

Critical Capabilities for Content Services Platforms

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Content services platforms provide content-centric capabilities that enable organizations to transform digital operations that rely significantly on business content. Application leaders should consider CSPs as a key component of digital business transformation.

Overview

Key Findings

- The overlap of content services platform (CSP) products with content collaboration platform (CCP) products is growing. Many of the major CSP vendors now offer some form of external collaboration and file sync and share features.
- User experience remains a key differentiator for CSP products. This is a mature market and feature differentiation across longstanding products is hard to find, but how users will engage with products for specific business processes is a critical aspect of product selection.
- Artificial intelligence (AI) is still relatively nascent in the CSP market, but is a major area of investment for most vendors. It is most commonly found in classification capabilities triggered at the point of capture.

Recommendations

For application leaders responsible for enhancing digital workplace applications:

- Evaluate native CSP collaboration capabilities when looking to satisfy operational digital business requirements that span employees, partners and customers. The growing maturity of such capabilities in CSPs may negate the need to undertake the complexity and cost of acquiring and integrating additional CCP products.
- Develop evaluation criteria that assess the user experience during product selection. Ensure vendors demonstrate how their products align with the required business processes and deployment scope (for example, horizontal versus vertical) to ensure their fit to organizational working patterns and project requirements.
- Base your selection, in part, on a vendor's current and future planned AI features — a key evaluation criterion. AI technologies will deliver increased efficiencies via automation and productivity enhancements, so ensure that AI is a strategic focus for the vendor you choose.

What You Need to Know

Content services platforms (CSPs) are a vital part of any organization's content services strategy. They are best aligned with use cases that cover the more formal aspects of how content is used in an organization, as opposed to content collaboration platforms (CCPs), which are often used in more informal, ad hoc collaboration. As such, CSPs typically provide advanced capabilities for document management, records management, workflow and content capture.

This report analyzes the capabilities of 18 of the major vendors in the market (there are 20 products included, two vendors have two products evaluated here). It does so by ranking a core set of 15 capabilities (described in the section titled Critical Capabilities Definition). The vendors are then further assessed by how well the capabilities support a set of five use cases, namely:

- Back-office processing
- Business process applications
- Document management
- Records management
- Team productivity

These use cases are described in detail later in this document. They were selected because (based on interactions with Gartner clients during inquiry) they are the most common reasons why organizations choose to purchase and implement CSP technology.

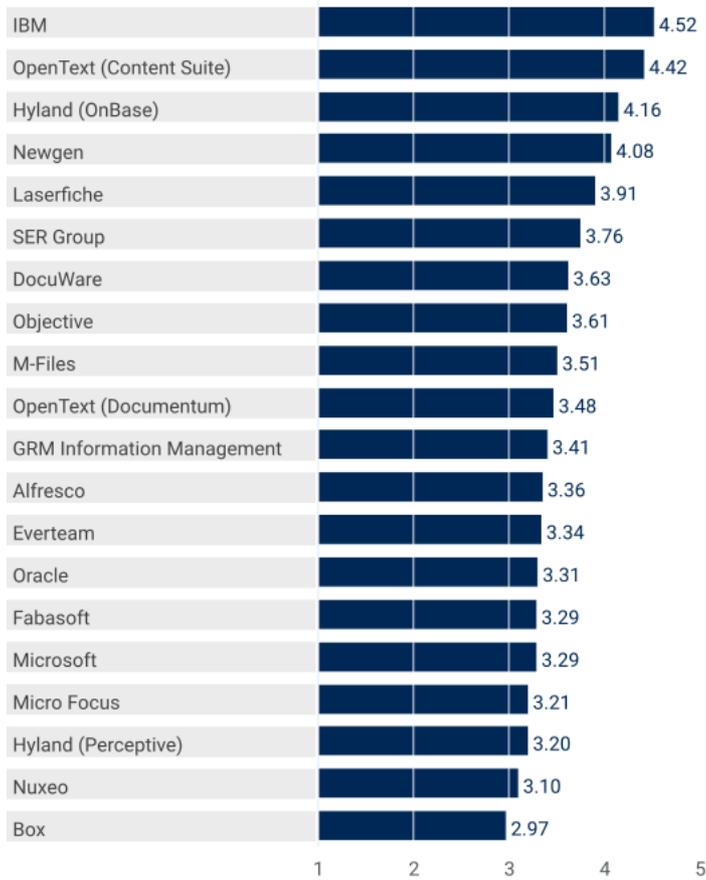
Application leaders should use this research report to evaluate vendors' capabilities for the business problems they are looking to solve. It accompanies "Magic Quadrant for Content Services Platforms." Whereas the Magic Quadrant takes a broad view of the vendors' vision and ability to execute, the Critical Capabilities report focuses on just the products. Two vendors (OpenText and Hyland) have two products each included in this report, as the products have significant market presence. A summary description is provided of the relevant product modules and the individual use case score, along with a summarized view of the highlights and areas of concern for each use case.

Analysis

Critical Capabilities Use-Case Graphics

Figure 1. Vendors' Product Scores for the Back-Office Processing Use Case

Product or Service Scores for Back-Office Processing



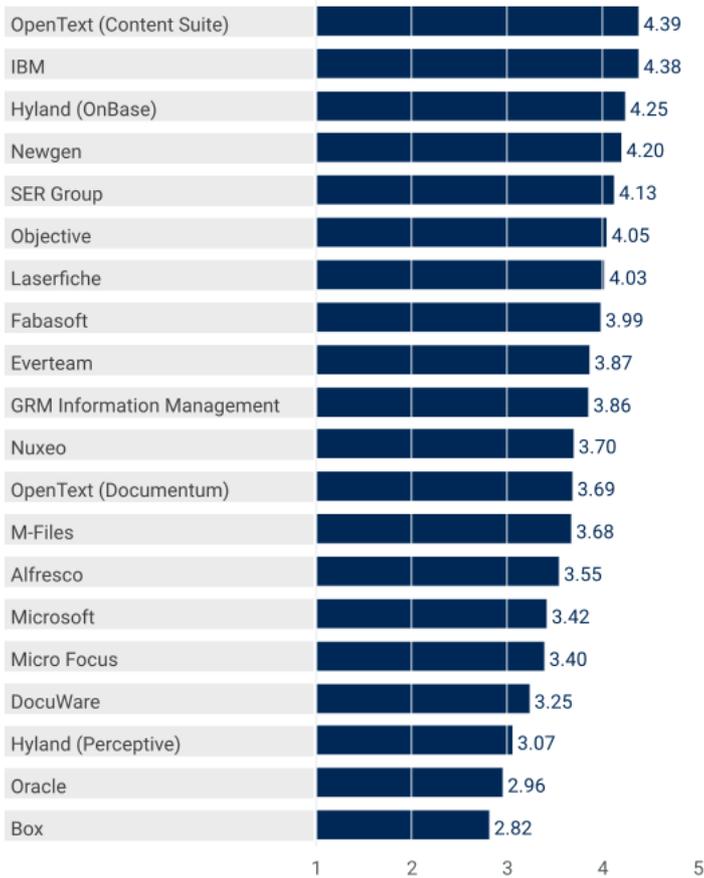
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Figure 2. Vendors' Product Scores for the Business Process Applications Use Case

Product or Service Scores for Business Process Applications



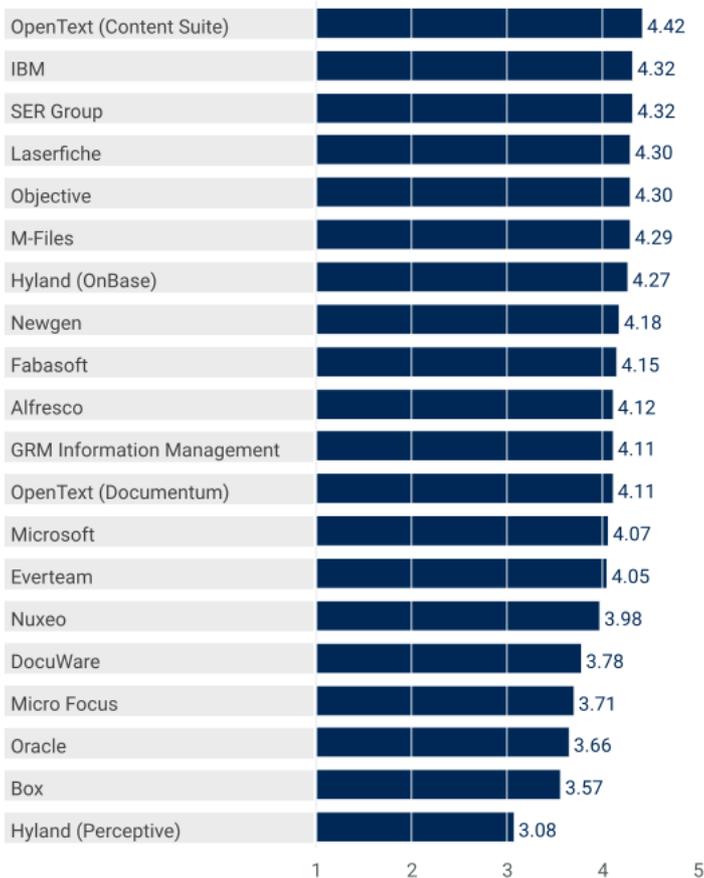
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Figure 3. Vendors' Product Scores for the Document Management Use Case

