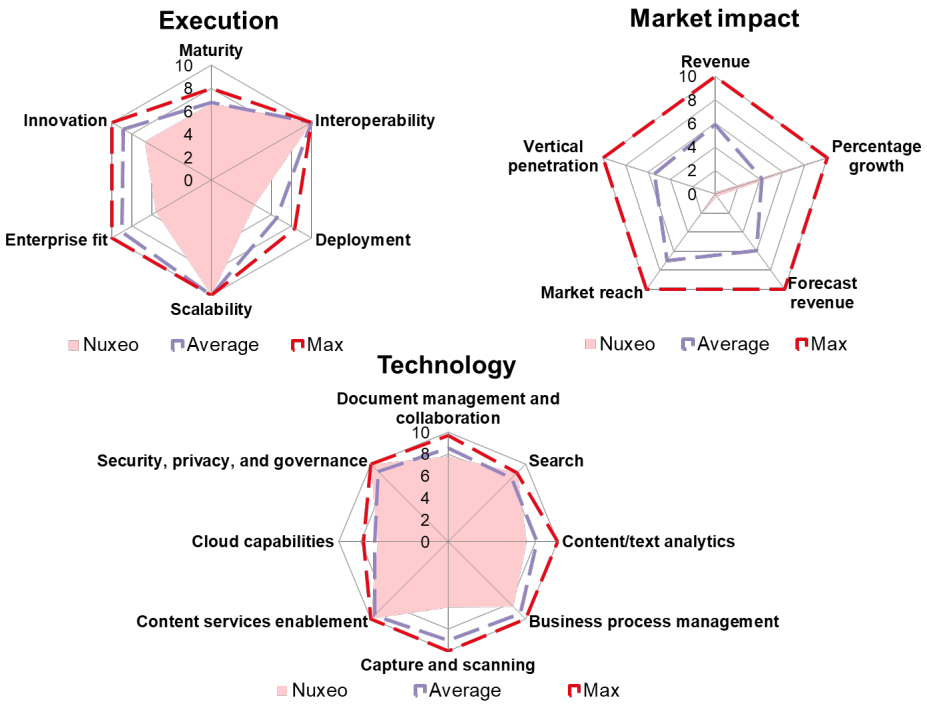
SharePoint, Microsoft's content services platform can quite easily work beside one from a third party.

Threats

- **Microsoft's is regarded as a mid-market solution by many, which threatens its ability to expand into the enterprise market as a corporate system for content services.** Even though the ECM or content services capabilities provided by Microsoft have greatly increased over the last few years, and it has the advantage of providing a leading information rights management solution, many enterprises still consider Microsoft to be a mid-market vendor. Microsoft needs to communicate more effectively the message that it offers a holistic suite of capabilities that provide extensive ECM capabilities.
- **Microsoft is often replaced by a competitor solution as the requirements of organizations grow.** Many organizations use SharePoint, OneDrive, and Office 365 as their first content management system. However, as their requirements grow, they often deploy a solution from another vendor as a corporate system and use the Microsoft portfolio at a departmental level or for ad hoc users. Microsoft provides a wide range of ECM or content services capabilities, which will satisfy the requirements of many enterprises, but it needs to demonstrate that its solution can scale to meet the demands of large enterprises.

Nuxeo Platform (Ovum recommendation: Challenger)

Figure 10: Nuxeo Platform radar diagrams



Source: Ovum

Ovum SWOT assessment

Strengths

- **Nuxeo Platform manages content in remote repositories.** Nuxeo recognizes that many enterprises have multiple ECM systems, which are impossible to consolidate onto a single platform. The Nuxeo Platform can manage content in its native repository as well as in remote ones, allowing enterprises to retain multiple repositories but have a single platform, Nuxeo, to centrally manage and govern that content.
- **Nuxeo has a cloud-native architecture that allows enterprises full flexibility in the deployment model.** Nuxeo's cloud-native architecture provides enterprises with the benefits of the cloud, regardless of whether they are using a cloud or on-premises deployment. This makes it much easier for enterprises to migrate from on-premises to cloud, deploy a hybrid solution, or move workloads to the cloud at times of heavy demand. Docker and Kubernetes are supported to enable applications to be easily and quickly deployed in the cloud.
- **The platform includes extensive collaborative and mobile capabilities.** The Nuxeo Platform has collaboration features including the ability to create notes, annotate documents, comment on documents, share content internally and externally, and edit content using native tools. It also provides version-conflict resolution capabilities, the ability to review documents in their original format in a collaborative environment in the cloud, and the ability to collaborate around sets of related documents regardless of whether they are stored in cloud or on-premises repositories.
- **Nuxeo's integration capabilities allow content-centric processes and applications to be created.** The Nuxeo Platform is delivered with RESTful APIs, native connectors, CMIS, and a dedicated federation services layer, allowing integration with third-party content and data. Nuxeo can integrate with a variety of applications including ECM solutions, EFSS offerings, core line-of-business applications, and both cloud and on-premises solutions.

