

The Aragon Research Globe™ for Workflow and Content Automation, 2020

The Post-Pandemic Race to Automate Content

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Topic: Workflow and content automation

Issue: Who are the vendors that are making a difference in workflow and content automation?



SUMMARY

Workflow and content automation (WCA) continues to grow as a market as more use cases come online to help power digital transformation in the enterprise. While automating basic document creation is the first step, the overall trend is that machines will do more of the document creation based on a combination of rules and artificial intelligence. We evaluate fourteen key providers that are leading the charge in the WCA market.

Prediction: By YE 2022, WCA providers will offer a document bot to assist users with the automatic generation of content (70% probability).

INTRODUCTION

Workflow and content automation (WCA) is becoming a key plank in digital transformation. The reason for this has to do with the speed that can be obtained in executing business processes when enterprises can automate the creation and routing of content and eliminate the old manual processes that slow down productivity. WCA platforms are becoming smarter and are powering a number of new enterprise applications that completely automate old forms-based processes. WCA solutions accelerate the rate at which information flows between enterprises, people, and important business systems to shorten process cycle times and increase accuracy.

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Introduction

As we enter the fourth industrial revolution, there is no doubt that analog processes are winding down and the shift to digital workflow and content automation (WCA) is here. WCA has matured to an extent that more enterprises are now realizing that they need to shift away from the human creation of documents tied to processes and allow the application to create documents automatically based on rules. This report identifies fourteen vendors in our inaugural Globe for Workflow and Content Automation.

The shift to digital has been pushed forward due to COVID-19, and many enterprises are now planning to accelerate towards being all digital by 2023 instead of later timelines. Additionally, in a post-pandemic world, enterprises are planning on investing in more tools to help them automate all of their business processes. Automating the creation of documents and contracts is not trivial, and the growth of the category shows that this transformational shift is well underway.

In the last year, the WCA market has continued to evolve and innovate as more providers enter the market and more use cases have emerged. This Research Note provides a guide to the WCA market and evaluates fourteen major providers.

The Post-Pandemic Race to Becoming a Digital Enterprise Means Focusing on Content Automation

The shift to WCA was already underway before the pandemic. Now, it is shifting into high gear as most enterprises clearly understand that to remain competitive they must go fully digital with customer-facing documents and processes related to those documents. New account openings for a bank is a great example. The old forms-based approach is giving way to guided interviews for information capture, accompanied by people that assist customers via chat or phone. Besides financial services, industries that are transforming include retail, healthcare, and government. Many services need to be offered remotely and, as such, there is an even higher expectation from buyers of a seamless customer experience. There is a demand for leveraging modern content platforms that can perform at higher levels of scalability and integration, and this means that a new class of providers has emerged.

Hybrid cloud offerings are increasing and, with them, the ability to do content automation in the cloud or on local servers that are containerized. The multi-cloud approach has arrived and now enterprises with large volumes of content being produced can still do so in a local data center and have the applications managed by the vendor they select. This choice for enterprises now means they can move faster with content automation projects. Note: not all vendors offer hybrid cloud containerized services.

The Race to Digital Means Doubling Down on Content Automation

Process automation is growing at a fast rate, but so is content automation. Many enterprises started with content automation with backend customer-facing documents, such as statements or bills, and then shifted to areas such as sales.

Enterprise content—the vital documents that are tied to conducting business—needs to be looked at critically for its potential to be fully automated. While some providers can automatically generate documents, it really is about the entire process, which includes the workflow, proceeding from start to finish in an automated or semi-automated way.

Part of the race to become a digital business is being able to process all the documents that are tied to a business transaction. Enterprises need to be able to automate the creation of the contract, the signing, and the completion of the orders, such as routing, in order to provide customer success/support.

WCA as a Catalyst for Digital Transformation

More than any time in the past, the need to transform business processes and the content associated with them is clear now. The primary driver is COVID-19 and the pressure has been put on enterprises to be remote or virtual, and to accelerate their shift to becoming a fully digital enterprise.

We already had an accelerated adoption of WCA for certain use cases such as sales contracts and employee documents, the era of remote work is forcing us to look at all document processes that are created on a repeated basis.

WCA—From Forms to Low-Code Content Workflows

Forms Replacement

The need to become a digitally-focused business starts with forms—eliminating paper forms should be a goal—if not that, then enterprises should at least focus on making them digital with guided navigation. For enterprises with legacy forms-based approaches, automatic document generation should be considered a must-have capability for 2021.

In some cases, embedding the data capture as part of a mobile app is one way to streamline the process. It is also one of the easiest ways to make the form feel more modern by embedding it in a mobile-responsive or mobile-native app.

Basic Document Generation

The need to generate business documents is accelerating, and the good news is that more solutions are evolving into a true no-code approach. With a local approach more documents can be automated for automatic generation based on rules. Business users and business analysts can be trained to develop these approaches in relatively short order. Enterprises should evaluate providers on both the ease-of-use and the local approach that the WCA provider currently has offered and also has on the roadmap for the future.

High-Volume Document Generation—The Role of CCM

Many enterprises also need to do large volumes of document generation on a regular basis. This has traditionally been referred to as customer communications management, or CCM. A number of providers in this report provide large high-volume capabilities, including Adobe, MHC Software, Smart Communications, and OpenText.