Product or Service Scores for Document Management

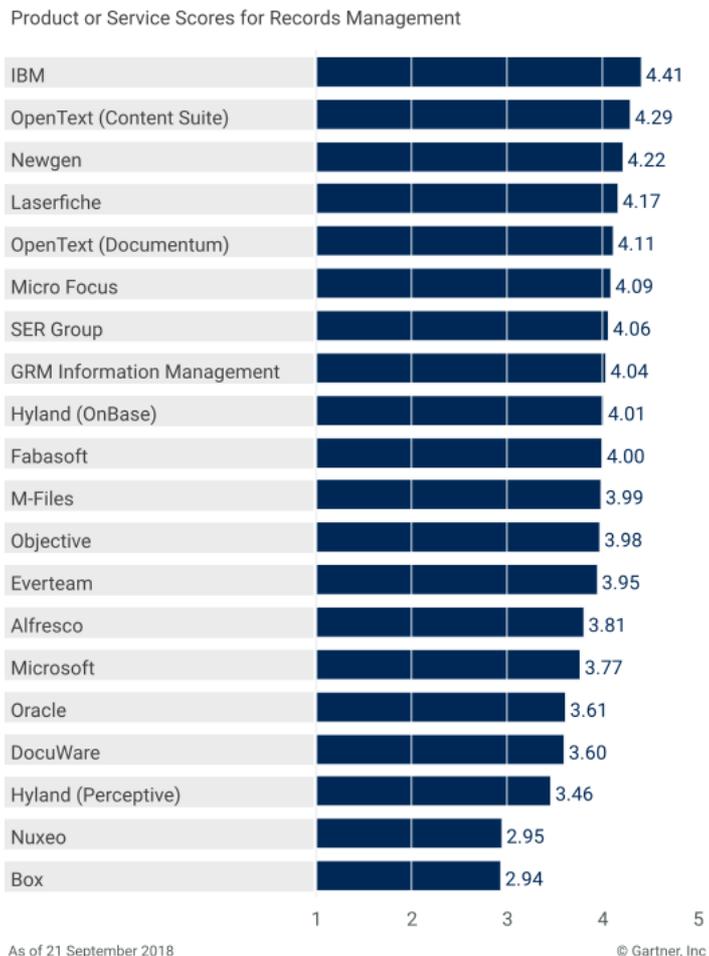


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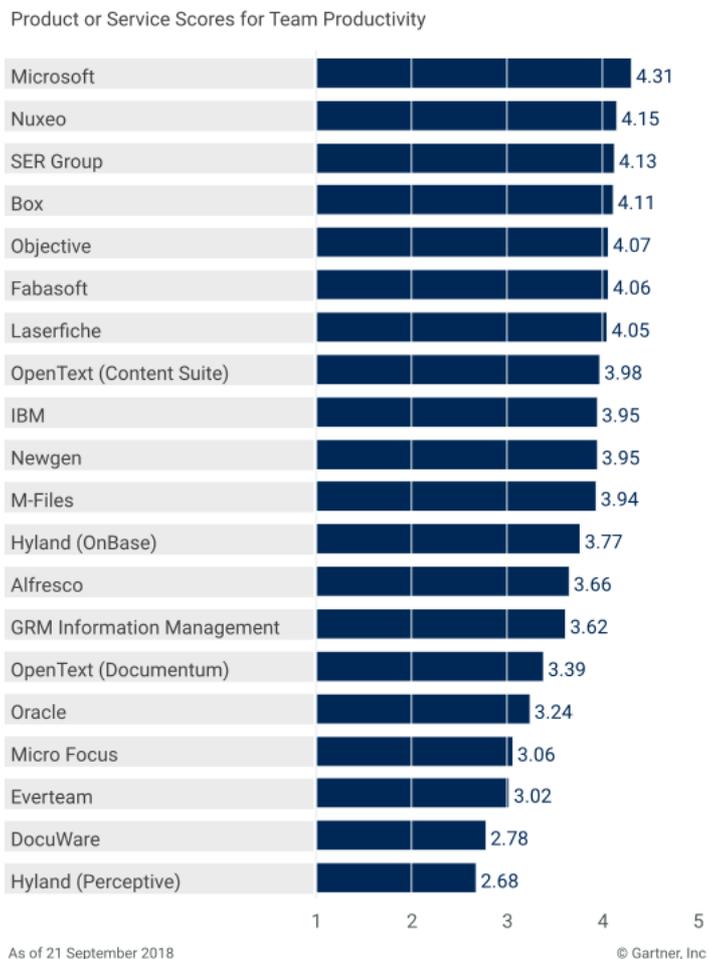
Source: Gartner (October 2018)

Figure 4. Vendors' Product Scores for the Records Management Use Case



Source: Gartner (October 2018)

Figure 5. Vendors' Product Scores for the Team Productivity Use Case



Source: Gartner (October 2018)

Vendors

Alfresco

Product evaluated: Digital Business Platform

The Alfresco Digital Business Platform suite, based on open-source standards, is composed of a number of product modules that are available individually or as a combined offering. They include Alfresco Content Services, Alfresco Process Services (business process management [BPM]), Alfresco Governance Services (automated records management), Search and Insight Engine (contextual analytics), and Desktop Sync (file sync and sharing).

Use case ratings:

- **Back-office processing (3.36 – good):** Alfresco's strength in this capability lies in supporting integrations with line-of-business (LOB) solutions and purpose-built applications with its Application Development Framework (ADF). This combination of rich API and user experience SDKs provides a very flexible way to extend the content and process capabilities within the platform. Alfresco Capture Services provides capture capability. This is a fully supported OEM version of the capture product from Ephesoft. There is a native integration for Salesforce, but partner solutions or development via an integration endpoint (such as the REST interface or ADF) are required for other LOB integrations.
- **Business process applications (3.55 – good to excellent):** Alfresco provides extensive workflow and business processing capability via its Process Services component (built on the open-source Activiti framework). A combination of this capability and the ADF provides organizations with tools to develop rich business process applications. Alfresco lacks native capability to provide analytical visualizations that are present in other competing offerings.
- **Document management (4.12 – excellent):** Alfresco provides very strong document management capabilities and flexible metadata modelling capabilities. It provides a workspace-based work area and facilities for document preview and annotation. The default user experience (Alfresco Share) for document management appears more complex and somewhat dated in comparison to other products in this space. This may challenge its suitability for simple, less formal document management needs. The ADF components, released in 2017, are more modern and Alfresco is in the process of building a standard document user interface (UI) using this framework.
- **Records management (3.81 – good to excellent):** Alfresco's positive score for records management is based on the capability contained within its governance services module. It contains all the features expected for a mature records management offering and maintains certification with a number of international standards, including DoD 5015.2 and VERS. Alfresco currently lacks any native capability to manage records outside of its native repository; however, partner solutions are available.
- **Team productivity (3.66 – good to excellent):** Alfresco provides a workspace-driven approach to team and personal productivity through its web and mobile clients. It supports integration into common productivity suites including Microsoft Office 365 and Google Drive (support for the latter being considerably less common in this market). There is currently no native cloud-based CSP, and integrations into other CCPs such as Box and Dropbox are limited but available through partners.

Box

Product evaluated: Box Enterprise with Governance

Box is a SaaS-based CSP with a number of stock-keeping units (SKUs). The core SKU with the most features is Box Enterprise, which includes collaboration and basic document management content services. Additional SKUs are available for content retention and legal holds (Box Governance) and workflow (Box Relay). Other modules, specifically related to Box's SaaS nature, enable localized data residency (Box Zones) and customer-owned encryption key management (Box KeySafe).

Use case ratings:

- **Back-office processing (2.97 – fair to good):** Box provides a number of native integrations with LOB solutions for back-office processing use cases that are particularly suited to organizations with cloud-based application strategies. These include native integrations for Salesforce, Oracle Sales Cloud, and SAP SuccessFactors. Other integrations with major LOB systems such as SAP, Microsoft Dynamics, ServiceNow, and Workday require integration using the Box Platform APIs and SDKs. Mobile capture is a native feature; however, high-volume digitization requires third-party components, and integrations exist for products such as Kofax and IBM Datacap.
- **Business process applications (2.82 – fair to good):** Relay is Box's workflow platform, available as an add-on. Project leads can configure simple workflows such as document reviews and approvals, and provide these to users in a compelling, informative and simple-to-use interface. Relay is a leader in the CCP market, where requirements regarding workflow are less complex. However, compared to other products in the CSP market, it is limited and not suitable for complex process-driven applications. Third-party integrations (for example, Nintex or Pega) are available for more complex requirements. Box platform APIs also provide a way for developers to utilize Box's content services in business-specific applications.
- **Document management (3.57 – good to excellent):** Box provides a set of standard document management services in its core product. The aspect that really differentiates Box in this regard is the consumerized nature of the user experience, which is consistently applied across both web and mobile clients. Integrations are provided for common productivity tools such as Microsoft Office 365 and Google Docs. Additionally, Box Drive provides file system integration, further simplifying how users work with content. The metadata capability in Box is quite limited when compared to other products in the CSP market. Customers with advanced metadata requirements (for example, taxonomy management, complex types, aspects, inheritance rules) should therefore qualify that the features are sufficient for their needs.

- **Records management (2.94 – fair to good):** Box Governance provides basic retention and disposition controls that make it suitable for organizations with lightweight records management needs. Retention policies are applied via rules associated with metadata values, meaning that retention can be applied automatically or manually. Data loss prevention capabilities can also be assigned to further identify and protect information that contains sensitive data. Box does not provide advanced records management capabilities such as file plan management and is not certified for international records management standards.
- **Team productivity (4.11 – excellent):** Box excels at supporting team productivity use cases. It is a modern user experience with content sharing and collaboration as primary features. Content can be viewed, annotated and commented upon online with viewers that support a large number of file formats. There are numerous integrations into common collaboration applications such as Slack, SharePoint, and Workplace by Facebook. Additionally, Box Notes provides a cloud-based content creation capability that allows users to create and collaborate around content in a manner that is unique in the CSP market.

DocuWare

Product evaluated: DocuWare

DocuWare provides a single CSP suite available on-premises or as a SaaS-based service. It includes capabilities for document management, capture, records management and workflow.

Use case ratings:

- **Back-office processing (3.63 – good to excellent):** DocuWare provides a number of features that make it suitable for back-office processing use cases. On-demand capture and image processing capability are native features targeted at distributed capture use cases. Native integrations are available for SAP and Microsoft Dynamics. Additionally, DocuWare provides a simple way to configure external application integrations using robotic process automation (RPA)-like techniques in its Smart Connect module. Centralized high-volume capture operations are likely to require third-party software integrations.
- **Business process applications (3.25 – good):** DocuWare contains a workflow platform that is well-suited to creating business processes that are utilized in a standard way across organizations. The workflow designer is comprehensive, enabling designers to construct complex process flows that can include rules and parallel paths. Limitations compared to competitive offerings include a lack of analytical dashboards and minimal workflow reporting capabilities.
- **Document management (3.78 – good to excellent):** Document management capabilities are provided in web-based, desktop, mobile and office suite applications. The integration for Microsoft Outlook is feature rich, allowing users to interact directly with content and DocuWare features such as the document classification form within Outlook. Metadata is also a product strength, with some rich data modelling capabilities. Limitations include a lack of support for bulk import and, despite the ability to generate PDFs via a DocuWare printer component, there is no support for storing alternative formats in the repository.
- **Records management (3.60 – good to excellent):** DocuWare enables end-user classification of records via a unique “record stamp” capability. This applies common controls to records (for example, retention and disposition) and also places a visual overlay to the content, which enables users to see the records status in a clear and concise manner. This stamp feature is fully audited along with other activities in the repository. The records management capability is not as rich as that of some of the other leaders in the market, lacking file plan management and the ability to define disposal authorities. Currently, it does not hold any international records management certifications.
- **Team productivity (2.78 – fair to good):** DocuWare supports formal team productivity use cases via its standard document management and workflow features. This enables teams to work in folders with security governing membership and utilize workflow for review and communication. DocuWare is not well-suited to more ad hoc use cases, as it lacks the notion of a team workspace and does not provide integrations into other collaboration products. One exception is access to content in DocuWare from Microsoft SharePoint Server (this is limited to the on-premises version of the product).

Everteam

Product evaluated: Everteam

Everteam is a platform composed of a number of modules. These include everteam.document (document management), everteam.capture (image processing), everteam.archive (records management), everteam.process (BPM), everteam.case (case management) and everteam.discover (analytics and content discovery).

Use case ratings:

- **Back-office processing (3.34 – good):** Everteam provides capabilities that enable the capture of large volumes of information into its repository. This, coupled with a strong workflow capability, makes it suitable for back-office processing use cases. Prebuilt integrations with other LOB applications are limited in the current version. However, Everteam is planning a range of adaptors for inclusion in forthcoming releases. An API is present for custom-built integrations. Optical character recognition (OCR) and intelligent character recognition (ICR) are not native functions and rely on integration with third parties.
- **Business process applications (3.87 – good to excellent):** Everteam has a rich set of BPM capabilities, with a modelling environment that allows business users to create outline processes that can then be completed and implemented by technical resources. Analytics and resultant visualizations are also a key strength of the platform. Deployment options (cloud, hybrid and on-premises) are more limited than for other vendors as third-party services are required.

- **Document management (4.05 – excellent):** Everteam has a strong set of document management capabilities that are presented in a modern-looking user experience that exposes all of the standard document management features. Connectors for a wide range of additional repositories are provided, which allows users to utilize content stored elsewhere directly in Everteam as if it was native. Despite its modern feel, Everteam's UI contains some quite complex technical terminology that more casual users may find confusing, thereby impacting on adoption.
- **Records management (3.95 – good to excellent):** Records management and archiving is one of Everteam's main go-to-market features and, as such, the vendor has broad capability to satisfy this use case. Retention, disposition, file plan management and comprehensive audit are all part of the platform. In addition, the everteam.discover interface, which allows for search with rich analytical views combined with the multirepository connectivity, makes it suitable for discovery and application of governance policies across an enterprise. The somewhat technical and proprietary language used in the UI could be off-putting for nontechnical users.
- **Team productivity (3.02 – good):** Everteam's score for team productivity reflects a balance between useful and missing features. There are many useful collaboration and productivity features related such as Microsoft Outlook integration, URL-based document sharing, social commenting, rating and note taking. However, there is no real concept of a team workspace (other than a folder), no file synchronization capabilities and limited integration with CCPs.

