

# Capture Service Provider Market Study



A Madison Advisors Report  
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## EXECUTIVE SUMMARY

The Madison Advisors 2020 Capture Service Provider Market Study provides insights on the latest trends in the inbound document processing market with a focus on how capture service providers (CSPs) are positioning their offerings to stay current with technology and strategic services to meet customer demands. A June 2019 brief published by Madison Advisors initially outlined the roles of CSPs in an organization's digital transformation to improve its overall customer experience. The 2020 Capture Service Provider Market Study expands on those observations and provides an overview of how CSPs that participated in the study are using technologies to improve inbound document processing.

As part of the study, Madison Advisors conducted in-depth interviews with each participant to document their capabilities and service offerings, strategic direction/roadmaps and differentiators. Our research also delved into whether CSPs are using Intelligent Automation (IA) technologies, such as Robotic Process Automation (RPA) and Artificial Intelligence (AI), as part of their companies' digital transformation and what they determine to be the salient trends within the capture industry. Finally, Madison Advisors gathered pricing information at a detailed level to better understand what is behind pricing models for the digital mailroom and lockbox services.

Key topics included in the study are:

- A market overview of current automated tools for inbound document processing
- Strategies and solutions for return mail
- Chain of custody requirements and the evolution of dashboards, portals and reporting
- Pricing models for inbound mail processing
- CSP inbound mail solutions overview and differentiators
- CSP market insights

## CSP MARKET OVERVIEW

Participants in the 2020 Capture Service Provider Market Study provide different solution offerings, yet all agree that inbound document processing has changed dramatically in the last 5-6 years. Client demands are driving CSPs to develop new and innovative ways to reduce costs and provide solutions that meet evolving compliance requirements, while delivering a clear chain of custody behind document processing. We also found that while the differences between digital mailroom processing and lockbox services has been traditionally widely dissimilar, the availability of advanced tools are bridging the known gaps, making it possible to leverage similar technology to solve for both solutions.