Weaknesses

- **Nuxeo does not provide its own content services for noncore ECM functions.** While Nuxeo provides extensive capabilities in core ECM features, it does not provide its own solutions in areas such as records management and capture. This is a deliberate strategy on Nuxeo's part, because it believes that many enterprises will already have implemented solutions in areas such as capture and records management and will not want to replace them when implementing a content services platform. However, some enterprises still want to adopt a traditional approach and acquire a complete solution from a single vendor, and this approach will deter them from implementing the Nuxeo Platform.

Opportunities

- **The need for enterprises to rapidly adapt to evolving business requirements provides Nuxeo with an opportunity to increase its market share.** The Nuxeo Platform includes low-code development tools to enable developers to rapidly prototype, test, and deploy applications or content services, allowing them to adapt to changing requirements. Developers are also able to create mobile apps, supporting the demands of employees and customers to access and work with content on mobile devices. This will suit enterprises with complex content management requirements that wish to adopt an agile and flexible approach to application development.

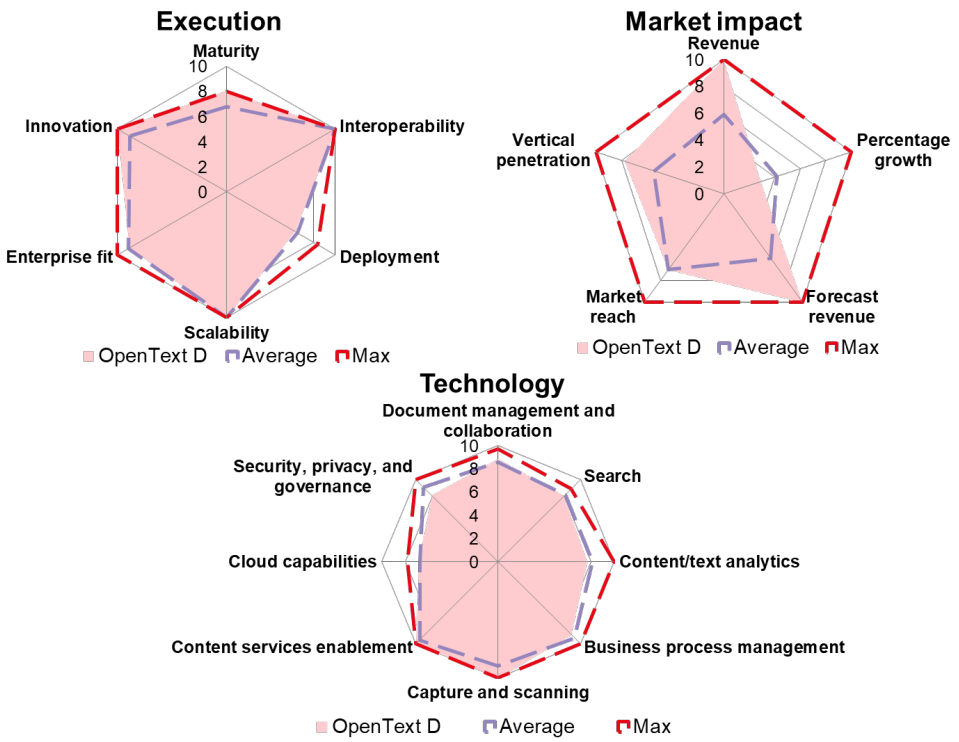
- **Nuxeo's product strategy to help organizations connect and manage digital information across the organization should be attractive to enterprises.** A big opportunity for Nuxeo is its product strategy of helping enterprises to manage their digital information through its flexible, highly scalable content services platform, digital asset management, and case management capabilities. To this end, the vendor has moved to a continuous innovation paradigm whereby new features will be introduced to its cloud solutions as they become available. It will increasingly use AI/ML to drive insights, increase knowledge worker productivity, and enhance low-code development for the rapid development of apps and IT modernization to provide enterprises with the tools and services required to replace legacy systems. In addition, Nuxeo's community of partners and customers can increase and accelerate the creation of apps, services, templates, and integrations to the Nuxeo Platform.