Fabasoft

Product evaluated: Fabasoft Folio

Fabasoft provides a range of software modules as part of its Folio suite (which is also the basis of its cloud platform) covering document management, BPM and information governance. Other modules include a knowledge-management-focused insight engine (Mindbreeze), specialization for records management in the government sector (Fabasoft eGov-Suite), enterprise digital asset management (Fabasoft DAM), and HR records filing (Fabasoft Personnel File). The full suite is available as a SaaS-based service in the Fabasoft Cloud and also as an appliance that users can install on-premises.

Use case ratings:

- **Back-office processing (3.29 – good to excellent):** Fabasoft provides native integration into SAP to support back-office processing use cases. There is also a dedicated HR filing application to support use cases related to the filing of personnel records. Several standards-based APIs are available for organizations to integrate into other applications, but prebuilt integrations are limited when compared to the leaders in this market. There is no native capture component, but integrations are available with industry-leading providers such as Kofax and ABBYY.
- **Business process applications (3.99 – good to excellent):** Fabasoft obtained a high score for its workflow capability, which led to a strong score for this use case. A workflow engine with abilities for process versioning, exception handling and complex routing rules is included. Additionally, Fabasoft supports Business Process Model and Notation (BPMN) Version 2.0, allowing processes to be defined by a business user to define a process using relatively nontechnical tools (for example, BPMN modelling in Visio) and then imported into Fabasoft for completion and implementation. Analytics are available for inclusion in dashboards, but further visualizations related to content analysis require the addition of the (fully integrated) Mindbreeze.
- **Document management (4.15 – excellent):** In addition to supporting most standard document management features (e.g., versioning, annotation), Fabasoft provides a number of features designed to drive greater productivity such as silent check in/check out and offline folder synchronization. A native desktop client that supports Windows notifications provides a more seamless experience for Windows desktop users. Annotation is available in the web, desktop and mobile applications.
- **Records management (4.00 – excellent):** Fabasoft provides a strong set of records management capabilities covering retention, disposition, holds and file plan management. Fabasoft eGov-Suite is a product specifically tailored for records management usage in government, particularly in German-speaking European nations where its suitability for underpinning e-government, citizen-centric processes has been proven. Adherence to other international standards is more limited; for example, there is no DoD 5015.2 compliance.
- **Team productivity (4.06 – excellent):** Fabasoft team productivity is centered on the concept of a Teamroom, which enables a grouping of people and information for the purpose of collaboration. Fabasoft extends this concept with specific models for managing projects, including support for different methodologies that may impact ways of working (e.g., agile versus waterfall projects). Integration into other areas such as workstream collaboration (e.g., Slack, Microsoft Teams) and collaborative document management (e.g., SharePoint, Box) is limited and requires organizations to utilize Fabasoft APIs to build their own integrations. Integration with Microsoft Office Online is, however, available.

GRM Information Management

Product evaluated: VisualVault

GRM's VisualVault is available as a cloud-based platform. It is primarily a multitenant SaaS, but there is a private cloud option available as part of its premium (enterprise) offering. The product contains modules for document management (VisualVault DM), scanning and image processing (VisualVault Capture), records management (VisualVault RM), content collaboration (VisualVault Content Share), workflow (VisualVault Workflow), analytics (VisualVault Analytics), and file sync and share (VisualVault FS).

Use case ratings:

- **Back-office processing (3.41 – good):** VisualVault Capture provides native capture services for the extraction of metadata from document images. This is combined with an expanded workflow platform and analytics capabilities that allow users to take direct action from management

dashboards. Native integration into LOB applications is limited compared to other leaders in this market; for example, there is no SAP or Oracle E-Business Suite integration.

- **Business process applications (3.86 – good to excellent):** VisualVault’s suitability for this use case is based on a range of key supporting features. The workflow engine is fully featured with a graphical workflow designer and user-friendly forms designer capable of creating simple-to-use data input experiences. An actionable analytics framework enables designers to create dashboards that serve as a graphical entry point into process-driven applications and provide users with the ability to take necessary business actions or respond to alerts based on previously defined data parameters. Analytics are currently limited to process analysis, social, rich media and content classification.
- **Document management (4.11 – excellent):** VisualVault has an extensive set of document management capabilities covering all the standard features. Highlights include a viewer for images and text documents that allow annotation, commenting and redacting features. The ability to merge documents is also provided – a useful feature not found in all competing products. The overall web user experience appears simple to use but is not as modern looking as some competitors in this space. The online content viewer does not yet support video streaming.
- **Records management (4.04 – excellent):** VisualVault provides comprehensive records management features via an easy-to-use interface. It allows records administrators to define rules and record-related information flows, which simplifies the end user’s experience and helps to ensure adherence to information policies. Available retention rules are not as sophisticated as in some competitor systems (for example, phased retention is not supported), while certification against international standards such as DoD 5015.2 and ISO 15489 is missing.
- **Team productivity (3.62 – good to excellent):** VisualVault provides collaboration and file synchronization services via its Content Share and FS modules, which allow users to share information both inside and outside the organization. It is best suited to structured team productivity use cases that gravitate around a process. Capabilities to support more ad hoc collaboration – such as team workspaces and integration with workstream collaboration and other content collaboration products – are more limited than those offered by some of VisualVault’s competitors.

Hyland (OnBase)

Product evaluated: OnBase

Hyland’s heritage product suite is OnBase (Perceptive Content, a recently acquired product, is reviewed further down). OnBase includes modules for document management, records management, business application enablement, case management, collaboration, workflow, and analytics. Image processing and capture is provided either via a native module, OnBase Capture, or via Brainware, a product that was part of Hyland’s Lexmark acquisition and is integrated into OnBase. An additional product, ShareBase, provides content collaboration features.

Use case ratings:

- **Back-office processing (4.16 – excellent):** OnBase provides native integrations for a number of LOB systems including SAP, Workday, and Guidewire. It also provides a range of integrations for healthcare-related systems such as Epic and Allscripts. A configurable integration framework named Application Enabler is available for low-code integration into other platforms. Basic capture services are provided in OnBase Capture, while more advanced use cases such as machine-learning-driven data classification are enabled by Brainware, particularly for invoice processing and transcript capture. The Brainware UI is quite complex and somewhat dated in appearance, which may deter casual users.
- **Business process applications (4.25 – excellent):** OnBase has an extensive workflow and forms engine that is native to the platform, along with the ability to embed process content-centric analytics into applications. A graphical UI is available for tailoring workflows, creating forms and personalizing the overall application for use in the desktop, web and mobile client. The mobile client is highly adaptable, more so than many other competitors in this market. There are some limitations to the workflow engine, including lack of support for BPMN 2.0, and no ability to version workflows.
- **Document management (4.27 – excellent):** OnBase is highly suited to all document management use cases. A tight integration with common productivity tools such as Microsoft Office 365 is provided directly from the office UI, with more advanced features available directly in the OnBase client. The document viewer is particularly rich and includes specialization for advanced document types such as CAD drawings. Another differentiating feature is the ability to visualize content metadata through external integrations such as on an Esri map. There is a lot of functionality available in the Hyland UI, but there is limited capability to restrict this based on user personas, so some users could find this overwhelming.
- **Records management (4.01 – excellent):** OnBase provides a full range of expected records management features for this market including retention, disposition, file plan management and legal holds. The admin interface is very comprehensive, with simple mechanisms for defining policies and applying legal holds. DoD 5015.2 compliance is achieved by implementing the Certified Records Management module, which also includes technology from Gimmal.
- **Team productivity (3.77 – good to excellent):** OnBase’s strong workflow and application definition features make it well-suited to team productivity use cases that are aligned to business operations. Dashboards, views and associated processes can be configured via graphical design tools with extensive administration options for defining who can access and participate. Bidirectional integration with ShareBase (an additional product) for external participation is available. More ad hoc team productivity use cases (e.g., project collaboration) are met by defining folder structures.

Hyland (Perceptive)

Product evaluated: Perceptive Content

Perceptive Content (formerly known as ImageNow) is a product suite acquired by Hyland in 2017 from Lexmark. It provides native modules for document management, records management and workflow. Capture and image processing is provided by native capability and integration into Brainware (another Hyland acquisition). Analytics capability is provided by integration into Perceptive Enterprise Search, an additional product.

Use Case Ratings:

- **Back-office processing (3.20 – good):** The BrainWare integration provides a compelling option for initiating back-office processing use cases in the capture phase. Brainware utilizes machine learning technology to recognize and classify documents, thereby eliminating the need to create and manage templates related to document types. Native integrations with LOB solutions are available for Salesforce, SAP and Microsoft Dynamics. Further integrations require organizations to extend Perceptive Content using the Perceptive APIs.
- **Business process applications (3.07 – good):** Perceptive provides a good set of workflow features that make it suitable for many business process application use cases. The web user interface is modern looking, simple to use and configurable for different scenarios. A module named Process Mining allows organizations to examine existing business processes from application logs and look for ways in which improvements could be implemented within Perceptive. Limitations include the inability to create workflow templates and a reliance on the additional Enterprise search module for any form of analytics associated with the process.
- **Document management (3.08 – good):** The web-based user experience for document management in Perceptive is clean and modern looking and supports standard document management features. Additional clients are available for Microsoft Outlook, Office and Windows Desktop. There are a number of limitations when compared to other products, such as no viewer support for image/video manipulation and no bulk import capability. In addition, the mobile client user experience is not as modern looking as its web-based counterparts.
- **Records management (3.46 – good to excellent):** Perceptive's Record Manager module is DoD 5015.2 certified and, as such, provides a comprehensive set of features for records management. There's an extensive set of administrative capabilities for defining holds and policies. Integration with Perceptive Enterprise Search is an additional UI but provides a mechanism for e-discovery and the ability to take action, such as moving records into a repository. The end-user experience for records management is more complex than many competitive products in this market, with little automation provided.
- **Team productivity (2.68 – fair to good):** Features to support team productivity use cases, particularly ad hoc scenarios, are more limited in Perceptive than in competitor offerings. File sharing via URL is provided and integration with Hyland's ShareBase platform (currently a roadmap item) will further extend this option. The primary limitation is the lack of any workspace concept, but other missing features include social features, integration with other workstream collaboration technologies, and integration with Office 365 and other cloud office suites.

IBM

Product evaluated: IBM Automation Platform for Digital Business

IBM's Automation Platform for Digital Business consists of a number of IBM products, including: IBM Content Navigator (the UI for accessing content in multiple repositories); IBM FileNet Content Manager (document management); IBM Datacap (image processing and capture); IBM Case Manager (workflow); IBM Enterprise Records (records management); and IBM Watson (content analytics). These products are also available as stand-alone modules.