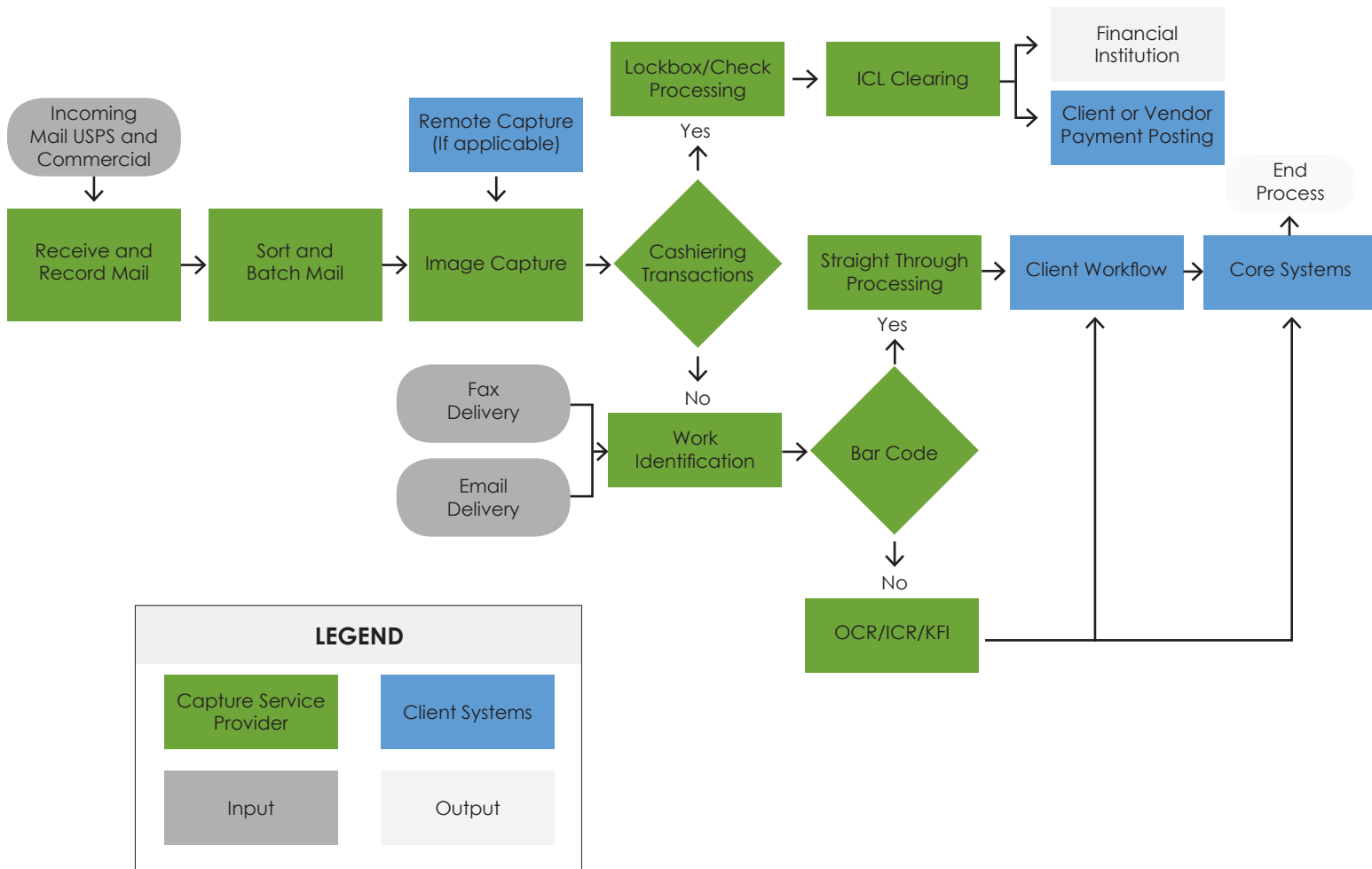


Table 1 – Standard workflow for inbound document processing<sup>1</sup>

Table 1 demonstrates the integration of the traditional digital mailroom workflow into payment processing. Here, all documents are received into a standard workflow and once document classification is complete, the documents then travel to the appropriate lockbox/payment engines or through the digital mailroom workflows.

<sup>1</sup>Diagram adapted from workflow provided by FIS

The focus on hardware technologies has taken a back seat to the need for automation with minimal human intervention. CSPs no longer prove their value through a highly trained, low-cost data entry workforce solution. Clients now expect higher levels of Optical Character Recognition (OCR) processing and a reduction in the need for manual keying for mission critical document applications, in both structured and unstructured formats.

Implementing IA supported by RPA and AI affords providers more options for straight through processing (STP) workflows that reduce errors and mitigate risk. RPA is being utilized in rule-based tasks to enhance highly repetitive processes, while AI technologies learn processes and can be “trained” to reason and make

decisions. OCR platforms, augmented by bots and machine learning tools, can transition unstructured documents into structured documents after the tools recognize trends during exception processing and “learn” to classify documents and perform data extraction to reduce future exceptions. Leading CSPs are utilizing a combination of bots created both internally and in partnership with leading RPA providers such as Automation Anywhere, Blue Prism and UiPath. These partnerships provide turnkey solutions for clients offering robust tracking mechanisms that satisfy corporate compliancy demands. Providers not capitalizing on these types of technology tools are being left behind due to a CSP’s ability to leverage automation to offer better pricing, improved service level agreements and advanced security controls.

## TRENDS IN RETURN MAIL PROCESSING

Return mail is an ongoing issue for organizations bound by compliance regulations for outbound communications. For one, return mail is costly where the impact on business is based on the contents of the mail piece. A returned check, for example, can have significant impact in an organization’s relationship with its customers as well as its vendors. CSPs have developed numerous tools to address the problem of return mail and are highly successful in instances where these tools can update the source data. RPA tools have become a key component in this process by providing the ability to extract data from the return mail piece. The tools can reach out to numerous databases including the USPS National Change of Address (NCOA) platform, make suggestions based on the information found there and return the data for client database updates. Ideally, bots could go into the system of record and make these changes, or at a minimum, place a “mail hold” on the data record until the address can be verified.

Recently, providers are taking advantage of new USPS offerings such as Informed Visibility® and USPS BlueEarth® Secure Destruction Mail Service Program to eliminate return mail, while still capturing the information and completing the chain of custody. These services make it possible to create efficiencies and eliminate significant costs for an organization. Providers can enhance the data received back from the USPS to provide value-added services of data analytics and trends that help clients make better decisions on how to handle their return mail.

*“RPA is increasing in its popularity as more companies adopt it and feel more comfortable with how they are using it.”*

**David L. VanDerEems**  
**Senior Director of Innovation and Business**  
**Process Centers**  
**Canon Business Process Services**

<https://iv.usps.com>

<https://about.usps.com/what-we-are-doing/green/secure-destruction-mail.htm>

All participants in the study offer holistic tools to manage outbound documents in various forms of customer communications management (CCM). These tools provide options for reducing return mail by making it possible (when applicable) to change the address before the mail piece enters the mail stream. Additionally, CSPs offering outbound solutions can capture the data, regenerate the mail piece and re-mail the package to a new corrected address following specific business rules created by the customer.

The reality of return mail processing is that most highly regulated industries are required to send out correspondence to the address of record. An enterprise's compliance rules may require that when a piece is mailed and then returned, it must be scanned and documented to prove the attempt of contacting the member/customer. CSPs can provide the images, data and suggested new address, but it then becomes the client's responsibility to manage the information and make database changes accordingly.