Threats

- **Nuxeo faces competition from much larger vendors.** Nuxeo is a vendor with an impressive array of large customers. However, because it is a smaller vendor with a lower profile than many of its competitors, some enterprises will not consider Nuxeo when reviewing content services platforms. This is a shame, because Nuxeo is growing year on year, and it has an extensive set of capabilities and a low-code development environment, making it ideal for creating content services. Nuxeo needs to raise its market profile to accelerate its growth rate.
- **There is still a perception in some enterprises that open source means free, "lightweight" software.** Although open source is gaining in popularity, and Nuxeo has many enterprise customers, there is a reluctance on the part of some organizations to adopt solutions from open source vendors, because they associate open source with free, unsupported software. This is not the case: Nuxeo is available as fully featured software with a full range of support services provided.

OpenText Documentum, 16.5 (Ovum recommendation: Leader)

Figure 11: OpenText Documentum, 16.5 radar diagrams



Source: Ovum

Ovum SWOT assessment

Strengths

- **The content services platform includes capabilities to manage the lifecycle of content.** OpenText Documentum provides the foundation on which content-centric applications and solutions can be built. It is ideal for enterprises in heavily regulated industries because it includes capture, document management, search, intelligence, security, compliance capabilities, and records management. Its repository enforces governance policies regardless of location, whether geographical or in the cloud.
- **Documentum xPlore search engine provides extensive search capabilities.** OpenText Documentum xPlore search engine is tightly integrated with Documentum platform's information policy management capabilities to ensure that permissions and access rights to documents are adhered to. Features include query-based subscriptions, thesaurus capabilities, and automated indexing as well as multiple search techniques including full text search, metadata search, faceted search, natural language processing, keyword search, and Boolean search. Documentum xPlore combines the OpenText Documentum xDB XML database with Apache Lucene.
- **Integration capabilities allow easy integration with business applications and content services.** Documentum exploits SOAP and REST, and there are standard Documentum APIs for WebDAV, FTP, SMB, and JDBC. The architecture is fully JEE compliant for web-based applications, and it supports the Microsoft.NET environment. In addition, a number of XML-based standards are supported. The platform also provides integration through standards

such as CMIS. As well as integrating with enterprise applications, it also integrates with systems such as directory services using LDAP. Also included are connectors for repositories and applications including Microsoft SharePoint, SAP, and Oracle.

- **Flexible deployment models are available.** OpenText offers a number of deployment options for Documentum including public or private clouds, on premises, or hybrid solutions. OpenText offers its own cloud, OpenText Cloud Platform, but Documentum can also be deployed on third-party clouds including AWS, Azure, or Google Cloud.

Weaknesses

- **Limited support is currently provided for mobile devices.** There are a number of features for mobile devices that would be expected in an ECM system that Documentum does not currently support. These include the ability to download and edit documents on mobile devices, real-time document coauthoring on smartphones/tablets, and the ability to optimize documents for readability on mobile devices. These are features that OpenText needs to add to support the demands of the modern workforce who work on mobile devices. However, Documentum D2 Mobile allows organizations to quickly search, access, review, and approve documents on a mobile device.

Opportunities

- **OpenText Documentum's records management capabilities provide additional sales opportunities.** Not all content services platform vendors now include records management. It is one of the technologies that is often separated from the platform to allow enterprises to deploy a best-of-breed solution. However, some enterprises still prefer a one-stop-shop approach. OpenText's records management solution includes certifications with a variety of bodies and the ability to manage physical as well as electronic records, which will appeal to enterprises wanting to acquire their content management solutions from a single vendor.
- **OpenText includes Magellan, an AI and ML analytics product, in its portfolio.** OpenText has embedded Magellan throughout its ECM and content services portfolio to provide AI and ML capabilities, which are important elements for enterprises that are undertaking digital transformation initiatives. AI is used in OpenText's content analytics and ML is used in its intelligent capture solution to automate additional business workflows. Embedding AI throughout the Documentum portfolio is increasing its attractiveness to enterprises.