While high-volume generation is important, the need to have even more flexibility and customization is one of the reasons that WCA is making a mark. New applications that leverage document generation are being designed that can leverage very high volumes with very high levels of personalization.

Workflow and Content Automation—From End to End

A fully automated environment normally deals with the document generation, but it also deals with all the workflows, processes, and approvals needed to complete the transaction. In some cases, these capabilities will be embedded within another application as they are part of the overall process, but not the lead part of the experience.

Examples include automated mortgages that banks are now offering and all-inclusive leasing in rental applications with documents and approvals.

Document Analytics Enables Document Reading and Understanding

The last year has seen tremendous advancement in the era of document image and overall content analytics. The ability of algorithms to accurately read and understand what should be in the document will help to inform WCA platforms of suggestions to humans on how to improve current or future documents.

One of the key shifts in the use of AI for document and content analytics is the ability for a business analyst to tune algorithms to focus on a certain type of document or a certain part of the document. Aragon feels that document/text analytics is poised to become

embedded in nearly every WCA process by YE 2023. This race to intelligence represents a new component of the race to digitally-enabled business processes.

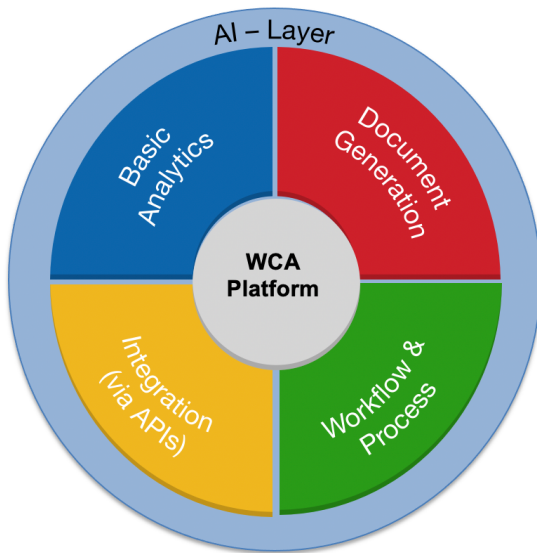


Figure 1: Workflow and content automation platforms are adding artificial intelligence as a core offering.

The areas where intelligent content analytics is making a difference include documents, images, and video:

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

We expect many of the WCA providers to leverage document analytics by partnering with large cloud providers such as Google, IBM, Amazon, or Microsoft. Each of these providers has strong document analytics capabilities. The importance of understanding content is also non-trivial: there is a growing compliance risk (when you consider GDPR, LIBOR, and other regulatory frameworks), so we recommend ensuring that the vendors you evaluate have taken this into consideration. There are many ways to use ML to understand the contents of a document. In some cases, a content assistant may assist a user in locating and analyzing a set of documents (see page 7).

Images—increasingly, enterprises need to interpret images and distinguish real images from fake images. This will become important for areas such as insurance claims processing, retail shopping, and/or signature authentication. For WCA, document analytics is the priority, but image analytics should also be looked at as an opportunity to round out the content platform. By being able to process images automatically, accident scenes, building inspections, and

other image types can be processed faster by a computer versus the extended times required by humans. For areas such as insurance and real estate, inspections and claims can be sped up significantly by adding image analytics to a business process.

Video—video analytics is closely related to image analytics and with more AI coming online, including new services from Nvidia, enterprises should look for more opportunities to analyze video, as it is tied to identity verification for a digital transaction. Locating a scene in a video and identifying people and objects represent opportunities to accelerate business outcomes or reduce business risk.

Document Virtual Assistants and Content Process Bots—Better Together

While document-based virtual assistants have been slow to come online, process bots are now integrating with workflow to enable more advanced applications that are often cross-platform. Nintex Workflow Cloud is a good example of this.

Both Smart Communications and HelloSign offer interview capabilities, which are equivalent to a lightweight virtual assistant.

Conversational AI is here to stay, and it has become easier to construct highly-effective chat bots for specific tasks. Aragon feels that with conversational AI, WCA providers will be able to provide an assistant to help with the task of generating a document, or in some cases, filling out a form.

While interview assistants are becoming more common, Aragon feels that a document assistant will help a business user with more of their document creation needs.

Prediction: *By YE 2022, WCA providers will offer a document bot to assist users with the automatic generation of content (70% probability).*

The Current State of the DTM and WCA Markets

Today, becoming a digital enterprise offers many competitive advantages, but for many enterprises, the major roadblock to digital transformation is paper and the processes associated with it. As enterprises look to automate document-related business processes, there are two major themes emerging:

- Standalone document processes.
- Document processes tightly integrated or embedded within other applications or processes.

Often in the past, paper processes were tied to forms, which is data capture. So today, WCA helps to digitize those old paper processes. Note: today, legacy electronic forms can be replaced with a new WCA offering. The key WCA capabilities for these applications include:

- WCA provides document generation: both real-time (interactive) and batch. Rules are common. Over the next three years, AI will make documents more tailored.
- WCA can deal with both structured and unstructured content.
- A key element of WCA is that it is low-code, thus reducing the work of both the designer/developer and the participants.
- It is mobile and multi-channel-enabled, hooking into email, instant messaging, texting, Internet of Things (IoT) devices, and existing websites.
- It calls on features like digital signatures, faxes, electronic forms, mobile apps, API gateways, etc., as needed. Unlike pure integration platforms, WCA is capable of significantly more elaborate process logic and effectively assigning tasks to software.