## CHAIN OF CUSTODY AND THE EVOLUTION OF DASHBOARDS, PORTALS AND REPORTING

Perhaps one of the biggest document challenges for organizations is maintaining a reliable chain of custody (COC). This makes the adage "Track, Audit, Report" more important now than ever.

The definition of COC is as follows: *COC is the chronological documentation that records the sequence of a document's journey from receipt, control, transfer, analysis and disposition whether physical or electronic.*

Documents must be tracked from the moment of receipt until the final disposition. This includes all transactions performed by systems, humans and bots. The CSPs interviewed in this study, all top tier providers, are aware of this requirement and have developed robust tools that provide clients with the information required to satisfy the governance needs of their organization.

*"In highly regulated industries, the CSP can provide the return mail data to the client, but the responsibility to change core systems to reduce return mail volumes ultimately falls to the client."*

**Gary Simpson**  
Senior Sales Executive  
Output & Billing Solutions at FIS

*"C-level executives realize the importance the chain of custody plays in managing inbound documents."*

**Saleem Ahmed**  
Vice President, Business Strategy  
Exela Technologies

CSPs are also required to provide portals and dashboards that outline operational metrics for a client's review. The complexity of these offerings may range from basic metrics including volumes, service level reporting and audit reporting, to feature-rich portals that are used to track metrics as well as workflows for a client's use in processing documents. Clients using a CSP's portal can take advantage of detailed analytics and real-time reporting on transaction processing. This may include keystrokes per hour, documents per hour, Six Sigma error reporting and even machine learning aspects, such as the volume of documents that are successful in straight through processing versus those needing human intervention. Lockbox clients utilize this real-time reporting to make daily financial decisions and prepare for deposits and account reconciliations.

Finally, reporting offered by CSPs is directly tied to the information made available within the client's dashboards. Dashboards can be customized based on user security access and preferences. The data can be easily downloaded and provide the end user the ability to create additional reports as needed rather than follow CSP change control processes for new requirements. The evolution of these tools demonstrates the major changes within the capture industry in the last few years. Clients ultimately benefit from the ability and expertise of CSPs to provide meaningful data.

*"CSPs have the expertise to support an organization's digital transformation with technology advancements that provide user-friendly dashboards for presenting detailed data analytics. In addition to traditional metrics, forecasting and service level reporting, CSPs can now share real-time insight and analysis into trends and provide suggestions for the next best action to take in a customer engagement."*

**Madison Advisors' Brief**  
**"Inbound Document Capture –**  
**New Innovations & Strategies"**  
**June 2019**

## PRICING MODELS FOR INBOUND DOCUMENT PROCESSING

Automation has significantly reduced the amount of data entry needed within inbound mail solutions, impacting the pricing models used by service providers. While some providers continue to offer detailed pricing based on specific job functions (See Table 2), most are bundling services to simplify their pricing models.



Table 2 – Basic inbound mail processing workflow

Digital mailroom and lockbox processing Requests for Proposals are typically centered around price rather than the overall value of the solution provider's services. In this highly competitive market, CSPs are rethinking their pricing models to provide simpler models that better reflect their current workflows. By combining pricing for mail pickup, open, sort and prep, the charges better align with the changes in workflows due to automation. Additionally, applications that include largely structured documents, where automated tools are highly productive and the need for exception document indexing is minimal, indexing is often bundled into the form identification pricing. This is not the case with applications that include unstructured or hand-written documents where there may be a higher percentage of document exceptions and human intervention.