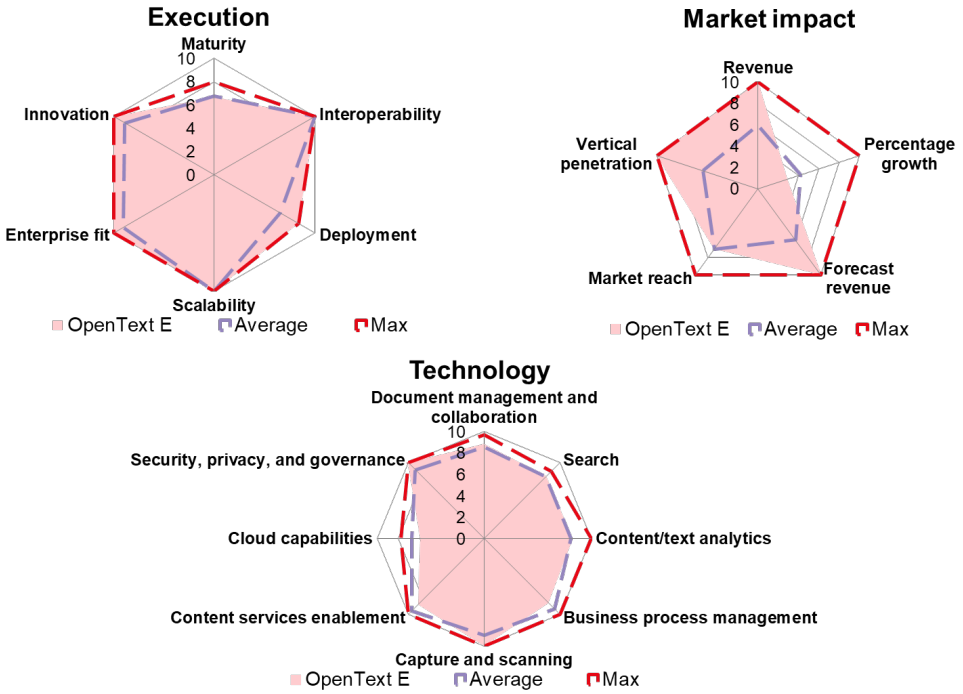
Threats

- **The biggest threat to OpenText Documentum is OpenText Extended ECM Platform.** OpenText runs the risk of becoming a victim of its own success. It has two of the leading ECM or content services platforms in its portfolio. This can lead to confusion for potential customers, who may be unsure which product provides the best fit for their requirements. OpenText needs to have a clear vision of which product is best suited for each scenario that customers present. However, OpenText stresses that it continues to support its large Documentum customer base, and its strategy is to provide a comprehensive content services platform as well as providing extended ECM capabilities in leading business applications, regardless of the platform being used. OpenText has recently announced Extended ECM Documentum for SAP Solutions to bring extended ECM capabilities to Documentum customers.

- **OpenText Documentum runs the risk of being regarded as a specialist solution only applicable to a small proportion of enterprises.** With its industry-specific solutions for energy, engineering, and life sciences and its focus on compliance and governance, Documentum risks being regarded as a solution only suited to enterprises in highly regulated industries. While it is an ideal solution for these types of companies, its case management capabilities mean it is also suited to enterprises that have a need for applications that combine people, content, and process.

OpenText Extended ECM Platform, 16.2.8 (Ovum recommendation: Leader)

Figure 12: OpenText Extended ECM Platform, 16.2.8 radar diagrams



Source: Ovum

Ovum SWOT assessment

Strengths

- **OpenText Extended ECM incorporates automated classification and metadata management.** Documents are automatically filed within a process and in the context of a related business object, which prevents documents being filed on local hard drives or file shares and being shared via email. Records management classification takes place in the background, negating the need for any user intervention. This feature takes advantage of Extended ECM's integration capabilities with applications such as SAP, Microsoft, and Salesforce.
- **Users can view content from within the application.** Users can access the information they require from Extended ECM Platform without leaving the business application in which they are working. In fact, they may never realize that they are working with content stored in a content management system. Users who do not have access to the lead application can work

with the same content used within the process via the role-based Extended ECM Smart View, which displays selected metadata related to the business object being managed in the lead application.