The New Apps that Leverage WCA Capabilities — Embedded

The other emerging trend is completely embedding WCA capabilities into new native applications or inside existing applications. New account openings that are part of a bank's processes are increasingly using embedded WCA capabilities.

Note 1: What Are Clickwrap Transaction Platforms?

Clickwrap transaction platforms (CTPs) combine the ability to create, deliver, manage, track, and archive all the online terms and conditions that consumers and businesses agree to with a specified entity. Clickwrap transaction platforms have similarities to both digital transaction management (DTM) and enterprise content platforms (ECP). In fact, CTPs have characteristics of both.

Many times, CTPs help enterprises streamline manual, labor intensive processes for legal teams. Other times, CTPs are securing eCommerce transactions by enabling the vaulting and screenshots of clickwrap transactions.

For more information, see the Aragon Research note: [The Rise of Clickwrap Transaction Platforms: Act Now or Lose the Battle for Secure eCommerce.](#)

The race to better customer experiences, which means fewer steps for a customer to complete a process, is a key tenet of digital transformation. Aragon's digital business platform coverage has discussed this at length.

The new change is that WCA offerings, due to their advanced API capabilities are easier to embed in other applications. An example of a new WCA capability is embedding agreements on websites that offer products and services that require customer approval of specific terms and conditions. Aragon has identified this as clickwrap transaction platforms (see Note 1).

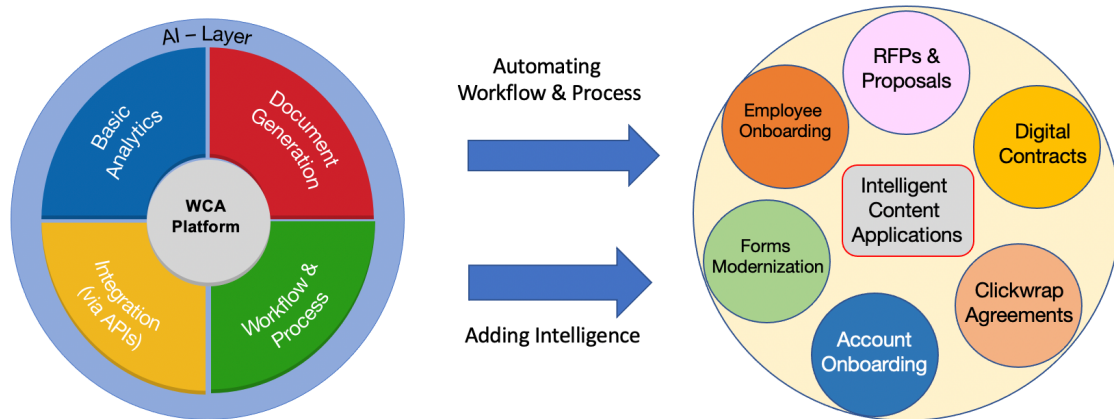


Figure 2: Workflow and content automation is powering a growing number of use cases.

Levels of automation continue to become more advanced. Increasingly, WCA will be used to automatically render and route content based on the decision of a person, or a condition that is part of business processes or digital customer journeys. This represents the true focus of content automation—in many cases today it is aspirational, but over the next five years we expect this goal to be achieved.

Managing Content Is Not Enough: The Need to Automate

WCA involves complex document processes including, but not limited to, document assembly, routing, integration into other applications, and workflow both upstream and downstream from the decision, approval, or signature. WCA has been focused on the early stages of content creation, but we are also seeing more automation coming into the review part of the document lifecycle. Firms like Conga are helping to drive this feature set.

Customer Experience: The Need to Automate Content-Centric Customer Journeys

With competition on the rise, enterprises need to focus on customer journeys. The reality is that paper processes are slowing down the enterprise and making the business less competitive. While senior executives understand this, there is now a greater set of urgency to go digital due to the pandemic. The challenge is prioritizing paper-based

processes and making them more automated to eliminate manual steps and the time involved with those steps.

Understanding the customer journey and creating a customer journey map (CJM) can reveal where the analog processes are slowing down a transaction. After reviewing the journeys of both customers and employee-based document processes, a set of goals can be established to make the journey digital and then later, make it fully automated.

There are three key benefits that accrue to the enterprise when deploying WCA (see Note 2).

It Takes a Team: Building The WCA and DTM Center of Excellence (CoE)

Last year, we discussed the importance of having a team that can help to focus on the critical documents that need to be automated. This is referred to as a WCA/DTM center of excellence. The reason to define the teams that work on different documents is because some documents are more important to some teams than others and a prioritization needs to be made.

The center of excellence should be organized to assist business units with their document-centric customer journeys. The focus of the CoE should be on:

- Customer-facing documents that are used repeatedly.
- Employee-facing documents that are used repeatedly.
- Documents that have multiple sources of data that could be automated.
- Documents that are part of a larger process that needs to be automated as part of digital transformation.