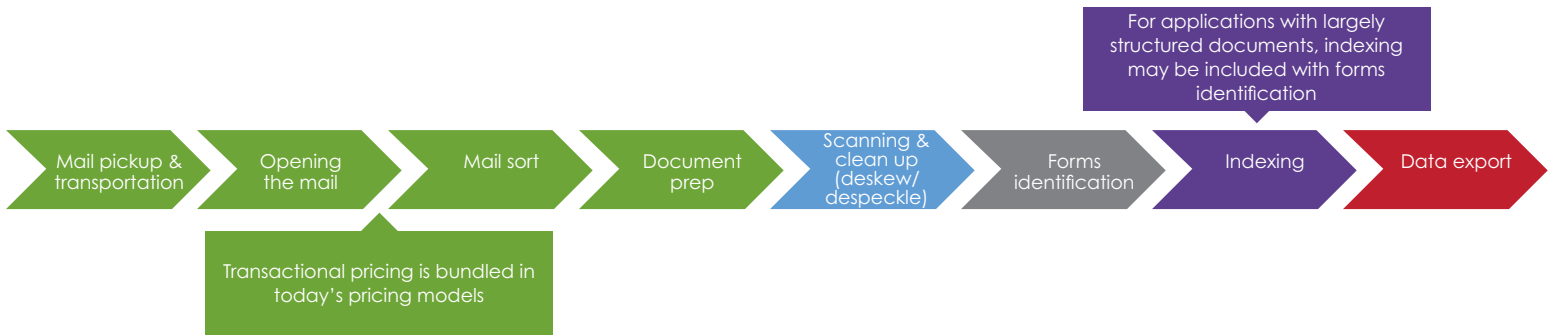


Table 3 – Transactional pricing bundling

CSPs provided pricing based on traditional components as listed above. Most combine pick up, opening of mail, sorting, document prep and scanning into one price. Based on volumes of 2 million images per year or greater, pricing ranged from \$0.053 to \$0.140 per image. Indexing/classification fees vary greatly due to applications being processed by providers. In order to provide side-by-side comparisons, the study focused on the transactional units that are consistent in every solution.

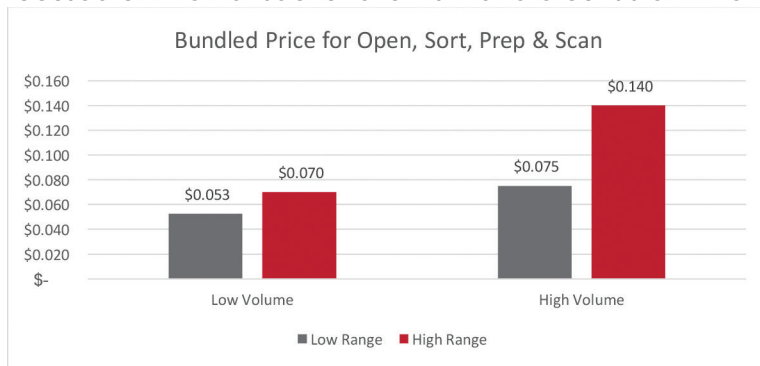


Table 4 – Bundled pricing for mail scanning



The difference in lockbox solutions and other forms of check processing requiring some type of cashiering or check management is demonstrated in the pricing models below in Table 5. Streamlined lockbox processing of highly structured documents is significantly less expensive than checks that are received as part of a digital mailroom. These could be checks sent in with accompanying documents that require the processor to identify the form before the payment can be applied.

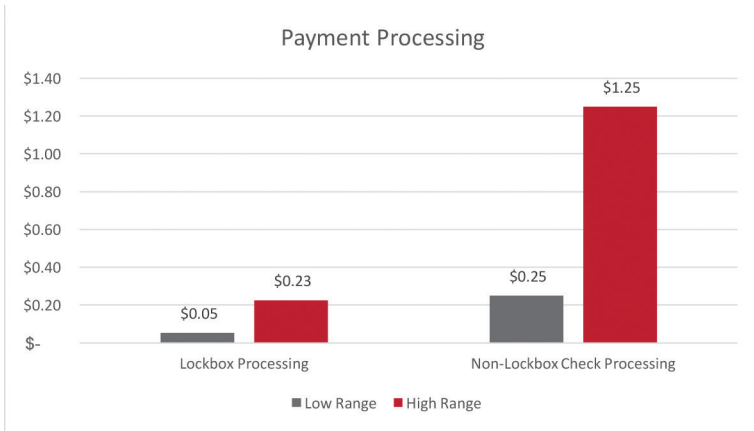


Table 5 – Payment processing – lockbox versus non-lockbox

The following pricing examples include auxiliary pricing that is often part of a digital mailroom solution. Prices may vary greatly based on the anticipated volumes of these items.