- **Content can be shared with external parties.** OpenText Core allows documents to be shared securely internally and with individuals outside the enterprise. Cloud-native sharing and collaboration features provide access for everyone with the appropriate permissions to the most up-to-date version of a document. Corporate security, compliance, and privacy protocols are adhered to.
- **Project-based work is enabled with team workspaces.** Software deployment can be simplified by using templates to create team workspaces, which are aligned to business processes. Connected workspaces can be related to a customer, product, employee, purchase order, or any other business object type. They can be created automatically from the lead application.

Weaknesses

- **OpenText is not yet fully containerized with Docker and Kubernetes.** OpenText is in the process of containerizing Extended ECM using Docker and Kubernetes. OpenText reports that Extended ECM is planned to be containerized for the EP7 release, which is scheduled for late 2019. Until this is made available, deployments to the cloud will not reap the benefits of containerization architectures.

Opportunities

- **Integration is key to a content services architecture, and OpenText's capabilities should provide additional sales opportunities.** Providing a content services platform with robust, publicly discoverable APIs is vital for rapidly developing vertical and horizontal applications and integrating ECM capabilities with a wide range of enterprise systems and applications. In addition to providing APIs, OpenText has integrations with a range of business applications including ERP systems such as SAP S/4HANA and Oracle E-Business Suite, HR applications including SAP SuccessFactors, and customer relationship management (CRM) systems including Salesforce. Productivity tools such as Office 365 and SharePoint are also supported.
- **OpenText's cloud options provide opportunities as enterprises continue with their digital transformation initiatives.** The cloud is an important element of digital transformation. OpenText offers flexible cloud models for public, private, or hybrid deployments, with a number of options such as managed services, standardized cloud editions, and cloud microservices and apps. Services and solutions can be deployed in Microsoft Azure, Google Cloud Platform, Amazon AWS, and SAP's Cloud Platform. OpenText also has its own cloud. Content services applications are an ideal way to test the cloud before undertaking a major migration.

Threats

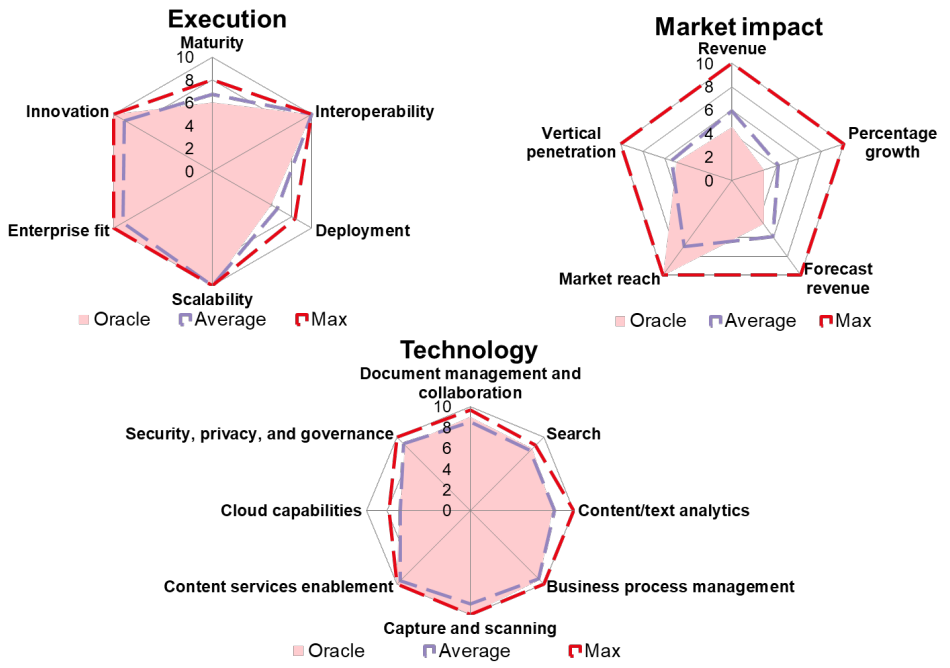
- **The biggest threat to OpenText Extended ECM Platform is OpenText Documentum.** OpenText runs the risk of becoming a victim of its own success. It has two of the leading ECM or content services platforms in its portfolio. This can lead to confusion for potential customers, who may be unsure which product provides the best fit for their requirements.

OpenText needs to have a clear vision of which product is best for each scenario that customers present.