Note 2: Top Three Benefits of Workflow and Content Automation

1. Faster Digital Transactions

Aragon estimates that in the creation process, hours are often saved when comparing WCA to traditional, manual creation. For example, creating an automated proposal for a client can be done in fifteen minutes with WCA rather than the two hours it would take to do it manually. This saves significant time.

2. Faster Time to Revenue

Enterprises are looking for any way to gain a competitive advantage. The time to complete a content transaction, along with the need to shorten the account receivables, starts with a faster content process. WCA becomes a catalyst for shortening the time to revenue.

3. Reduced Errors and Human Oversight

It cannot be overstated that errors in documents slow down the review cycle. WCA solutions can automatically pull the relevant and current information from other systems, such as CRM or ERP, and enter it into the document.

Reductions in errors means that in many cases, a document can be created and sent for signature without the need for a human to review.

Prediction: *By YE 2021, 50% of enterprises will reorganize existing content management teams to focus on content automation and build a center of excellence (60% probability).*

The Consolidation of WCA

There is no doubt we have entered a consolidation phase for workflow and content automation. Both venture capital firms and private equity see the potential for WCA, which is why we see the continued investment in the category that is driving consolidation. In 2019, there were a number of deals that changed the market and we expect more to come in 2021.

The Aragon Research Globe™ for Workflow and Content Automation, 2020
(As of November 5, 2020)

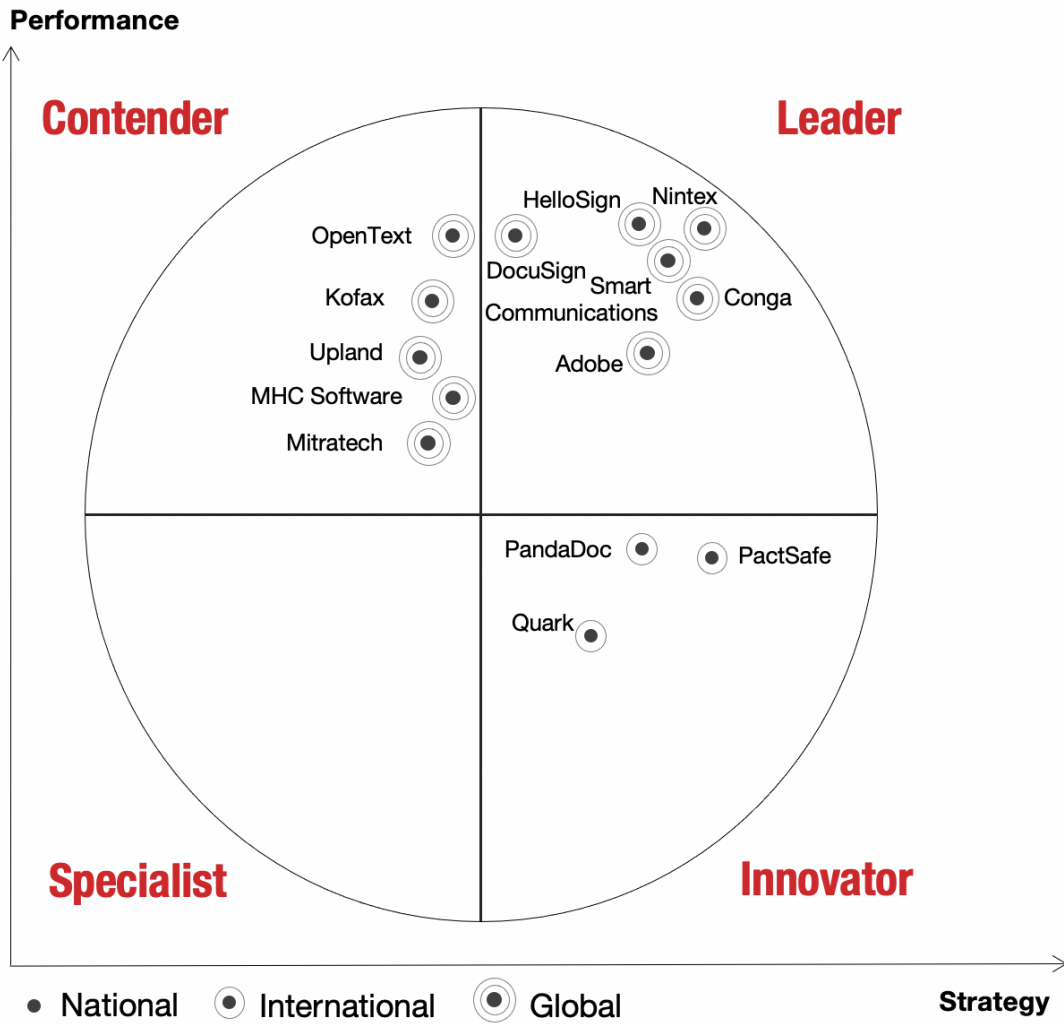


Figure 3: The Aragon Research Globe™ for Workflow and Content Automation, 2020.