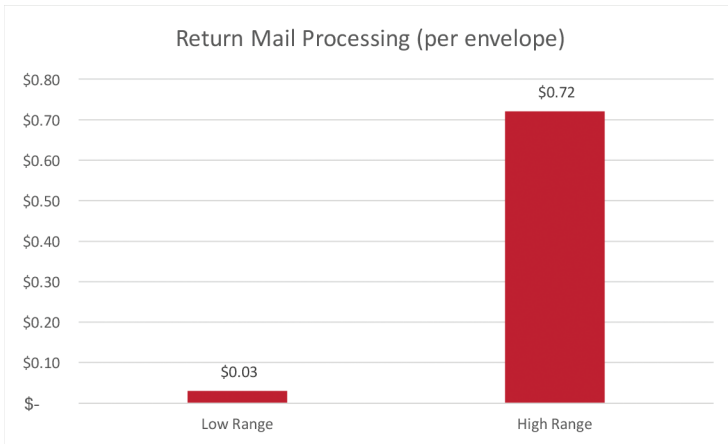


Table 6 – Return mail processing pricing

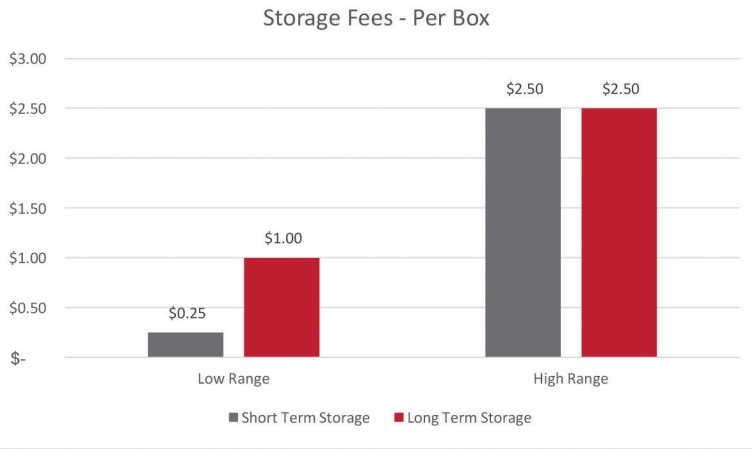


Table 7 – Storage fees for physical documents

## CSP INBOUND MAIL SOLUTIONS OVERVIEW AND DIFFERENTIATORS

For the 2020 Capture Service Provider Market Study, four capture market leaders were profiled on their strategies and differentiators. As part of this study, Madison Advisors does not intend to rank each company, but rather to highlight the specific solutions and innovative technology strategies for each provider. Listed alphabetically:

# Canon

COMPANY PROFILE	CORPORATE INFORMATION
Company Name	Canon Business Process Services
Headquarters	New York City
Public or Private Company?	Private
What year was your company founded / started?	Founded in 1959 as an on-demand courier company; acquired by Canon in 2010 and rebranded as Canon Business Process Services in 2013
What verticals do you serve?	Banking/Financial Services, Education, Healthcare, Insurance, Legal, Life Sciences, Manufacturing, Oil & Gas
Do you have a presence outside of North America?	U.S., Canada and Philippines; majority of clients are U.S.
Describe your value proposition.	We enable business agility and digital transformation. We accomplish these goals by applying our workforce management expertise, Six Sigma methodologies and best-in-class technology.

Canon Business Process Services (Canon) has a long history of providing business process services for its clients. Inbound document processing is managed through digital intake centers, a process that allows them to utilize

the capabilities of automated digital applications to manage white mail applications (employee mail) or process mail like accounts payable.

Canon is unique in that it provides clients with a hybrid solution that may include on-site and/or off-site document processing as well as offshore resources for keying as needed. In-house facilities benefit from Canon's ability to provide staffing and equipment to manage multiple locations. For clients with multiple sites, ingestion can be done at one or more sites, with a data consolidation within the Canon solution that includes Kofax software as the backbone. Additionally, Canon works with its clients to consolidate ingestion sites, offering scalability and cost savings. Alternatively, Canon's digital intake centers are highly secure environments designed to provide outsourced options for clients that desire this solution.

Canon's use of IA in its document processing solutions includes automated forms identification and data extraction for structured, unstructured, semi-structured and handwritten forms. The company has developed client interfaces that make it possible to integrate such things as business rule validations and escalations into a client's system without burdening internal IT resources. These interfaces rely simply on a client's IT team to provide a username and password with read-only access to specific applications, such as an accounts payable application using a PO# captured from an invoice to validate the vendor number and mail-to address.

Another notable solution from Canon is the use of portals for document processing, post-ingestion. Users can log in and have multiple options for the final disposition of the document. Canon's RPA monitors user activity and includes the ability to escalate processing if documents are not handled within a specific timeframe. A partnership with MicroStrategy provides detailed analytics and some clients also utilize this solution to track employees' productivity within Canon's solution.

*"Canon has expanded its role as an innovative solutions provider to also offer the strategy and manpower needed to solve the following critical needs for clients: labor, process and technologies."*

**David L. VanDerEems**  
**Senior Director of Innovation and Business**  
**Process Centers**  
**Canon Business Process Services**

COMPANY PROFILE	CORPORATE INFORMATION
Company Name	Conduent Inc.
Headquarters	Florham Park, NJ
Public or Private Company?	Public
What year was your company founded / started?	2016
What verticals do you serve?	<p>We leverage our years of experience and innovation to provide a full range of technology-based business solutions that cover all stages of end-user interaction management. Below are the Conduent business verticals:</p> <ul style="list-style-type: none"> <li>• Human Resource Services</li> <li>• Learning Solutions</li> <li>• Legal and Compliance Solutions</li> <li>• Finance, Accounting and Procurement Services</li> <li>• Workers Compensation Solutions</li> <li>• Multichannel Communication Services</li> <li>• Transportation Solutions</li> <li>• Government Services</li> <li>• Healthcare Solutions</li> </ul>
Do you have a presence outside of North America?	Conduent operates in 22 countries around the world. We focus on 20 industries in the Public and Commercial Sectors, operating more than 200 delivery centers worldwide.
Describe your value proposition.	We deliver mission-critical services and solutions on behalf of businesses and governments – creating exceptional outcomes for our clients and the millions of people who count on them. Conduent operates at the intersection of our clients' organizations and the people they serve – implementing and operating services and solutions that are essential to their organizational success.