Use case ratings:

- **Back-office processing (4.52 – excellent to outstanding):** IBM has an extensive and advanced capability to support back-office processing. Datacap provides multichannel content capture capabilities with sophisticated natural language features built in. These features allow for intelligent data extraction such as sentiment analysis and summary keyword extraction, and feeding into subsequent workflows. Integration into LOB systems is also rich, with IBM App Connect providing configurable integrations into over 100 other applications. Minor limitations include a lack of an integration with Adobe Sign and no support for capture via instant messaging channels.
- **Business process applications (4.38 – excellent):** IBM's Case Manager module provides application designers with a powerful environment for developing business-process-driven applications. The concept of case management is central as a technical component, rather than simply being a collection of processes (something that occurs in some other workflow-driven platforms). The end-user application is clear, modern looking and simple to navigate. Likewise, the resultant mobile applications are business specific and have a consumerized look and feel.
- **Document management (4.32 – excellent):** IBM provides an extensive set of features to support document management use cases. Content Navigator is a clean, modern user experience that can be invoked as a stand-alone application or integrated into other applications such as Microsoft SharePoint. Other standout features include offline content access, support for compound documents (made of multiple parts) and embedded content analytics in search results. Watson Explorer integrated with Content Manager provides richer, analytics-led experiences. The search experience offers many options and is therefore somewhat complex.
- **Records management (4.41 – excellent):** IBM Enterprise Records includes a comprehensive set of information-governance-related features. Retention, disposition, holds and file plan management are all available from an administrative console, presenting many options. Retention options are more advanced than many other competing products, yet the administration console does not become overly complex to use. From an end-user perspective, declaration of records is a relatively simple manual process or automated process, depending on rules set up by records administrators.
- **Team productivity (3.95 – good to excellent):** Within Content Navigator, IBM provides the concept of a teamspace that is ideally suited to team productivity use cases. Administrators can define templates for teamspace so that they maintain task-related consistency, and instances of these can then be created by end users. Teamspace include document management, social features and the ability to launch workflows. IBM

has, until recently, positioned its integration with Box as the solution to external collaboration, and this integration remains available. However, it has recently refocused on native capability and, in June 2018, released an external sharing feature within Content Navigator. Mobile and desktop synchronization features are also available within Content Navigator.

Laserfiche

Product evaluated: Laserfiche

The Laserfiche suite provides a core set of document management capabilities extended by a number of modules covering image processing and capture (Laserfiche Scanning), document classification (Laserfiche Quick Fields), records management (Laserfiche Records Management), collaboration (Laserfiche Discussions and Laserfiche Answers) and workflow (Laserfiche Workflow and Laserfiche Forms). The products are available on-premises, on subscription and on Laserfiche Cloud, with either an entry-level standard set of bundled features or full enterprise versions.

Use case ratings:

- **Back-office processing (3.91 – good to excellent):** Laserfiche provides a native scanning and document classification module for physical document capture. In addition, there are facilities for multichannel content capture from file system and mobile devices. The UI for both document classification and end-user access once content has been assigned to a workflow is modern and simple to use. Integration into LOB systems is achieved via a number of components. SAP integration is available directly from Laserfiche while other integrations (e.g., Salesforce, Microsoft Dynamics) are available from partners on Laserfiche's integration marketplace. Additionally, Laserfiche Connector allows designers to utilize RPA-like tools to capture and send information to and from other systems, thereby providing further integration options.
- **Business process applications (4.03 – excellent):** A comprehensive workflow engine is central to Laserfiche's suitability for this use case. The design tool is web based, graphical, intuitive and supports templates in a business library to encourage reuse of process components and expedite process development. The resultant forms are modern looking and easy to use. The engine can be used to generate documents as output from the process. Process-related reports are available and can be configured by admin users. However, these are located in a specialist reports area rather than being embedded in applications, as is common in leading competitive offerings.
- **Document management (4.30 – excellent):** Laserfiche provides a very strong set of document management capabilities in a number of clients, including desktop (with Microsoft Office integrations), mobile and web. The document access mechanism is via folder navigation or search. Once accessed, a document is available in either its native application (including integration with Microsoft Office Online) or in the online viewer, which has extensive features such as detailed document search and redaction. The mobile application has a standard set of document management features, along with the ability to interact with simple forms that can be made available for offline usage.
- **Records management (4.17 – excellent):** The Laserfiche records management capability is DoD 5015.2 certified and claims to be compliant with other records-related standards such as ISO 15489 and MoReq 2010 (though not certified). The UI for records and document management is consistent in layout and presentation, with clear indications of the information life cycle state and associated policies. The administration interface uses the same UI paradigms and includes useful features for applying actions (such as cut-off definition) in batch. The main limitation is an inability to manage physical records and content that exists in other external repositories (in-place records management).
- **Team productivity (4.05 – excellent):** Laserfiche utilizes processes and forms to drive team productivity use cases. There are a number of less common, but useful, features related to meeting scheduling and calendar integration that simplify the scheduling of team activities. Laserfiche does not directly support the notion of a team workspace, instead relying on folder and access control to define team membership.

M-Files

Product evaluated: M-Files

M-Files provides a single suite of products that cover all aspects of a CSP, including document management, image processing, records management, collaboration, workflow, analytics and content sharing. It is available on-premises, in a single tenant private cloud or as a multitenant SaaS offering.

Use case ratings:

- **Back-office processing (3.51 – good to excellent):** Capture is provided by M-Files' own native capture and OCR services, or via integration into other capture engines (Kofax, for example). The native capture capability provides multichannel support for email, file share and web services. Native integration services for LOB applications, a critical part of back-office processing use cases, is available for Salesforce, SAP and Microsoft Dynamics. Integration into other LOB applications requires configuration using the built-in M-Files Admin interface, and/or customization utilizing the M-Files API.
- **Business process applications (3.68 – good to excellent):** M-Files provides a workflow definition tool that allows designers to define business processes using a graphical modelling tool. An innovative, differentiating feature is the ability to define policy- and procedure-related graphics that act as entry points into other workflows. This is an enabler for business information management (BIM) system applications. The end-user views are presented in the standard M-Files document and metadata view. However, the product lacks the ability to define highly specialized, business-specific applications.
- **Document management (4.29 – excellent):** M-Files provides one of the most integrated document management experiences for Microsoft Windows users on the market. While a fully featured mobile- and browser-based experience are available, the desktop client allows users to work with files in a familiar and simple Windows Explorer-type way while also exposing CSP features such as metadata and workflow. M-Files' Intelligent Metadata Layer allows these features to be applied to many content sources (e.g., SharePoint, Box, Documentum), not just the native

M-Files repository. Once beyond the simple use cases, M-Files uses a unique hierarchical concept for visualizing aspects such as related content. While this is consistently applied and powerful, more casual users may require additional training and support to use it effectively.

- **Records management (3.99 – good to excellent):** M-Files' records-management-related capabilities are comprehensive, covering retention, disposition, holds and file plan management. Access to records can be driven by metadata, making it suitable for scenarios where labels and protective markings determine records access. The UI relies heavily on the hierarchical concept and multiple layers of pop-ups, which could be confusing for casual users. M-Files' records management is not currently certified for major international standards such as ISO 15489, DoD 5015.2 and VERS.
- **Team productivity (3.94 – good to excellent):** An extensive range of features enables team productivity use cases in M-Files. Integration into productivity suites and, in particular, Office 365 is provided in a simple, easy-to-use way with native components. Gantt chart views are available in the team workspaces to support project-based collaboration, while an external portal allows for external participation. The Intelligent Metadata Layer provides a cohesive way for teams to work with content that may have previously been locked away in legacy silos.

Micro Focus

Product evaluated: Content Manager

Content Manager (a product acquired from HPE in 2017) is the primary product within Micro Focus's Secure Content Management CSP suite, covering document management, records management and workflow. External collaboration is provided by a separate product called Filr (an acquisition from Novell), while content analytics is provided by another product, Control Point.

Use case ratings:

- **Back-office processing (3.21 – good):** Content Manager can be used to support back-office processing use cases when combined with third-party products. High-volume capture, scanning and classification are not provided natively; however, integrations with leading capture vendors such as Kofax are available. Integration with LOB systems is also limited compared to competitors, though an API is available for further extension. Control Point can be used to automatically capture content from other digital systems.
- **Business process applications (3.40 – good):** Content Manager has a graphical workflow designer that allows designers to create business-specific process flows. There are features for creating workflows from existing templates to increase reuse and expedite workflow development. While the functionality is comprehensive, both the designer and UI are dated when compared to other leading offerings.
- **Document management (3.71 – good to excellent):** A standard set of document management features is included within Content Manager. These features are provided in a native web client or via integration with Microsoft Office productivity tools and Outlook. The language used and presentation of the features is geared toward records management use cases and is therefore best suited to formal document management processes. This could lead to user adoption challenges, where less formal controls are required.
- **Records management (4.09 – excellent):** Records management is undoubtedly a strength of the Content Manager platform, with a large array of features and configuration options to satisfy the most rigorous records keeping requirements. This is especially helpful for organizations in highly regulated industries. A comprehensive desktop UI is provided to allow records administrators to define and apply policies, run reports and act on the information contained in such reports. Integration with Control Point provides organizations with an option to extend Content Manager's records management capabilities to content stored in other repositories.
- **Team productivity (3.06 – good):** A combination of a standard set of capabilities for document management, records management and workflow means that formal, process-driven team productivity use cases can be satisfied by Content Manager. Teams can work together in designated folders and use workflow to provide consistent communication and approval flows. However, for less formal, ad hoc collaboration, there are significant limitations including a lack of a designated workspace (SharePoint integration is relied on for this) and external collaboration capabilities.

Microsoft

Product evaluated: SharePoint Online and SharePoint Server 2016

SharePoint is Microsoft's CSP. It is available on-premises (SharePoint Server) and as public cloud SaaS (SharePoint Online). Customers can also use them together, fabricating a hybrid service. SharePoint Online's CSP capability is further extended when utilized as a component of a wider Office 365 implementation. Microsoft's scores in this report are reflective primarily of SharePoint's stand-alone capabilities; however, additional Office 365 features have been factored in where they are most relevant.

Use case ratings:

- **Back-office processing (3.29 – good):** Within Office 365, SharePoint Online and Microsoft Flow can be used in combination to support simple back-office processing use cases. Flow provides connectivity to many third-party applications and can be extended to other sources via configuration and development if integrations do not exist. SharePoint Server does not have a direct Flow equivalent but it does offer basic (in comparison to competitor products) workflow services, while SharePoint Server data can be consumed in Flow services, offering a hybrid option. Deep integrations with commonly used LOB applications such as SAP require third-party add-ons; an extensive set of add-ons is available, often directly from the LOB vendor. Capture from mobile channels is a key feature, but high-volume scanning also requires third-party components.
- **Business process applications (3.42 – good):** SharePoint is highly configurable, with many options based on sites, lists and libraries that make it well-suited as a user entry point to business process applications. Simple process capabilities are provided natively in Office 365 via Flow.

However, Flow's primary focus is on task automation and, as such, is not always suitable for complex business processes. Therefore, in both the online and on-premises versions, third-party components are often required from vendors such as K2 and Nintex for advanced workflow needs.

- **Document management (4.07 – excellent):** Document management is a central tenet of SharePoint, with all standard services covered. It is provided in a modern, easy-to-use interface with the most consistent and streamlined integration into the Microsoft productivity application suite in the market. A viewer is included with a large variety of supported formats. One limitation compared to some other vendors is that content can only exist in one library, which can lead to content duplication. Shortcut capabilities are available, but this is a simplistic and limited way of managing multihomed content when compared to competitive offerings (for example, resolution of classification inheritance). Microsoft offers a range of metadata and classification features to mitigate this.
- **Records management (3.77 – good to excellent):** Records management has been a key area of investment for Microsoft in recent years and this is reflected by an increase in score. SharePoint Server has basic records and retention capabilities, with records centers and information management policies. Typically, third-party products are deployed here for organizations with complex records management needs. SharePoint Online introduces labels and retention policies in a move to simplify records management application, while providing further levels of control. Some key features are still missing for more complex records requirements including file plan management, complex retention, immediate disposition, and the ability to apply more than one label. Automation of label application is only available with an Office 365 E5 subscription.
- **Team productivity (4.31 – excellent):** Team productivity has long been a core strength of SharePoint. A central concept of all versions is the site, which allows users to define workspaces for any kind of team-based task. Further improvements exist in Office 365 with Groups (a selection of Office 365 components deployed for a group activity) and Teams (workspace collaboration). The autonomy given to users – while a significant benefit of the platform – does require careful governance to ensure compliance, ongoing efficiencies and adherence to organizational policies.