Leaders

Adobe

Adobe has continued to invest in content solution offerings for the enterprise. Its two flagship offerings are Adobe Experience Manager Forms and Document Cloud. At the center of Document Cloud is the complete focus on PDF-based documents as one of the overall standards. Adobe Sensei is now more integrated with PDFs with its document analytics offering released in 2020 called Liquid Mode. Liquid Mode provides a mobile-optimized experience for PDFs by understanding and identifying parts of a PDF such as headings, paragraphs, images, lists, and tables.

Adobe continues to lead with its PDF and adaptive forms capabilities that can be found in multiple product offerings, including Adobe Experience Manager Forms and Adobe Document Cloud.

The Adobe Experience Manager (AEM) platform offers an automated forms conversion feature that supports batch conversion of PDF or XDP forms into mobile-friendly adaptive forms at scale. Its strengths in increasing efficiency and digital experiences in paper-intensive industries, including financial services, government, and healthcare, continue to allow Adobe to do well. With the strength of its traditional PDF-based forms business, and its web and mobile-responsive forms and documents capabilities, Adobe is well-positioned to take on a number of WCA initiatives.

Strengths

- Brand and financial stability
- Intelligent content analytics
- Multi-channel forms and documents generation
- Strong partner network
- Broad set of digitization components supports enrollment, onboarding, and ongoing communications
- Native eSignature support

Challenges

- Balancing overlapping products that offer similar PDF form and document capabilities

Conga

Conga merged with Apttus in 2020 and kept the Conga name. It instated Noel Goggin as the new Conga CEO in September 2020. The new Conga has a larger portfolio of offerings including quote-to-cash and its growing content offerings, which feature Conga Composer and Conga Collaborate. Both offerings are complemented with Conga Sign, which now allows Conga to be a complete advanced DTM provider.

Conga continues to be one of the leading solutions in the Salesforce AppExchange. Its Digital Document Transformation Suite has been gaining traction and has a record number of users. Conga leverages its own AI Analyze and its partnership with Kira to analyze contracts and also streamline workflows.

Conga's contract lifecycle management capabilities, when combined with its quote-to-cash offerings, make it a strong choice for Revenue Operation teams. Its growing DTM and WCA portfolio also make it a candidate in multiple industries—and it should benefit from its partner Salesforce, which has a growing focus on industries such as healthcare, financial services, and media/communications. Conga has proven to be effective at attracting new customers via the Salesforce AppExchange, which has contributed to its growth.

Strengths

- Salesforce integration
- Document generation
- Contract lifecycle management
- Quote-to-cash solutions
- Analytics
- Ease of use

Challenges

- Awareness outside of Salesforce ecosystem

DocuSign

DocuSign has continued to grow, powered by continued demand for basic digital transaction management offerings that feature its flagship eSignature solution. Its Agreement Cloud has all of the capabilities for workflow and content automation. It acquired former partner Seal Software in 2019, which gives it more document analytics capabilities for document understanding and contract-related use cases. The DocuSign Agreement Cloud is a suite of over 12 products that helps companies connect and automate the way they prepare, sign, act on, and manage agreements. As part of its Agreement Cloud, DocuSign now offers DocuSign Gen, which includes a document-generation experience from within Salesforce, and DocuSign Negotiate, which layers on the ability to redline and track documents as part of sales negotiation.

DocuSign's AI offering is now called DocuSign Insight, and as part of its expanded offering, in September 2020, it announced DocuSign Analyzer, which reads agreements and helps enterprises with negotiations of a contract. DocuSign CLM combines DocuSign Gen with a workflow engine, Word-accessible clause library, and centralized searchable repository. Besides eSignature, DocuSign offers identity verification as well as clickwrap agreements. While DocuSign now has a complete portfolio of WCA capabilities, it continues to generate most of its revenue from its core eSignature offering.

Strengths

- DTM platform
- Integrated WCA offering
- Brand
- Mobile (iOS, Android, Windows, in-person/offline)
- Security
- APIs and developer community focus

Challenges

- Awareness of offerings within the workflow and content automation buyer audience

HelloSign

In 2019, HelloSign, a Dropbox company, has continued to expand its flagship WCA offering HelloWorks. HelloWorks automates document-based workflows with a no-code user interface that is seamless and easy to use. Its low-code approach will attract firms that have aspirations of doing more content automation design work. Part of the WCA progress was also driven by tighter integration with Dropbox and their new offerings, like Dropbox Spaces.

In June 2020, HelloSign launched its offerings in 21 different languages and offered support for European Data Residency. In July 2020, the first signs of integration between Dropbox and HelloSign were launched with a seamless signing capability that is now native within Dropbox. The Dropbox native integration with HelloSign makes Dropbox a complete content automation platform.

HelloSign also launched new integrations with Google Workplace, Oracle, and others. HelloSign offers HelloFax, which serves as a digital on-ramp for many firms that still depend on fax to assist firms with digital transformation. Finally, HelloSign will be able to take advantage of Dropbox's growing AI capabilities, which include a focus on image analytics.