Conduent has been providing inbound mail processing services for more than 25 years through organizations coming together to form Conduent in 2016. It leverages advances in its applications brought about by IA and RPA to provide a complete end-to-end solution for its digital mailroom and lockbox clients. Conduent has a proven track record in successfully implementing lockbox processing for several major U.S. banks. The company's expertise and refined processes often have streamlined transitions faster and in a more secure way than the banks could do themselves.

While many enterprises and service providers have chosen to leave or outsource lockbox processing due to declining volumes, Conduent has made the strategic decision to continue

*"Conduent offers a variety of platforms and services that can integrate into an entire value chain for a client."*

**Anthony DiRado**  
**Senior Director, Customer Communication Services**  
**Conduent**

to invest in this platform. This is due to a concerted effort and focus on how both their traditional inbound document processing and lockbox solutions can benefit from technology advances and RPA.

In the quest for continuous process improvement, the Conduent team recognized there were functions not built into the original platform that could be solved by RPA. The team went one step further to determine if the platform's functionality could be moved upstream in the process to eliminate exceptions. This innovation resulted in being able to offer automation from intake to output with a minimal amount of human intervention.

Additionally, Conduent has invested in building technology that provides the ability for clients to more easily make modifications to documents. "Low-code" technology puts the application design into a business user's hands, removing the need for IT resources or heavy coding. This tool supports machine learning and reduces the need to relearn new document formats. While these capabilities are available in most CCM tools, we find Conduent unique in its execution of this feature within its inbound solution.

*"Our products are designed for any type of capture documentation, categorization, indexing, data lift and data key applications."*

**Anthony Warren**  
**Vice President of Banking, Insurance & Capital Markets Service Delivery**  
**Conduent**

*"We've taken RPA a step further by harnessing examples of exceptions and moving those functions upstream, eliminating the need to build a lot of exception processes on the back end. Keep an eye on Conduent in the next 12 months!"*

**Cindy Robertson**  
**Vice President, Automation Lead**  
**Conduent**

COMPANY PROFILE	CORPORATE INFORMATION
Company Name	Exela Technologies
Headquarters	Irving, TX
Public or Private Company?	Public
What year was your company founded / started?	In July of 2017, Novitex, SourceHOV, LLC, and Quinpario Acquisition Corp. 2, a publicly traded special purpose acquisition company, combined to create Exela, a location-agnostic global business process automation ("BPA") leader combining industry-specific and multi-industry enterprise software and solutions. Exela Technologies, Inc. has conducted business under this name since July 2017.
What verticals do you serve?	Banking & Financial Services P&C / Life Insurance Healthcare – Payer & Provider Public Sector Services Tech & Manufacturing Telecom & Utilities Commercial Legal Pharma & Life Sciences
Do you have a presence outside of North America?	Regions served include: Arab States South/Latin America Asia & Pacific Europe
Describe your value proposition.	Our value proposition is being a single source provider with global platforms and location agnostic operations, hence positioning us as a differentiated partner to our multi-national customers.  We have a global workforce with a majority of our employees located in the United States, and the remainder located in Europe, Northern Africa, India, the Philippines, Mexico and China. Our operation centers are located in areas where the value proposition it offers is attractive relative to other local opportunities, resulting in an engaged educated multi-lingual workforce that is able to make a meaningful global contribution from their local marketplace.

Exela Technologies' (Exela) expertise in inbound document processing has been developed over many years from multiple companies coming together to form Exela. Ongoing investments in mailroom technologies has afforded Exela the ability to offer a solution that provides clients with robust inbound digital mailroom processes augmented by highly configurable tools that customize the routing of images to various workflow tools based on their document classification. Exela's end-to-end process includes scanner solutions designed to

complement the digital mailroom processes. These scanners, manufactured by Exela, have features that are not available in other technologies. Additionally, the solution includes an enhanced document separation process and the company has perfected its OCR engines to streamline document classification.

Exela has invested considerable research and development time into IA and RPA to simplify processes, especially in exception management. Exceptions are routed to industry-specific document subject matter experts within Exela to review, clear the document and make decisions before sending out the data. Customers benefit from this team of experts making these determinations and then use that information to reduce future exceptions.