Newgen

Product evaluated: OmniDocs ECM Suite

Newgen's OmniDocs ECM Suite is a fully featured CSP composed of a number of modules. These include: OmniDocs (document management); OmniScan (multichannel capture); OmniDocs Records Management System (records management); OmniFlow iBPS (workflow and business process management); OmniDocs Content Analytics (content analytics); and OmniVrs (multirepository integration). A separate product named Corrus provides external collaboration capabilities.

Use case ratings:

- **Back-office processing (4.08 – excellent):** Newgen includes a range of native products that make it suitable for back-office activities such as accounts payable processes. OmniScan provides multichannel capture, which has extensive features for information identification and extraction. OmniSocial provides the ability to capture information from social media streams. While it is feature rich, the UI for OmniScan is dated compared to competing offerings. Native integration into a range of LOB applications such as SAP is available.
- **Business process applications (4.20 – excellent):** Newgen has a rich BPM engine in its iBPS module. It can be used to build advanced business process and case management applications. Forms, rules processes and analytic visualizations are all definable from graphical modeling tools. The Newgen Enterprise Mobility Framework (NEMF) allows mobile applications to be constructed via low-code techniques. The user experience is, however, not consistent with OmniDocs. Therefore, the use of both products could introduce user confusion.
- **Document management (4.18 – excellent):** The Newgen OmniDocs user experience has been significantly refreshed in the latest version and is now available in a modern looking web-based interface, in addition to the desktop client. All standard document management features are included. OmniVrs allows for connectivity into existing enterprise repositories, with numerous connectors available (e.g., Documentum, FileNet, SharePoint). A mobile client is also available but optimization for the form factor is limited and, therefore, the experience is not as compelling as the web client.
- **Records management (4.22 – excellent):** Newgen's records management module is targeted at compliance and is DoD 5015.2 and VERS certified. A full set of standard features are included along with additional capability for physical records management.
- **Team productivity (3.95 – good to excellent):** Ad hoc team productivity use cases are mostly enabled by Corrus, a separate Newgen application. This is a modern-looking SaaS-based application that can be used to support external collaboration and contains a blend of workspaces, simple workflow and online content editors with a rich set of features. Integration with other modules is possible; for example, integration with iBPS case management capabilities for an end-to-end process that covers employee, partner and customer communication. Corrus is a separate product line and requires additional licenses and deployment considerations.

Nuxeo

Product evaluated: Nuxeo Platform

The Nuxeo Platform is available as either an on-premises or private cloud SaaS deployment and contains modules for document management, content collaboration, workflow and content analytics. An additional product, Nuxeo Drive, provides file sync and share capabilities. A Digital Asset Management application for brand management use cases is also available. This is the first of a planned series of content services applications that Nuxeo and its partners are planning to build on the Nuxeo platform.

Use case ratings:

- **Back-office processing (3.10 – good):** Nuxeo's flexible workflow engine and modern-looking UI provides the underlying capability to support back-office processing use cases. Additionally, native autoclassification capabilities for text and images help to automate business processes. An adaptor for Salesforce is available but integration with other LOB systems is limited (for example, there is no native SAP integration) and Nuxeo relies on extension via the REST API. Multichannel capture is also not included and relies on third-party integration.
- **Business process applications (3.70 – good to excellent):** Nuxeo is a very flexible platform and provides a comprehensive set of features that can be configured to design and deploy highly specialized content services applications. A range of content services including workflow, automation rules, content types and forms are configured in Nuxeo Studio, a modern and easy-to-use design experience. Applications that are configured using these services are delivered in a modern, responsive web-based client. Analytics visualization requires third-party add-ons such as Tableau.
- **Document management (3.98 – good to excellent):** Nuxeo provides a standard set of underlying content management features. Its strength, however, is its ability to tailor document management views directly to end-user needs via specialized applications constructed in the Nuxeo Studio client. Workflow, search and effective content security are embedded in the modern-looking user experience in a seamless way. Mobile clients are available for document consumption, but not interaction. Access to content in other repositories (such as Documentum, SharePoint, and Box) is available via Nuxeo Federation Services. There is currently no desktop client, which may be challenging for organizations with more horizontal content services requirements.
- **Records management (2.95 – fair to good):** Nuxeo's lightweight records management features make it suitable for organizations with simple records keeping requirements. The primary feature is the ability to apply simple, single-phase retention policies to content using rules to define applicability. Applying retention ensures that content is made immutable. There are limited advanced records management features (in particular, the ability to manage a records-based file plan) in the current release that will limit its records management applicability for organizations with significant compliance obligations. In this case, third-party add-ons or integrations with deeper records management systems are required.
- **Team productivity (4.15 – excellent):** Nuxeo supports a number of concepts that make it highly suitable for team productivity use cases. Content sharing is present for both internal and external users, with the ability to add multiple content assets into collections, thereby streamlining review and approval-type activities. A feature for managing "deliverables" is another concept that is useful when working with external organizations. In the current release, integration with external workstream collaboration tools, most notably Slack, is missing, but this is targeted for an upcoming release.

Objective

Product evaluated: Objective ECM

Objective provides an extensive set of content services via its Objective ECM suite. It is a modular platform with components for document management (native to the ECM suite), image processing (Objective Trapeze), records management (Objective Inform), collaboration (Objective Keystone and Objective Connect) and workflow (Objective Perform).

Use case ratings:

- **Back-office processing (3.61 – good to excellent):** Content capture requires third-party integrations with leading scanning providers. Once content is captured, a range of components are available to support back-office processing use cases. These include further image analysis and classification and native components for capture directly from Microsoft Outlook (a rich integration in comparison to competitors). Integration with leading LOB applications (such as Salesforce or SAP) requires additional client configuration utilizing Objective AppLink.
- **Business process applications (4.05 – excellent):** Objective contains a very rich BPM component. This can be used to design specific business applications that are then surfaced in the Objective web UI and the mobile client. Email template generation is comprehensive, reducing the need for users to switch from email to a dedicated client when performing tasks. Process analytics are also natively provided and can be consumed via configurable dashboards. A number of advanced features are missing, including the ability to simulate workflows during the design process and support for BPMN 2.0 notation.
- **Document management (4.30 – excellent to outstanding):** Document management is a key focus for the Objective platform. It is provided in a manner that is suitable for horizontal use cases across departments in an organization. Folder structures can be fixed or based on user-defined queries and are presented with dynamic iconography that indicates the status of the content within. The Objective client for Microsoft Office is also a highlight. It offers Objective capabilities integrated directly into common Microsoft functions without directing the user to specialized menus, a common technique provided by other products that can be confusing for end users.
- **Records management (3.98 – good to excellent):** Objective provides a comprehensive set of records management features including file plan management, retention policy management, and legal holds and reporting. There is also a fully featured physical records management capability with requisition and tracking capabilities. Power users and records management users have access to a desktop interface for accessing advanced records management capability. Objective has a strong presence in the Asia/Pacific market and therefore VERS certification is available. International certifications, in particular DoD 5015.2, are not.
- **Team productivity (4.07 – excellent):** Objective provides many options for supporting team productivity use cases, such as thoughtful integration for Microsoft SharePoint and Microsoft Teams. Objective Connect provides workspaces for external collaboration in a web application and a fully featured, optimized mobile client. Integration into other collaborative spaces such as Slack and Workspace by Facebook is not currently provided.

OpenText (Content Suite)

Product evaluated: OpenText Content Suite Platform

OpenText has a large portfolio of content services products. Its most enduring product line is the OpenText Content Suite Platform composed of a broad set of capabilities covering document management, records management, collaboration and workflow. Both OpenText Capture Center and Captiva offer clients choices for image processing, while OpenText Core provides external collaboration and file sync and share services.

Use case ratings:

- **Back-office processing (4.42 – excellent):** Clients can choose between OpenText Capture Center and Captiva (a product acquired from Dell EMC in 2017) for capture capabilities, both of which are integrated with Content Server. Captiva is the most advanced from a platform perspective, while Capture Center has the greatest number of business-domain-specific applications available (e.g., invoice processing). OpenText also provides native integration for a large number of LOB applications via its Extended ECM product set (effectively an integration layer for Content Suite). This includes integrations with SAP, Salesforce, Oracle ERP, and Microsoft Dynamics.
- **Business process applications (4.39 – excellent):** Content Suite provides a great deal of flexibility to support business process applications. The latest Content Suite user interface – Smart UI – is widget based and can be tailored for different business scenarios. The OpenText AppWorks tool is used to define application layout and business processes for scenarios such as case management. AppWorks, which allows the creation of complex business processes, requires additional licenses, thereby increasing the cost of the platform for organizations with such requirements.
- **Document management (4.42 – excellent):** General horizontal and business-specific document management are well-supported within Content Suite. The Smart UI is adaptive and provides a consistent user experience to web and mobile clients. In addition, a desktop client is available via a product called Enterprise Connect for users that wish to continue working in a file system paradigm. Integration into Microsoft Office applications is quite seamless. Advanced online file viewing and annotation is available via an additional OpenText product called Brava! The additional modules required can drive up the costs for users with detailed requirements.
- **Records management (4.29 – excellent):** Records Management is a standard Content Suite module. It provides rules for managing retention, disposition and file plan management. Retention and records policies can be automatically applied based on rules defined by administrators. The records administrator client is not consistent with the end-user Smart UI and looks somewhat dated by comparison. Likewise, reports are cumbersome and can be difficult to navigate. However, it is possible to configure the records manager dashboard directly in the Smart UI. OpenText Records Management is certified compliant with ISO 15489, DoD 5015.2 and VERS.
- **Team productivity (3.98 – good to excellent):** The Content Suite Smart UI provides flexibility to define views that can dictate how teams will work in generally formal processes. From a content perspective, team content is primarily folder-based but views can be configured to present this with additional contextual information. Native adaptors exist for SharePoint so that more ad hoc team work can take place there, with the content residing in OpenText. In addition, OpenText Core integration can be triggered directly from within the Content Suite Smart UI to share and collaborate externally. OpenText has not yet integrated its content services into other workstream collaboration tools such as Slack and Microsoft Teams (although this is scheduled for release in November this year).

OpenText (Documentum)

Product evaluated: Documentum

The Documentum suite is composed of modules including document management (D2), records management (Records Manager), and workflow and process (xCP). OpenText Captiva is fully integrated for multichannel capture and recognition, while integration with OpenText Core supports external collaboration use cases.

Use case ratings:

- **Back-office processing (3.48 – good):** Captiva is the primary application for information capture associated with the Documentum platform, although integrations with other third-party solutions (for example, Kofax) are available. Captiva is a very flexible capture engine suitable for centralized and distributed uses. An accounts payable accelerator (a product configuration rather than a complete offering) is available based on the xCP platform. Documentum does not have the same range of integrations into LOB applications as OpenText Content Suite. However, API access is available and OpenText may seek to extend these integrations further in the future.
- **Business process applications (3.69 – good to excellent):** Business applications are primarily the remit of xCP. This allows application designers to use a consolidated integrated development environment (IDE) to define user experience, processes and data models. The output is an experience that is highly tailored toward specific business scenarios. Aspects of the business process can also be surfaced in D2, the document management UI. While xCP is a very flexible and powerful tool, the user experience is dated compared to other products and is inconsistent with the D2 experience.
- **Document management (4.11 – excellent):** D2 is the primary Documentum application for document management use cases. D2 is a highly configurable application that allows authorized users to design document management workspaces using a rules configuration matrix. These rules can be used to define a diverse range of elements such as screen layout, metadata inheritance and retention application, in addition to expected document management functions. A mobile version of D2 is also available. Microsoft Office and desktop integration require additional modules (Content Connect and My Documentum for desktop respectively). As with xCP, the user experience for D2 is dated compared to other products and in need of a refresh.
- **Records management (4.11 – excellent):** Documentum has a long-standing heritage in records management due to its presence in highly regulated industries. Its DoD 5015.02-certified solution is therefore particularly comprehensive and provides advanced features such as multiphase retention and conditional versus chronological retention. Records capability can be applied automatically on an asynchronous,

scheduled basis determined by user metadata. The administration UI for records management is very dated as it is based on the legacy Webtop UI.