Strengths

- Ease of use
- Dropbox integration
- Google Workplace integration
- Mobile forms onboarding support
- No- to low-code approach
- Salesforce integration
- Oracle integration, APIs, and integration

Challenges

- Building awareness in the Dropbox ecosystem

Nintex

Nintex has continued its strong track record of growth in both WCA and as an overall digital business platform (DBP). In October 2020, Nintex completed its most recent acquisition—K2 Software, Inc., a close competitor in the digital process automation space. K2 is Nintex’s third acquisition in three years with Thoma Bravo as its majority investor. With the addition of K2’s process automation expertise and engineering talent in South Africa, Nintex is well positioned to continue gaining market share and driving faster innovation.

Since its inception, Nintex has helped to pioneer a no-code/low-code approach to both content and process automation that allows IT professionals, business ops, and analysts to quickly and easily automate complete document processes. Nintex Workflow Generator—a built-in automation capability within Nintex Promapp, the platform’s visual and easy-to-use process mapping tool—when combined with document generation, enables a nearly unattended automation scenario.

Additionally, in October of this year, Nintex released the next generation of its Nintex Workflow Cloud platform, which includes new process mapping and automation targeting capabilities; object support with permission management to enable more automated document and data processes; and integrations with Google, Salesforce, and Microsoft. Nintex also offers advanced workflow and content analytics that help enterprises understand what is happening in their automated workflow and content processes in real-time. This enables a complete end-to-end routing of data and content, with minimal human intervention.

Nintex offers integrated eSignature capabilities, known as Nintex Sign, via its partnership with Adobe. The company continues to innovate in WCA and advanced DTM, including adding intelligent process automation (IPA) capabilities to its product. The company’s estimated annual revenue is now greater than \$200 Million and makes Nintex one of the largest privately held process automation software vendors and one of the larger independent digital business providers. Nintex remains one to watch.

Strengths

- Ease-of-use, coupled with power
- Advanced workflow and content automation
- No-code to low-code approach
- Visual business process mapping and management
- Robotic process automation with fast time to value
- Automated document generation
- Automated workflow generation from process map
- Microsoft and Salesforce integrations

Challenges

- Market awareness outside of Microsoft ecosystem

Smart Communications

Smart Communications has continued to evolve its offering and has continued to grow. It rebranded Intelledox, which it acquired in July 2019, as SmartIQ. Smart Communications now has three main product offerings: SmartCOMM, SmartIQ, and SmartDX. SmartCOMM is the traditional CCM platform, which uses modern templates to enable communications to customers via multiple channels.

SmartIQ enables adaptive interviews that collect information—connecting to third-party systems of record—and then uses new and existing data to automatically generate personalized digital content and documents on-demand via its intuitive user experience. SmartIQ’s low-code approach allowed it to work with financial institutions to offer a complete Paycheck Protection Program (PPP) in record time. SmartDX provides trading documentation generation and collaboration for leading investment banks.

Smart Communications has now rationalized its offerings, which can now deliver a variety of solutions based on customer need and the type of device and channel that needs to be leveraged. Smart Communications has its own data centers and is also leveraging Amazon AWS. Smart Communications has also been innovating and has shown previews of chatbots and conversational AI interfaces for future document-based assistants. The new Smart Communications provides enterprises with a robust set of capabilities to meet most of their content automation needs.

Strengths

- Journey-based document creation and workflow
- Content automation
- Ease of use
- Intelligent user experiences
- Low-code to no-code
- Journey analytics
- Pre-built connectors for journey automation

Challenges

- Partners for eSignature

Contenders

Kofax

Kofax focuses on automating manual, high volume, document-centric workflows by combining Cognitive Capture and embedded AI capabilities to process documents containing complex data structures across any channel. Further, Kofax converts and extracts unstructured data locked in documents for further insights and processing. Kofax extends OCR with machine learning and natural language processing to achieve more targeted extraction of data from documents and continual improvement in extraction accuracy over time.

Kofax continues to broaden the value it delivers to organizations with its focus on Intelligent Automation for digital workflow transformation. It has rationalized and integrated its portfolio of capabilities, which also include RPA, process orchestration, artificial intelligence, process discovery, and advanced analytics to support organizations in automating the highest value opportunities. Kofax focuses on high value automation opportunities—business workflows that require understanding unstructured documents, orchestrating complex workflows, and connected disparate and unintegrated enterprise systems. Therefore, product innovation investment over the last 24 months has been focused on optimizing its portfolio to support organizations digitally transforming their high-value, information-intensive business workflows.

Finally, Kofax has made it easy for business analysts to create workflows due to its low-code development approach. With both WCA and its focus on intelligent process automation, Kofax offers a number of solutions to meet the growing demands from enterprises for workflow and content automation.

Strengths

- Brand
- Multichannel capture
- Financial services focus
- RPA
- Mobile SDK
- Document analytics

Challenges

- Balancing focus on RPA vs. WCA

MHC Software

MHC Software, based in Minneapolis, Minnesota and led by CEO Gina Armada, offers a portfolio of workflow and content automation offerings that includes CCM provider Ecrion, which it acquired in June 2020. The combined company has a growing customer base. Ecrion's platform supports customer communications management (CCM), document automation, and customer journey automation.

MHC supports both user-driven interactive documents as well as the automation of high-volume batch jobs such as invoices or monthly statements. MHC can create a wide variety of different documents from its stored assets—onboarding materials, welcome kits for prospects, new account packets, contracts, and policies. MHC offers solutions in multiple industries including healthcare, public sector, banking, insurance, manufacturing, and utilities. Given MHC's strong financial backing, we expect it to continue to make more acquisitions in the WCA and related DTM markets.