In addition to the multiple workflows available based on the document type, Exela's solution includes tools for Natural Language Processing (NLP) for unstructured documents. Exela's JET solution effectively automates extraction of metadata elements through machine learning, NLP techniques, and a set of statistical rules. After JET's processing is completed, the extracted metadata and corresponding document are routed to Exela's Enterprise Information Management solution, BoxOffice. BoxOffice is a next-generation workflow platform, going beyond traditional document capture and extraction to include enhanced content analysis and text mining. As a single-source provider for both technology and operations, Exela is positioned to provide synergies across business operations through global delivery that streamlines operations and enhances quality, experience and cost structure.

Finally, Exela's solution includes reporting tool, Athena, that offers a virtual window into processing operations by providing configurable dashboards with dynamic drilldown capability, delivering real-time visibility and alerts for mission critical data. Dashboard reporting includes, but is not limited to, daily reports identifying status and age of inventory for all identified work items and volume of work received and processed each day. With Athena's drilldown capabilities, end users can understand both the broad scope view of company data and the in-depth analysis for specific departments by viewing key drivers, volumes, personnel and vendor roll ups, benchmark tracking of employees, profiles and many other factors. Athena offers flexibility and interactive charts and tables that can be configured, removed and added as needed.

*"Bots deployed within Exela's solutions come from 30 years of business process outsourcing experience. We understand our customers' business processes, so transitioning to business process automation helps us create more effective bots, thus enabling our customers to better utilize their staff."*

**Saleem Ahmed**  
**Vice President, Business Strategy**  
**Exela Technologies**



COMPANY PROFILE	CORPORATE INFORMATION
Company Name	FIS
Headquarters	Jacksonville, FL
Public or Private Company?	Public
What year was your company founded / started?	1968
What verticals do you serve?	Utility & energy providers, insurance providers, large global banks, mid-tier and community banks, credit unions, commercial lenders, automotive financial institutions, healthcare providers, retailers, and governments.
Do you have a presence outside of North America?	Yes, FIS operates in over 130 countries
Describe your value proposition.	FIS is a strategic technology partner focused on improving the customer experience through Strategic Customer Communications Management (SCCM). By considering both inbound and outbound customer communications strategically, FIS impacts the entire business process, providing solutions that transform customer experiences while leveraging new technology and services to optimize legacy systems. Promoting omni-channel processing whether inbound or outbound, allows our customers to use data more effectively to grow their business and improve decision making, while simultaneously reducing costs and driving operational efficiencies across channels.

FIS has a laser focus on improving the customer experience, which is evident in its value proposition and in the solutions FIS provides to clients. Traditionally focused on financial services and lockbox applications, FIS has built a network of 8 remittance processing centers in the U.S. specialized in processing highly structured documents. Offering a vast array of client solutions, FIS has a proven track record of bringing together multiple internal departments to find creative solutions to solve clients' inbound requirements in both lockbox and traditional digital mail applications. The company's inbound solution is highly automated, and ongoing research and development is focused on enhancing forms identification tools to improve front-end processing.

A unique offering of FIS is its ability to provide full and complete outsourced solutions or to make its technology available for internal client use. To complement its inbound mail processing solutions, FIS has teams specializing in RPA, designing solutions that consider customer communications workflows encompassing FIS technology and client systems. Similarly, FIS provides its technology and related services to insurance and financial institutions as a service or through traditional licensing of its products for in-house use. This approach allows their customers to initially engage with FIS using FIS technology and easily graduate to a higher level of sophistication, creating a path for a firm to seamlessly transition to an outsourced model as business needs change.



In recent years, FIS has recognized opportunities to improve the customer experience generated from interactions with its clients and now manages inbound and outbound communications in a holistic way. By considering the entire document lifecycle and available data elements, documents can be designed to promote straight through processing for inbound workflows.

FIS offers integrated tools and solutions that support the entire customer communications experience from custom document design, to production management and tracking and, ultimately, inbound document processing with real-time tracking and customizable reporting through dashboards and customer portals.

*"We know improving the customer experience is an important goal of most organizations. CCM is designed to improve the customer experience and in doing so, should take into consideration both inbound and outbound communications. CCM is the bridge between strategic board room discussions about improving the customer experience and tactical plans that result in actionable results through digital transformation."*

**Gary Simpson**  
**Senior Sales Executive**  
**Output & Billing Solutions at FIS**

## CAPTURE SERVICE PROVIDER MARKET INSIGHTS

### GOVERNANCE

As digital transformation continues to impact the industry, solid governance models have become a requirement instead of a nice feature. Our CSP participants all agree on certain basic tenets for document capture that must be considered in their governance strategies. New compliance demands and declining paper volumes are making it harder to justify keeping document processing in house and CSPs must be ready to partner with enterprise clients to offer outsourced opportunities in a timely matter.