- **Team productivity (3.39 – good):** Documentum lacks any real concept of a team workspace that would make it suitable for ad hoc collaboration and productivity use cases. However, more formal team activities are supported using a combination of strong workflow and document management. An integration is also available for SharePoint Server. External collaboration is supported by integration into OpenText Core. Documentum lacks integration into other workspace collaboration products such as Slack or Microsoft Teams.

Oracle

Product evaluated: WebCenter Suite Plus/Content and Experience Cloud

Oracle has two offerings with content services capabilities: WebCenter, a long-standing product aimed at on-premises and private cloud deployment; and Content and Experience Cloud, a SaaS-based product that can be used to extend content services to externally facing use cases (i.e., directly to customers or partners). WebCenter contains modules for all standard CSP capabilities including document management, records management capture and workflow. It has been evaluated as a single CSP offering because Content and Experience Cloud, on its own, does not meet all the requirements of an organization looking for a complex CSP. Content and Experience Cloud can be used to extend simple CSP capabilities beyond traditional enterprise boundaries.

Use case ratings:

- **Back-office processing (3.31 – good):** Oracle provides high-volume centralized capture services via WebCenter Enterprise Capture and WebCenter Imaging. This includes a comprehensive set of capabilities to capture batches of content and extract data both automatically and manually. An integration with Oracle E-Business Suite is provided out of the box. However, adaptors for integration into other LOB systems (for example, SAP) are more limited and require customization using the WebCenter APIs. The user experience for WebCenter is not as modern as other competitors' offerings.
- **Business process applications (2.96 – fair to good):** Oracle WebCenter content contains a range of functionality suitable for content-related workflow scenarios such as document routing and approval. Workflows can either be ad hoc, instigated by an end user or designed in advance by authorized users. The workflow in WebCenter is limited to the definition of step sequences and not suitable for complex business processes. There is also no graphical design tool and the user experience is not intuitive. For rich business process application construction, additional Oracle products are required – either Oracle Business Process Management or Oracle Process Cloud Service (these services were not evaluated in this score).
- **Document management (3.66 – good to excellent):** As expected from a product with such a long presence in the content services market, WebCenter provides a good set of document features. A highlight of the document management experience is the ease with which hybrid cloud scenarios are supported. If clients also possess licenses for Content and Experience Cloud, then the ability to create cloud content folders is very simple and intuitive. The UI for document management is more modern looking than other parts of the system but lacks newer features to ease productivity, such as silent check-in. There is also no bulk load feature, a common inclusion in enterprise-level products.
- **Records management (3.61 – good to excellent):** Records management features are rich in Oracle WebCenter. Retention management, disposition, file plan management and legal holds are all covered. These features are certified as compliant with DoD 5015.2 and a partner add-on is available to extend compliance to the VERS standard. There are no records management features in Content and Experience Cloud, so organizations would require a hybrid strategy to tackle such requirements where this technology is deployed.
- **Team productivity (3.24 – good):** Oracle Content and Experience Cloud platform provides functionality that can support extended collaboration. Content can be grouped into folders and easily shared with external participants using a modern, consumerized user experience. Hybrid scenarios are supported so that content can be created in the on-premises/private cloud WebCenter component and then synchronized with the cloud platform for end-to-end scenarios. Limitations include a lack of a dedicated workspace environment and no integrations with other workstream collaboration platforms such as Slack or content platforms such as SharePoint, except via extension using the Oracle APIs.

SER Group

Product evaluated: Doxis4 iECM Suite – Content Service Bus

SER Group's Content Service Bus product provides standard CSP services including document and records management. A number of submodules provide additional capability including content collaboration (iRoom), workflow (BPM Services), content analytics (Cognitive Services) and capture services (winCube Scan and Inbound Center).

Use case ratings:

- **Back-office processing (3.76 – good to excellent):** Doxis4 contains a comprehensive set of capture capabilities via its Inbound Center product, which, when combined with equally comprehensive process modelling functionality, provides a strong grounding for back-office processing use cases. Capture can be centralized or distributed with end-user capture capabilities provided by winCube Scan. The integration with SAP is one of the richer integrations on the market; however, integration with most other LOB systems (Microsoft Dynamics, Oracle E-Business Suite) requires customization via the Doxis4 APIs.
- **Business process applications (4.13 – excellent):** Doxis4 includes a powerful application builder called cubeDesigner, one of the primary tools for building business process applications. This enables designers to configure almost all components of Doxis4 including information models, records management policies, UIs, rules and business processes. The resulting output is an end-user application available and adapted to all

Doxis4 UIs including mobile, web and desktop clients. While powerful, cubeDesigner is not suited for business users. Business users can create and modify basic processes within the end-user application. BPMN 2 import is also available, which would allow such users to create more complex process models in user-friendly applications and then import them into Doxis4 for technical completion.

- **Document management (4.32 – excellent):** All standard document management features are included within Doxis4. For document management, Microsoft Outlook integration is a key feature and includes extraction of document metadata triggered automatically or via a drag and drop action. The user experience is modern looking and provides the ability to tailor dashboards within the UI for specific tasks and activities. Folders are also customizable to present tailored views including metadata; for example, a customer folder that includes address information, contacts and related documentation.
- **Records management (4.06 – excellent):** Doxis4 provides capabilities for advanced records management use cases. Documents can be declared as records automatically or manually and then have retention policies applied. Storage policies are also definable, which will move content to appropriate storage based on its life cycle state. At this stage, Doxis4 lacks any international records management certifications but claims to be able to meet the requirements of such standards (for example, DoD 5015.2 and ISO 15489). In addition, the cubeDesigner interface, while powerful, is very technical and may prove challenging for some records administrators.
- **Team productivity (4.13 – excellent):** Team workspaces can be defined for a variety of business scenarios directly within Doxis4. For example, a project structure can be created directly with relevant metadata and subcategories (such as product phases). Within these structures it is possible to create “rooms” that can then be utilized as a container for internal and external collaboration. External collaboration uses the Doxis iRoom, a product that can be hosted in an externally facing secure environment. This, then, provides a bridge between the internal Doxis4 environment and external users, enabling them to access relevant content and processes. This is a fully integrated solution that avoids the need for additional software and administration overheads. However, the iRoom UI is not as consumerized as some competitor offerings.

Context

This research evaluates products based on their functionality to support five different use cases and 15 critical capabilities. The use cases were selected because they were the most common reasons that organizations gave for selecting CSP technology during Gartner interactions. The 15 capabilities are effectively groupings of related functionality. They are the same set of capabilities that are used to assess CCPs, but they are weighted differently in this analysis and the use cases also differ. See “Critical Capabilities for Content Collaboration Platforms.”

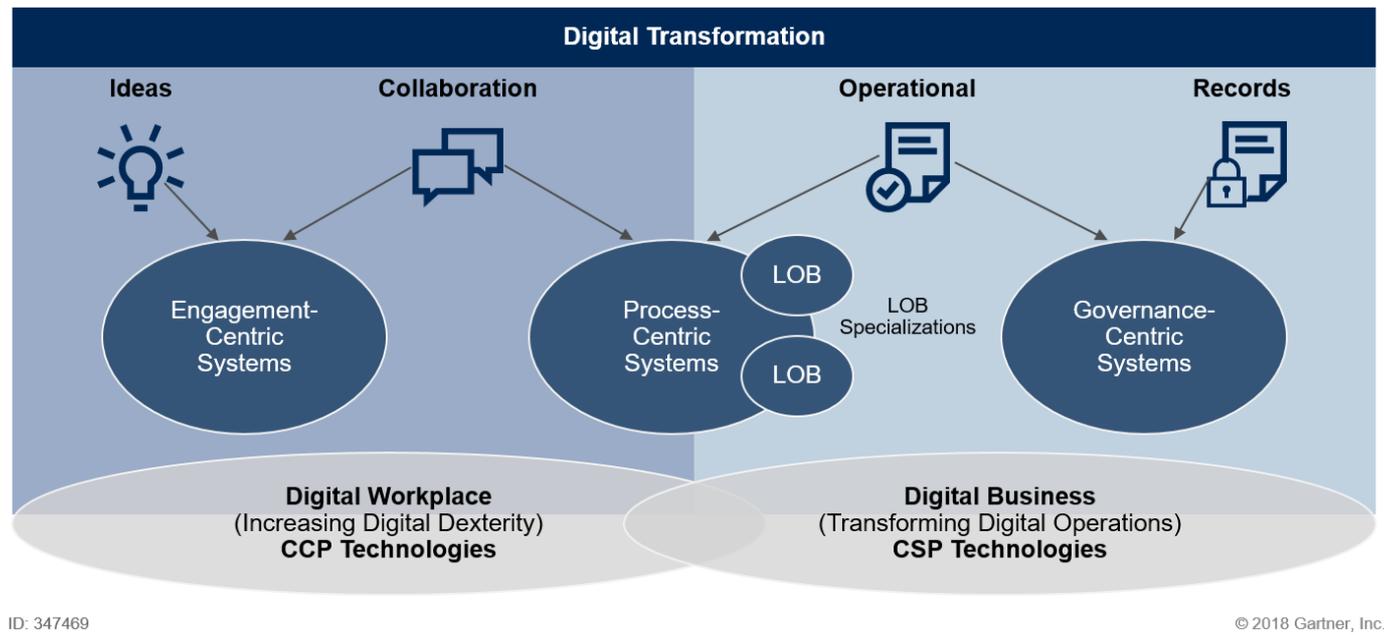
The rationale behind using the same set of capabilities for both the CSP and CCP markets is that Gartner sees considerable overlap between them. CSP vendors are developing greater capability to tackle collaboration use cases, while CCP vendors are developing more formal controls such as metadata and retention management. There are currently two vendors that Gartner evaluates in both the CCP and CSP market (Box and Microsoft). This number is expected to increase in the future. Gartner does not, as yet, see convergence of the two markets. The use cases that drive buying behavior are often very different (as demonstrated in the two Critical Capabilities reports). Content services technologies are often procured to support digital transformation initiatives and this generally falls into one of two categories (there is overlap between these categories; it is not a binary split):

- **Digital workplace—** Initiatives that change employees’ day-to-day working environment and increase the digital dexterity of the employee through simple-to-use, collaboration-focused tools. This is the primary remit of CCP technologies.
- **Digital business—** Initiatives that change the way business operations are undertaken. Usually, there is a heavy emphasis on process, rules and effective records keeping, but also on enabling new interactions directly with customers. This is the primary remit of CSP technologies.

This split is broadly representative of customer successes in place today. Figure 6 demonstrates how these markets tackle a spectrum of content-related needs for content to support digital transformation.

Figure 6. Content Markets Supporting Digital Transformation Needs

Content Markets Supporting Digital Transformation Needs



CCP = content collaboration platform; CSP = content services platform; LOB = line of business

Source: Gartner (October 2018)

Product/Service Class Definition

In broad terms, a CSP will possess the following characteristics:

- A platform orientation, including service-oriented architecture, integrated content repository, content-related services and user interfaces.
- A services-led architecture that enables content-oriented capabilities in 15 functional areas (see the Critical Capabilities Definition section below).
- Offer SaaS delivery of the platform services, although many vendors offer a mix of delivery models from on-premises, virtual private cloud, managed hosted services, multitenant public cloud (SaaS) and hybrid options for customers.
- Agile and flexible services and interfaces that can be customized, extended and integrated through publicly available APIs, connectors to commonly used productivity, ERP and LOB applications.
- Innovation in content-related processes, especially around leveraging AI and machine learning to automate tasks, enhance metadata and provide proactive insight based on enterprise content assets.
- Enable digital transformation by means of interfaces that link content assets with transformative initiatives such as digital dexterity, digital workplace and digital business. Use cases and activities for these include document management, team-based productivity, records management, back-office business processing, and business application enablement.