- **The complexity of ECM or content services platforms can deter customers from migrating to new platforms.** A criticism often leveled at ECM vendors is that their products are complex to implement with a great deal of customization required, necessitating the engagement of professional services, which can more than double the cost of the solution. The adoption of content services is an opportunity for vendors to simplify the implementation process by increasing the number of connectors to business applications that they offer out of the box, because integration is an area that typically requires professional services.

Oracle Content and Experience, 19.2.1 (Ovum recommendation: Leader)

Figure 13: Oracle Content and Experience, 19.2.1 radar diagrams



Source: Ovum

Ovum SWOT assessment

Strengths

- **Oracle provides extensive security, privacy, and governance features to help protect content.** Oracle includes extensive security features in Oracle Content and Experience including user role and group security. Full audit logs and administrative reporting are provided, allowing administrators and managers to see who made changes to documents and when they were made. Encryption is included, with enterprises able to manage their own encryption keys, which is something that not all vendors support. In addition, organizations can enforce data-sovereignty rules to constrain files to geographical locations, and content is stored in a manner that makes it GDPR compliant.

- **Oracle includes capture capabilities to help enterprises digitize their content and optimize processes.** Oracle's capture capabilities are available as a service, which allows them to be used on content that is destined for the hub. Integration with cloud-based and on-premises third-party ECM platforms allows enterprises to import or receive content from a wide range of sources. Recognition for different document types means content can be integrated into many different processes.
- **Oracle provides development tools to allow enterprises to rapidly develop content services.** Oracle includes low-code development tools to enable rapid application development, allowing enterprises to quickly develop content services. Mobile app development tools are also available. REST APIs, native connectors, and support for CMIS provide mechanisms for integration to third-party repositories and business applications.
- **Oracle supports collaboration with internal and external personnel.** Oracle provides several collaborative features such as the ability to collaborate on documents regardless of whether they are stored in the cloud or on-premises and the ability to annotate or mark-up rendered versions of shared documents. It also supports EFSS capabilities including offline user support with file synchronization available the next time the user connects to the network, item level security, the ability to download documents to and edit them on mobile devices, the ability to delete synchronized files remotely, and real-time document coauthoring on smartphones and tablets.

Weaknesses

- **Oracle text and content analytics capabilities do not currently provide sentiment analysis.** Sentiment analysis is currently missing from Oracle's text and content analytics capabilities. This is an important omission, because one of the areas where AI is being applied by vendors is in the ability to target employees with content they may be interested in or that they are likely to want to work on to help improve productivity. Sentiment analysis plays an important role in the ability to identify relevant content. It is also important for identifying negative sentiments such as complaints from customers.

Opportunities

- **Oracle is simplifying content management by reducing the number of repositories required.** The boundaries are blurring between content that is internal to an enterprise and customer-facing content that is used in experiences. By adopting a single hub for all content and assets and thus simplifying content management, Oracle has the opportunity to build its market share by selling to enterprises that want fewer platforms to manage their content.
- **Oracle Content and Experience can help enterprises with their digital transformation initiatives.** Enterprises undertaking digital transformation need modern ECM and web content management (WCM) systems that allow content delivery through multiple channels. They also require flexible deployment models including cloud options and AI and ML capabilities. Oracle provides all of these with Oracle Content and Experience.

Threats

- **Enterprises using legacy ECM systems pose a threat to Oracle.** There are still many enterprises using legacy ECM platforms, often running multiple systems as a result of mergers and acquisitions as well as departmental implementations. Because of the sheer scale of the task involved in migrating to a modern content services platform, enterprises are

often deterred from upgrading. However, enterprises need to upgrade if they are to fully digitally transform themselves. Vendors such as Oracle need to make the migration process as simple and painless as possible to help persuade enterprises that it is worth undertaking the migration task.

- **Because of the depth and breadth of Oracle's portfolio, there is a perception that multiple Oracle products are required.** Oracle has a huge portfolio of products that cover development, infrastructure, middleware, security, and databases to name a few. Its software solutions also include a wide range of technology areas. There is a perception that in order to deploy an ECM or content services platform, a number of other Oracle products are required. This is not true. Because of the integration capabilities in Oracle Content and Experience, any number of third-party products can interact with the content in the hub.

Appendix

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Ovum Consulting

We hope that this analysis will help you make informed and imaginative business decisions. If you have further requirements, Ovum's consulting team may be able to help you. For more information about Ovum's consulting capabilities, please contact us directly at consulting@ovum.com.

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