Key considerations for outsourcing:

- Digital mailroom is not a core competency; how efficient are existing operations?
- Document compliance and the chain of custody requirements are costly to build internally
- Potential cost savings from outsourcing

Enterprises are responsible for their own governance strategies and the tools and technology solutions provided by CSPs can be leveraged to execute these strategic initiatives.

### TECHNOLOGY

In addition to the technology tools already discussed in this research, there are additional cognitive automation technology tools that have great potential for advanced usage in inbound document processing.

## **Straight Through Processing (STP)**

Advances in technology tools that provide the ability to manage more documents with STP is a continuous process improvement sought by CSPs. Tools providing data for machine learning advance the ability to migrate more documents from unstructured to structured processing. Exception processing can be reduced by learning how users respond to certain situations and building RPA “on demand” removes the need for a human decision on future occurrences.

## **Natural Language Processing (NLP)**

From the recent article, “**A Simple Introduction to Natural Language Processing,**” by Dr Michael L. Garbade:

*Natural Language Processing, usually shortened as NLP, is a branch of artificial intelligence that deals with the interaction between computers and humans using the natural language. The ultimate objective of NLP is to read, decipher, understand, and make sense of the human languages in a manner that is valuable. Most NLP techniques rely on machine learning to derive meaning from human languages.*

NLP is based on context of data. CSPs use technology to gather samples and use machine learning to capture data from highly unstructured documents such as legal documents and contracts. Organizations may be creating similar documents with content that varies, but it is possible to standardize certain attributes, and this is where NLP comes into play. Not new to the industry, NLP is included in many CSP solutions, but with limited applications taking advantage of the tools. These new tools may determine sentiments of emails, urgency and key words to help in document classification and gather analytics faster. NLP is an area that CSPs are researching to develop new functionalities into their solutions.

## CONCLUSION

Advancements in intelligent automation technologies have changed the landscape for inbound document processing dramatically in the last 5 years. Top tier capture service providers now have extensive security credentials to pass enterprise security requirements and have invested heavily in the transparency and reporting of documents' chain of custody to satisfy governance requirements for highly regulated industries. Technology advancements in automation have impacted pricing models, forcing the move away from individual transaction-based models to ones that bundle services for simplicity in tracking and billing. Ongoing advancements in automation are expected to have a continued impact on pricing models when it comes to reducing the overall cost of providing services. These shifts are likely to better position top tier providers for selection versus mid-tier players that have not implemented technology and automation in ways that help them increase transparency and reduce their internal costs.

As the CSP market continues to evolve, we expect to see new offerings in CCM tools that will impact inbound mail processing positively, offering advanced cognitive technologies that have the capability to extract data from viewed images from security cameras using machine learning techniques currently applied to document processing. This future is near and will provide new opportunities for CSPs to offer more services, grow revenue and enjoy a competitive advantage by giving customers what they want.

## APPENDIX A – ABOUT THE AUTHOR

Susan Cotter

**Senior Program Manager / Analyst**

Susan Cotter brings to Madison Advisors over 25 years of experience in consulting in business communications and business process outsourcing. Susan is well-versed in customizing solutions for business process reengineering and the outsourcing of business-critical back office functions using technology to achieve automation. As part of Madison Advisors, she coordinates multiple phases of project execution with both the client and the end customer.

Prior to Madison Advisors, Susan worked as a client solutions executive for EDM Americas for six years, where she oversaw new business development and project management within existing key accounts by driving business process reengineering and developing ROIs for outsourced document management services. Susan also previously served as vice president of Active Data Services, and was client services manager for Lason Systems Inc.

Susan holds a B.S. in Business Administration from University of North Carolina, Chapel Hill, NC.

## APPENDIX B – ABOUT MADISON ADVISORS

Madison Advisors exists to advance the print and electronic communications objectives of Fortune 1000 companies. Madison Advisors specializes in offering context-specific guidance for a range of content delivery strategies, particularly those addressing enterprise output technologies and customer communications. The company has specific and unique knowledge of the document composition market, technology vendors, best practices, and emerging scenarios.

Madison Advisors offers services and expertise primarily through high-impact consulting services along with associated solution deployment and professional services. With no-nonsense, highly specialized engagements, Madison Advisors directly helps clients achieve very hard and specific return on investment (ROI) related to their CCM, print and electronic communications initiatives.

Madison Advisors' analysts and consulting professionals are dedicated to technology and market research that is delivered through short-term project engagements as well as articles, publications and presentations. We specialize in customer communication technologies including enterprise output management, content management, customer relationship management, e-billing and infrastructure technology. In addition, our hands-on experience, developed through assisting our clients with deploying selected solutions, adds a practical dimension to our approach not typically found with consulting generalists or other analyst firms.

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