Strengths

- Platform flexibility
- Integrated WCA offering
- Omnichannel delivery capabilities
- Full CCM offering
- Security
- APIs and integration

Challenges

- Market awareness outside of North America

Mitratech

Mitratech, which focuses on software solutions for legal operations, offers a full WCA platform that it calls TAP Workflow Automation. TAP Workflow Automation provides solutions spanning multiple industries, including specialty apps designed for legal, compliance, human resources, procurement, and finance. Mitratech has also been acquiring firms in related markets. In July 2020, it acquired Tracker Corp, which manages all aspects of immigration-focused I-9 forms, making it a vertical WCA offering. In addition to Tracker, Mitratech also acquired three other firms in the last year.

Mitratech has continued to expand the TAP platform with new features and modules, including advanced document generation capabilities, collaboration capabilities, and dynamic, multi-language support for intake forms. In 2020, Mitratech made seven of its TAP Automation templates available at no charge to assist enterprises in dealing with COVID. TAP has a robust set of APIs for integration with third-party apps, including Microsoft, Salesforce and Mitratech's growing portfolio of solutions. For law firms and for corporate legal teams, Mitratech has embraced content automation as one of its core planks.

Strengths

- Legal market expertise
- Workflow and content automation
- Drag-and-drop design tools
- APIs and integrations
- Ease of use
- Custom interfaces
- Security

Challenges

- Balancing focus on legal market vs. other industries

OpenText

OpenText has two main offerings for content automation: its CCM brands and its process automation offering called Digital Process Automation (DPA). DPA allows for the development of content-related applications. OpenText also has affiliated offerings, such as OpenText RF center for bid management, OpenText Active Client management for insurance for managing new accounts, and things such as claims management. This is all tied to its flagship enterprise content management (ECM) offerings. In CCM, it continues to offer Exstream and StreamServe, which is now called Communications Center Enterprise. Exstream 16 is the most recent offering and it serves a large install base that focuses on batch document generation.

To further drive this vision, OpenText is actively creating (REST) APIs across all of its products and has developed a Common Asset Service (CAS) for CCM, which manages and shares design assets across Exstream and other OpenText products, such as Media Manager and Content Server. OpenText focuses its CCM efforts on a number of industries including financial services, healthcare, public sector, and utilities. It now has over 29 different brands and continues to be on the lookout for more acquisitions.

Strengths

- Brand recognition
- Install base
- Workflow and integration with business applications
- Content analytics

Challenges

- Focus on batch WCA

Upland

Upland continues to offer content automation for both sales teams and financial services organizations. One of the primary use cases for Upland is automating request for proposals (RFPs). With its other portfolio offerings, including Upland Altify, Upland is one to watch for sales enablement use cases. Upland also offers a collaborative workspace that allows teams to collaboratively create strategic documents across the enterprise. This work hub approach is a market trend that is occurring in sales as well as in horizontal markets.

Upland Qvidian integrates with Microsoft Office 365, which is critical for complex RFP creation. Upland analytics provides insights into current content trends, as well as real-time dashboards and scheduled reports. Upland Qvidian integrates with Upland's growing analytics offerings to provide project teams with more actionable intelligence. Given the growing demand for WCA, Upland Qvidian is well positioned to meet these needs.

Strengths

- Ease of use
- RFP automation
- Financial services focus
- Sales playbooks
- Integrations
- Analytics

Challenges

- Awareness outside of sales and financial services

Innovators

PandaDoc

PandaDoc has continued to grow, in part due to a new \$20M in funding it received in August 2020. PandaDoc offers an easy-to-use cloud-native workflow and content automation platform. In 2020, PandaDoc introduced a new editor that simplifies document creation and features built-in collaboration. PandaDoc is used in a number of use cases, including sales-focused cases, proposals, and contracts. In addition to WCA, PandaDoc also offers full DTM capabilities so that documents, once created, can be signed electronically. It also added a payments option so that documents can be signed with a payment added for use cases such as apartment rentals. Advanced analytics allow users to know what documents are being accessed and viewed and enables a better understanding of their impact.

One of the key aspects PandaDoc focuses on is the speed of the document creation process, using templates and the easy-to-use agreements generated by the PandaDoc platform. PandaDoc also integrates with a broad number of CRM offerings, including Copper, HubSpot, Pipedrive, Salesforce, and Zoho.

Strengths

- Ease of use
- Document generation
- eSignature
- Integrations
- Payments
- Analytics

Challenges

- Market awareness

PactSafe

PactSafe, based in Indianapolis Indiana and led by CEO Brian Powers, has helped to pioneer the clickwrap transaction platform market. Clickwrap transactions replace electronic signatures with the act of clicking to check a box or on a button that includes acceptance language (such as “I Agree” or “Accept”) and are typically embedded as part of an online purchasing, contract, or registration workflow. PactSafe’s CTP offering enables enterprises to create, deliver, manage, track, and archive clickwrap transactions. Its platform offers versioning and vaulting of online terms and agreements, presentation and tracking of online agreements, and DTM options to sign or click. PactSafe extends contract delivery capabilities, enabling enterprises to deliver important documents via text messages and other channels.