Although not a requirement, the CSP may also include prebuilt, content-oriented applications for horizontal and vertical business processes.

The representative vendors, inclusion criteria and evaluation criteria we followed for this Critical Capabilities report, and its companion Magic Quadrant, have been updated in 2018. This follows a major revision of the 2017 iterations, which introduced "content services" and retired the concept of "enterprise content management."

There are important differences in the platform approaches among CSP offerings and it is here that vendors are competing hard to innovate and differentiate their products. While the boundaries are not hard, there are distinguishing characteristics that buyers should consider when evaluating the products and finding the best fit for their content services strategies:

- **Centralized and integrated suites** – These are single-repository systems that include a complete set of content-related services. The services are optimized around content control and processing of unstructured documents, often for specific horizontal or vertical content processes. Vendors with such platforms offer well-integrated content management capabilities and interfaces to support the processing of unstructured documents from capture through life cycle management. These vendors typically maintain their traditional focus – highly integrated, strong domain expertise – but increasingly offer greater openness for connecting to business and productivity applications. Most provide multiple delivery options (on-premises, cloud and hybrid).

Example vendors: Alfresco, DocuWare, Fabasoft, Hyland, IBM, Laserfiche, Micro Focus, Microsoft (SharePoint), Newgen Software, OpenText, Oracle.

- **Federated services layers** – Service-led architectures are "born in the cloud," with agility and flexibility for using and managing unstructured content across diverse content ecosystems, use cases and applications. Vendors in this category optimize around microservices, multiple

repositories, logical layers, publicly available APIs and centralized management. The benefits include customization, extensibility and hybrid architectures. These vendors differentiate around flexibility, agility and cloud delivery models (although they are not restricted to cloud delivery). Innovations include multiple repositories with manage-in-place capabilities, rapid deployment (especially SaaS), ad hoc business user development of lightweight workflow, and enhanced engagement via extended collaboration and multimodal device support.

Example vendors: Everteam, M-Files, Nuxeo, Objective, SER Group.

- **Content services platform as a service (CS PaaS)**— Cloud-based platforms consisting of a set of services and microservices that enable organizations to exploit diverse content types and fulfill content-centric use cases across the business. These are “born in the cloud” platforms, applications and services. They emphasize digital transformation through business application enablement and user engagement with content through multimodal interfaces and devices in agile and customizable environments. A CS PaaS, however, has the potential to simplify deployment, shorten development cycles and provide greater ongoing flexibility. Its emergence is a critical change in this market.

Example vendors: GRM Information Management, Microsoft (Office 365).

Critical Capabilities Definition

Administration

Controls and options for administration of the CSP include server and endpoint operating systems, general system administration, management dashboards and reporting tools.

Centralized administration includes dashboards and controls that allow administrators to manage synchronization, as well as provision, manage, track and protect content through policies, granular controls and remote management with mobile management capabilities. Dashboards that expose data on performance and usage allow administrators to understand and optimize the system.

Analytics and Reporting

These features enable users to discover insights regarding the content and data stored in the CSP. Such insights can be surfaced in dashboards and structured reports, either provided directly by the supplier or configurable by end users.

Analytics and reporting delivers insights to end users. These insights can be extracted from content in text, video or image form, but can also be delivered from the data that is inherent in many CSPs, including metadata and task/workflow-based tracking. The most basic features include the ability to define and consume static business reports. However, greater emphasis has been placed in this report on the ability to utilize more advanced analytical capabilities and machine learning to provide actionable dashboards. This allows users to view insights and select actions to take directly (for example, electing to join a review process for a topic that is of specific interest).

Business Application Enablement

This capability contains features that describe how well the CSP supports the wider business application ecosystem via integrations with common line-of-business (LOB) solutions.

In order to maximize the effectiveness of content services with wider business processes, it is often imperative to ensure that users stay in the LOB application in which they are working, rather than context switching into an entirely separate application. SAP integration is an extremely popular integration for CSP products, but other integrations (such as Salesforce, Workday, Microsoft Dynamics, and ServiceNow) are evaluated.

Capture

Capture is the ability to digitize information and have it stored in the content repository. The capture of paper-based information with optical character recognition (OCR) is the most traditional aspect, but mobile capture is also particularly important for CSPs.

Standard functionality is the ability to capture via mobile devices. More advanced features include the ability to manipulate images at the point of capture (by adding additional pages to multipage documents or overlay annotations, for example). Large-scale, multichannel capture of paper-based information is a common requirement for products in the CSP market.

Collaboration

Collaboration capabilities help users to work jointly on projects using a common set of documents. They include recommendations, commenting, sharing, co-authoring, markup, tasks and gamification. The “workspace” construct enables a persistent secure space for extended content collaboration.

These capabilities are critical to extending content collaboration among teams, across organizational boundaries, and with individuals or groups outside the organization. Social tagging, favorite ratings, forwarding, notifications, workflow approvals, signatures and mapping content usage extend the file synchronization and sharing functionality as an asynchronous channel for processing content.

Content Management

Content management enables users to work effectively with the content stored in the system by the provision of standard content controls for documents, images and other media. This includes features such as importing, editing, viewing multiformat content, versioning, and annotating.

Content management is at the core of all requirements for a CSP to make it an effective place to access and maintain content. More advanced features (beyond those mentioned above) include content template management, silent check-in/check-out facilities, and the grouping of documents together via relationships or document sets.

Content Security

Content security capabilities assess controls that relate directly to the protection of content and include access control lists (ACLs), electronic digital rights management (EDRM) protection and data loss prevention (DLP).

Content security is a key capability for the content protection use case, and is essential for organizations for which privacy and security of the content they store in the CSP is of paramount importance. Other features include content encryption, role-based access controls, content watermarking, security inheritance rules, link management and protection of content on mobile devices.

Delivery Model

The delivery model capability assesses how products are deployed, and the effectiveness of the service within which they are deployed. It includes consideration of whether the product is available both on-premises and in the cloud, and what service levels are available in each model.

Features assessed vary depending on whether the platform is available in the cloud, on-premises or both. For a cloud-based service, this includes assessment of whether the vendors provide artefacts such as privacy policies, public terms of service, exit criteria, and business continuity plans. For on-premises services, the flexibility of the platform is assessed (for example, the database options, operating systems and virtualization options that are supported).

Information Governance

Information governance covers the features that enable an organization to be compliant with regulatory and organizational mandates. It includes certification with international standards and formal controls for long-term content preservation.

Information governance is usually a primary requirement for organizations evaluating CSP technology. It includes compliance or adherence to standards such as ISO 15489, DoD 5015.2 and MoReq 2010. It also includes features involved in the management of long-term content life cycles such as retention, disposition and legal hold. Also included here is the certification commonly supported by cloud-based CSPs such as HIPAA, FISMA, SSAE 16 Type 2 and PCI DSS.

Metadata and Classification

Metadata and classification defines the features that are used to associate metadata with content in a CSP.

Standard capabilities include the creation of unstructured tags, while more advanced features enable users to define more structured metadata patterns to enhance findability and the extraction of insights. Advanced features include the ability to define complex metadata types (for example, groups of fields that make a collective whole, such as an address), the ability to define and use structured taxonomies, and controls over how versions of metadata are applied to related content. Automated classification of metadata is one area of innovation in which a number of vendors are bringing initial versions of this technology to the market.

Platform

The platform capability represents the technical architecture of the CSP and its integration with the wider organizational IT landscape and strategy.

Examples include standard features such as REST-based APIs and the ability to scale to meet demand. Advanced features include CMIS APIs and integration with SIEM platforms. A strong platform offering enables customers to extend, customize and optimize content collaboration capabilities through APIs and interfaces with other content services (for example, content management, security, searching, storing and metadata) and across storage, deployment and repositories.

Productivity

Integrated and intuitive designs offer seamless cross-device access to files, productivity and business applications.

This capability supports file editing, real-time content collaboration, annotation and note taking – natively or through integration with third-party suites. Solutions with this capability provide intuitive interfaces and integrated, user-centric design for end users to sync, share and access files in different working models (for example, in the office, remotely or on mobile devices). This capability focuses on features that enhance user productivity with files, such as capture, editing, assigning to folders and sharing.

Search

The ability to search for information either within the content or by using the metadata associated with the content, and then retrieve a set of results.

The provision of full-text search is a standard feature for this capability, along with metadata search where it is included in the underlying system. More advanced capabilities include the ability to go beyond the native repository and pull back search results from other services. How search results are displayed and the flexibility offered to users to manipulate and further interrogate such results is also a major differentiator.

System Security

System security defines how the underlying system is secured. It includes considerations for authentication, identity management, and encryption of communication and logging of user activity.

Other features and controls considered include LDAP integration, encryption key management, remote wipe services, SAML support, audit logs, device pinning and FedRAMP compliance for cloud-based services.

Workflow and Process

The most basic feature of workflow and process is typically ad hoc task assignment, which can be used in an approval-type process. More advanced features enable authorized users to define flows and UIs (represented as forms) suitable for end users to utilize for any number of business processes.

Other common features include task management, tracking, digital signature integration and integration with other external processes. The modelling environment is also an important consideration, as it determines the speed with which applications can be implemented using the underlying process framework. Support for end users being able to define process flows without the need for constant IT interaction has the potential to further accelerate development efforts.

Use Cases

Back-Office Processing

This use case focuses on the processing of content and information to support business operations that include invoice processing, purchase to pay and employee onboarding.

It is heavily reliant on capabilities that capture information from unstructured data sources such as paper-based documents, electronic messages and images. Once information is captured in a digitized form, it needs to be processed in line with business policies. This often includes integration with LOB systems including ERP, CRM and HRM. BPM capabilities are also important to enable processes and workflows to be defined, expedited and automated, where possible. Back-office processing has long been a common driver for the purchase of CSPs. However, modern innovations, often powered by machine learning, are providing greater levels of automation, more seamless integrations and driving down maintenance overhead costs.

Business Process Applications

The ability to configure and define content-centric applications through the tight integration of content services and business processes.

Business process applications are used to satisfy a range of different user requirements that include incident management, case management and service management. They are purpose-built applications that satisfy specific business needs. They are developed using modelling techniques that can be used to define processes, information models, UIs and business intelligence dashboards. They can address internal or external business constituents and are therefore used to define B2E, B2B or B2C applications. Strong workflow and process capabilities, along with analytics and reporting capabilities, are the most important capabilities for developing such applications.

Document Management

This use case describes the general ability to support document and content management needs across teams, departments and enterprises.

Effective document management is a fundamental need of all organizations and this use case reflects the need to deploy a common set of services across an organization. This includes a standard set of library services including versioning, check in/check out and document viewers that support multiple content formats. Also required is integration into common user productivity tools to enable effective content creation and categorization, and retrieval capabilities to enable users to locate and utilize the content as required.

Records Management

One of the most basic and common use cases for a CSP is as a secure repository to support records management, regulatory compliance and business continuity.

Risk management and regulatory compliance continue to be critical drivers for CSP adoption. Lost documents have a cost and so too can retaining content longer than is absolutely necessary. That cost can be high if the lost document is required by regulatory authorities, or if the content is needed as evidence in litigation. Legal and regulatory drivers require organizations to keep tight control of their information assets, and to provide a full audit trail of how, when and where those assets were accessed. Records management modules provide the policies, processes and certifications for complying with industry-specific regulations.