PactSafe offers both ad hoc and dynamic document generation that is tied to user behavior, product selection, and other form data that can be rendered through its content engine in real-time. PactSafe also enables version control and a streamlined approach to updating agreements. Many times, teams managing documents can simplify or remove manual steps to generating and executing documents by configuring standalone, no-code clickwrap transaction use cases.

PactSafe also offers PactSafe Sign, its electronic signature offering, which offers signing options and provides templates for sales teams to create key contracts faster. As clickwrap transactions become a larger part of online eCommerce-based transactions, PactSafe is well-positioned for this segment of the DTM market. A unique offering of PactSafe’s CTP is the ability to automatically capture screenshots of all clickwrap transactions to improve the audit trail.

Strengths

- Ease of use
- Clickwrap transactions
- Document generation
- eSignature
- Integrations
- Archiving and vaulting
- Analytics

Challenges

- Market awareness

Quark Software, Inc.

Quark, based in Denver, Colorado, focuses on automating the publishing and workflow process for all types of complex documents in a variety of industries. Due to its underlying XML architecture, Quark can also render documents in multiple formats to meet the delivery needs in today's multi-device world. Quark also offers solutions for sales enablement, where it assists sales teams in delivering rich content to prospects and customers.

One area where Quark excels is in highly complex document layouts that contain text and graphics. Because Quark leverages XML, it makes it easy for data to be leveraged from multiple sources. These XML-reusable content modules save time when it comes to creating and updating complex documents in industries such as life sciences and aerospace—where procedure-based documents need to be updated regularly. Quark has integrations with Google, Microsoft, CRM offerings, learning management systems, and marketing automation.

Strengths

- Complex publishing
- Native XML support
- Content reuse capabilities
- Brand awareness
- Ability to create creative content

Challenges

- Balancing focus on a range of use cases and industry-specific solutions

Aragon Advisory

- Automating content as part of digital transformation is the new way forward. Organizations should focus on automating all employee- and customer-focused document journeys.
- Enterprises need to use the customer experience as the measure for how they look at document generation and workflows.
- Enterprises need to create a center of excellence and focus on high-impact documents for customers, employees, and partner journeys for automation.

Bottom Line

Given the pandemic, content automation is more front and center with enterprises as a priority. Enterprises should focus on automating critical documents with the end goal of better customer journeys and faster time to outcomes. The focus of a center of excellence should be helping business units to prioritize documents that have the biggest business impact. Enterprises should also set goals for continuous improvement in the level of automation that can be obtained.

Aragon Research Globe Overview

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

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

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

Dimensions of Analysis

The following parameters are tracked in this analysis:

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

- Product
- Product strategy
- Market understanding and how well product roadmaps reflect that understanding
- Marketing
- Management team, including time in the job and understanding of the market

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

- **Awareness:** Market awareness of the firm and its product.
- **Customer Experience:** Feedback on the product, installs, upgrades, and overall satisfaction.
- **Viability:** Financial viability of the provider as measured by financial statements.
- **Pricing and Packaging:** Is the offering priced and packaged competitively?

- **Product:** The mix of features tied to the frequency and quality of releases and updates.
- **R&D:** Investment in research and development as evidenced by overall architecture.

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

- **Americas** (North America and Latin America)
- **EMEA** (Europe, Middle East, and Africa)
- **APAC** (Asia Pacific: including but not limited to Australia, China, India, Japan, Korea, Russia, Singapore, etc.)

The market reach evaluation includes:

- Sales and support offices worldwide
- Time zone and location of support centers
- Support for languages
- References in respective hemispheres
- Data center locations

The Four Sectors of the Globe

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

- **Leaders** have comprehensive strategies that align with industry direction and market demand and effectively perform against those strategies.
- **Contenders** have strong performance, but more limited or less complete strategies. Their performance positions them well to challenge for leadership by expanding their strategic focus.
- **Innovators** have strong strategic understanding and objectives but have yet to perform effectively across all elements of that strategy.
- **Specialists** fulfill their strategy well but have a narrower or more targeted emphasis with regard to overall industry and user expectations. Specialists may excel in a certain market or vertical application.

Inclusion Criteria

The Aragon Research Globe™ for Workflow and Content Automation, 2020 will help clients differentiate the many vendors that offer tools to let enterprises manage their core content processes.

The inclusion criteria for this Aragon Research Globe are:

- **Revenue:** A minimum of \$4 million in primary revenue in the workflow and content automation market or a minimum of \$15 million in revenue in a related market.
- **Shipping product:** Must be announced and available.
- **Customer references:** Vendor must provide customer references in each region where the vendor does business.

Aragon Research evaluates markets and the major technology providers that participate in those markets. Aragon makes the determination about including vendors in our Aragon Research Globes with or without their participation in the Aragon Research Globe™ process. Aragon's analysis is based on its research and use of other valid sources including:

- Publicly available information
- Discussion with enterprises that use the product

Non-participation by technology providers in the Aragon Research Globe™ process does not affect their inclusion in this research note. The inclusion criteria listed in this research note is the determining factor.

Inclusions

The following providers were added to this year's report:

MHC Software

PactSafe