The most critical capabilities for this use case are information governance, content security metadata and classification.

Team Productivity

This use case focuses on supporting individuals and knowledge workers who need access to relevant content in the context of their project or work tasks.

Content can be the outcome of collaborative processes and tasks, and is often the evidence or substance of decision making. Content can be the product itself and is often generated by high-value workers working in teams. Although work within teams can often be ad hoc and unrelated to more structured business processes, it is usually targeted at a specific business theme or outcome. Content therefore needs to be quickly and intuitively gathered within team-based workspaces that can be readily shared and collaborated on by users inside and outside the organization.

The content itself is created, vetted, marked up or delivered through a social process or channel. It can be personal or team-oriented and may include the use of social content scenarios such as blogs, wikis or other modern content constructs (the characteristics of which are usually online, editable in real time by many users, and with built-in functions for task-based collaboration).

The most critical capabilities for this use case are productivity and collaboration.

Vendors Added and Dropped

Added

GRM Information Management

Dropped

Comarch — This vendor did not meet our 2018 geographic inclusion criteria, which requires having an established customer base and localized support (direct or via partners) in at least two major regions. Its business remains localized to Eastern European buyers, a market that is well-represented by many vendors in this Critical Capabilities report and companion Magic Quadrant.

iManage – The vertical focus on the legal industry is out of scope for this year's CSP Critical Capabilities and Magic Quadrant reports.

Inclusion Criteria

The inclusion criteria represent the specific attributes that Gartner determined to be necessary for inclusion in this Critical Capabilities report. It is identical to the criteria for the accompanying Magic Quadrant report.

Inclusion Criteria

To be included, a vendor *must* meet the following six criteria:

- **Offering.** Vendor has a *generally available* enterprise CSP offering that is offered as a separately billed, stand-alone product. The product must be generally available before 1 April 2018.
- **Revenue (updated in 2018).** Vendor must have had *at least \$20 million* in total revenue derived from CSP sales in 2017, or have a demonstrated revenue growth rate of 40% from 2016 to 2017. Total CSP revenue derives from sales of:
 - **Licenses** – The right to use the software based upon contract type (perpetual or term license)
 - **Cloud-based services** – Revenue for cloud services including business process as a service (BPaaS), IaaS, PaaS and SaaS
 - **Subscriptions** – Annual fees for licensed, on-premises software, as well as license revenue for single-tenant managed services (such as hosting)
 - **Technical support and maintenance fees** – Contract fees for support services (not including training), new versions, updates and upgrades

Total CSP revenue excludes revenue from professional services and the sale of products manufactured by other vendors. Revenue arising from customer requests for software changes may not be considered, even if such changes are subsequently incorporated into the core CSP offering. Increases in software license charges as a result of such changes can, however, be considered.

- **Total users.** There must be at least 200,000 active, paid users among all the organizations that are licensed to use the product.
- **Installed base (updated in 2018).** The current installed base as of 1 April 2018 must meet the following criteria:
 - The total number of customer organizations must be higher than 200
 - 20% of deployments must have more than 1,000 seats
- **Geography (updated in 2018).** The vendor actively markets its products and has an established customer base and localized support (direct or via partners) in at least two major regions; for example, North America and Europe, the Middle East and Africa (EMEA), or Asia/Pacific (APAC) and Latin America.
- **References (updated in 2018).** Vendor supplies details of 10 customers that must have deployed the service or product for a minimum of six months. These must be new references that have not been provided in prior years, and should be deployments that have occurred in the last 24 months. These reference customers should have a minimum of 250 seats deployed, though deployments with larger numbers of users are preferred. References must represent a diversity of industries, company sizes and geographies.

Retired Criteria

Several inclusion criteria from the 2017 Magic Quadrant for CSPs have been subsumed into our critical capabilities requirements. These elements are not retired so much as they are now considered key capabilities for any CSP. All CSPs must offer these features either through native functionality or integrated technology by the vendor or third parties.

- **Content services.** Vendor provides integrated content services natively or as active third-party technical integrations providing services that support the following content-related activities:
 - Repository services
 - Capture and ingestion
 - Management and retention
 - Business processing
 - Usability and navigation

Optional services (e.g., content analytics and BI, web content management, file sync and share) may be supplied through partners or integration. Features provided by partners must be tightly integrated with the vendor's product and invisible to the end user.

- **Platform services.** Vendor includes services and tools to support CSP management, security and deployment. Vendor must provide native and integrated platform services, including but not limited to:
 - **Content security** – multifactor authentication, policies, malware scanning, classifications, SAML, key management, encryption in transit and at rest, legal holds
 - **Repository** – native repository with support for multiple and external repositories
 - **Data management** – geolocation, data residency, storage, disposition, backup and restore
 - **System optimization** – usage statistics, scalability
 - **Deployment options** – on-premises, cloud, hybrid, managed services
 - **Client interfaces** – web, desktop, mobile apps
 - **Admin** – central management console, policy management, usage dashboards, group management, user provisioning, content usage analytics and dashboards

Integration. Vendor must offer integration capabilities through publicly available APIs, native connectors, extensions, plug-ins and interfaces with EDI, LOB, HRMS, CRM, ERP, CMIS, and so on.

Table 1: Weighting for Critical Capabilities in Use Cases

Critical Capabilities ↓	Back-Office Processing ↓	Business Process Applications ↓	Document Management ↓	Records Management ↓	Team Productivity ↓
Administration	2%	4%	2%	5%	4%
Analytics and Reporting	2%	17%	2%	3%	2%
Business Application Enablement	23%	7%	0%	2%	0%
Capture	20%	4%	7%	0%	2%
Collaboration	0%	2%	5%	0%	30%
Content Management	4%	4%	35%	5%	5%
Content Security	4%	4%	10%	15%	5%
Delivery Model	0%	4%	0%	0%	5%
Information Governance	5%	4%	5%	42%	0%
Metadata and Classification	7%	5%	12%	10%	4%
Platform	5%	4%	0%	0%	2%
Productivity	5%	4%	5%	0%	33%
Search	4%	3%	12%	10%	2%
System Security	4%	4%	0%	8%	4%
Workflow and Process	15%	30%	5%	0%	2%
Total	100%	100%	100%	100%	100%
As of 21 September 2018					

Source: Gartner (October 2018)

This methodology requires analysts to identify the critical capabilities for a class of products/services. Each capability is then weighed in terms of its relative importance for specific product/service use cases.

Critical Capabilities Rating

Table 2: Product/Service Rating on Critical Capabilities

Critical Capabilities ↓	Alfresco ↓	Box ↓	DocuWare ↓	Everteam ↓	Fabasoft ↓	GRM Information Management ↓
Administration	3.4	4.1	3.9	3.7	4.3	4.1
Analytics and Reporting	2.1	1.8	1.6	4.4	3.8	3.9
Business Application Enablement	2.2	2.8	3.9	1.7	1.9	1.1
Capture	3.0	2.5	3.7	3.3	2.2	4.1
Collaboration	3.9	4.5	1.7	3.2	4.4	3.1
Content Management	4.5	4.2	4.3	4.3	4.6	4.3
Content Security	3.8	4.2	3.9	3.6	4.1	4.2
Delivery Model	2.7	2.4	3.9	2.1	4.6	3.6
Information Governance	4.0	2.1	3.5	4.0	3.9	4.1
Metadata and Classification	4.2	2.5	4.2	4.5	4.5	4.3
Platform	3.5	4.1	2.9	3.7	4.6	4.0
Productivity	3.6	4.6	2.8	2.1	3.6	3.6
Search	4.5	3.4	3.6	4.6	3.8	3.9
System Security	2.4	3.9	2.8	3.2	4.0	3.8
Workflow and Process	4.6	2.4	3.6	4.6	4.5	4.3

Source: Gartner (October 2018)

Table 3 shows the product/service scores for each use case. The scores, which are generated by multiplying the use case weightings by the product/service ratings, summarize how well the critical capabilities are met for each use case.

Table 3: Product Score in Use Cases

Use Cases ↓	Alfresco ↓	Box ↓	DocuWare ↓	Everteam ↓	Fabasoft ↓	GRM Information Management ↓
Back-Office Processing	3.36	2.97	3.63	3.34	3.29	3.41
Business Process Applications	3.55	2.82	3.25	3.87	3.99	3.86
Document Management	4.12	3.57	3.78	4.05	4.15	4.11
Records Management	3.81	2.94	3.60	3.95	4.00	4.04
Team Productivity	3.66	4.11	2.78	3.02	4.06	3.62

Source: Gartner (October 2018)

To determine an overall score for each product/service in the use cases, multiply the ratings in Table 2 by the weightings shown in Table 1.

Acronym Key and Glossary Terms

B2E	business-to-employee
BPM	business process management
CAD	computer-aided design
CCP	content collaboration platform
CMIS	content management interoperability services
CRM	customer relationship management
CSP	content services platform
EDI	Electronic Data Interchange
ERP	enterprise resource planning
FedRAMP	Federal Risk and Authorization Management Program
FISMA	Federal Information Security Management Act
HIPAA	Health Insurance Portability and Accountability Act of 1996
HRM	human resources management
HRMS	human resources management system
LDAP	Lightweight Directory Access Protocol
LOB	line of business
OEM	original equipment manufacturer
PCI DSS	Payment Card Industry Data Security Standard
RPA	robotic process automation
SAML	Security Assertion Markup Language
SDK	software development kit
SIEM	security information and event management
SKU	stock-keeping unit
SSAE	Statement on Standards for Attestation Engagements
UI	user interface
VERS	Victorian Electronic Records Strategy

Evidence

Sources for the analysis in this Critical Capabilities report include:

- A Gartner vendor and product survey, conducted in April 2018
- A Gartner survey of vendors' reference customers, conducted in May 2018, for which there were 231 respondents
- Gartner Market Share research
- Gartner Peer Insights vendor reviews
- Client interactions with Gartner analysts

Critical Capabilities Methodology

This methodology requires analysts to identify the critical capabilities for a class of products or services. Each capability is then weighted in terms of its relative importance for specific product or service use cases. Next, products/services are rated in terms of how well they achieve each of the critical capabilities. A score that summarizes how well they meet the critical capabilities for each use case is then calculated for each product/service.

"Critical capabilities" are attributes that differentiate products/services in a class in terms of their quality and performance. Gartner recommends that users consider the set of critical capabilities as some of the most important criteria for acquisition decisions.

In defining the product/service category for evaluation, the analyst first identifies the leading uses for the products/services in this market. What needs are end-users looking to fulfill, when considering products/services in this market? Use cases should match common client deployment scenarios. These distinct client scenarios define the Use Cases.

The analyst then identifies the critical capabilities. These capabilities are generalized groups of features commonly required by this class of products/services. Each capability is assigned a level of importance in fulfilling that particular need; some sets of features are more important than others, depending on the use case being evaluated.

Each vendor's product or service is evaluated in terms of how well it delivers each capability, on a five-point scale. These ratings are displayed side-by-side for all vendors, allowing easy comparisons between the different sets of features.

Ratings and summary scores range from 1.0 to 5.0:

1 = Poor or Absent: most or all defined requirements for a capability are not achieved

2 = Fair: some requirements are not achieved

3 = Good: meets requirements

4 = Excellent: meets or exceeds some requirements

5 = Outstanding: significantly exceeds requirements

To determine an overall score for each product in the use cases, the product ratings are multiplied by the weightings to come up with the product score in use cases.

The critical capabilities Gartner has selected do not represent all capabilities for any product; therefore, may not represent those most important for a specific use situation or business objective. Clients should use a critical capabilities analysis as one of several sources of input about a product before making a product/service decision.

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