

# Document Imaging Report

Business Trends on Converting Paper Processes to Electronic Format

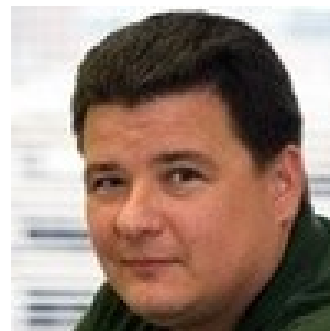
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## New Year, New Predictions

Predictions and projections are fun. They can provide inspiration, exasperation, amusement, and, sometimes, even guidance.

It's increasingly clear that, as far as predictions go, there are at least three that are sure bets for 2023:



1. A tight labor market and a shortage of IT talent will hinder IT initiatives, slowing down growth and profitability across all industries. Research from Protiviti: (see Risky Business section below) and IDC both emphasize this prediction (which feels more like an established fact at this point):
  - Protiviti: Finding and keeping talent is THE top risk: The number one risk overall for both 2023 and 2032 pertains to the ability to attract and retain top talent in a tightening labor market and succession challenges. Globally, this is the only risk issue at the 'significant Impact' level." [Ed note: In the context of this report, the risk isn't limited to IT talent.]
  - [IDC: Prediction 3](#): Through 2024, shortcomings in critical skills creation and training efforts by IT industry leaders will prevent 65% of businesses from achieving full value from cloud, data, and automation investments.
2. While the pace of implementation may not be as fast as companies desire, digital transformation efforts (including intelligent document processing, of course!) will continue into the foreseeable future.
3. Because of the first two, companies will turn to low-code efforts to bridge both gaps. I suspect that many companies will succumb to the marketing about how easy and simple this is and get it wrong.

Below I've pulled together a short list of predictions. Most aren't 100% IDP-focused. Many are IDP-adjacent or are setting the stage for IDP growth. Links are included to read the source material at your convenience.

## Investment Into Intelligent Automation Continues

Unsurprisingly, the outlook for capture and automation tools remains robust.

From the [Intelligent Automation Trends & Spends Report](#):

"What this all this means is that companies are not slowing down when it comes to RPA, intelligent automation and DX investments. In fact, we expect to see unprecedented levels of innovation in the year ahead as organizations continue to expand and evolve their digital footprints."

## Intelligent Automation and RPA

7

CHART 7

Do you expect your budget for intelligent automation to increase over the next year?

● Increase      ● Same  
● Decrease      ● Don't know

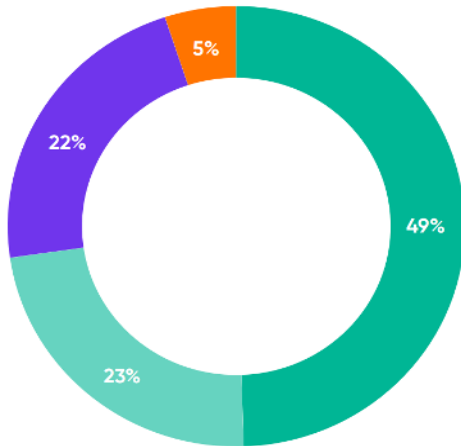
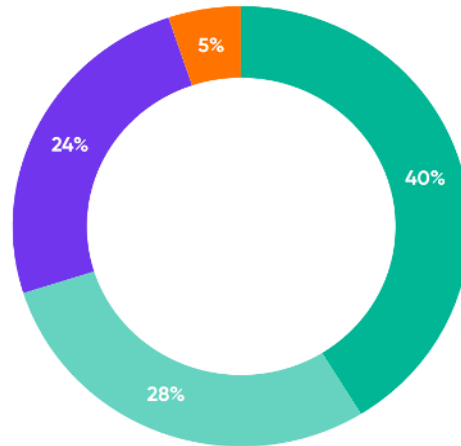


CHART 8

Do you expect your budget for RPA/Rules-Based Tools to increase over the next year?

● Increase      ● Same  
● Decrease      ● Don't know



## Risky Business

Protiviti and NC State University's ERM Initiative collaborated on "Executive Perspectives On Top Risks 2023 & 2032 ([Direct and free download here](#)).

As I read the list of risk and the research, I found myself thinking "workflow would help there" or "removing paper would help here." Opportunity abounds for everyone in this industry to help businesses mitigate risk.

- Organization's succession challenges and ability to attract and retain top talent in a tightening talent market may limit ability to achieve operational targets
- Economic conditions in markets we currently serve may significantly restrict growth opportunities
- Anticipated increases in labor costs may affect ability to meet profitability targets
- Resistance to change may restrict the organization from making necessary adjustments to the business model and core operations
- Uncertainty surrounding core supply chain ecosystem
- Changes in the overall work environment may lead to challenges in sustaining culture and the conduct of the business
- Adoption of digital technologies may require new skills in short supply, requiring significant efforts to reskill/upskill employees

- Organization's culture may not sufficiently encourage the timely identification and escalation of risk issues
- Approach to managing demands on or expectations of a significant portion of workforce to work remotely or as part of a hybrid work environment
- Organization may not be sufficiently resilient and/or agile to manage an unexpected crisis

## New Year's Resolutions for Tech in 2023

From McKinsey Technology, this compilation article focuses on steps IT should take this year. These are all good resolutions, albeit perhaps a bit basic. I also continue to find it odd to see resolutions like "Get your head in the cloud."

At this point, if you aren't looking to invest in the cloud after the last 20 years, are you just waking up for a very long winter's nap? Of course, "automation" makes the list too. Here's the complete list, followed by some of the automation thoughts (you can link directly to each of this articles):

1. [Focus on the combinatorial trends](#)
2. [Prep the board for tipping-point technologies](#)
3. [Free the engineers you already have](#)
4. [Get ready for decentralized innovation](#)
5. [Make the most of your security opportunity](#)
6. [Get your head in the cloud](#)
7. [Measure your 'dark matter' to pay your tech debt](#)
8. [Do what it takes to keep your best tech talent](#)
9. [Do your data due diligence](#)
10. [CIO mandate: Make 2023 the year of automation](#)
11. [Be accessible and inclusive to tap new growth](#)

Here's a teaser from the year of automation:

"In some cases, making these gains will be straightforward. The past few years of plenty, for example, have led to runaway costs that are relatively easy to cut back. Migrations to cloud without sufficient attention to managing costs is just one typical example. But the opportunity and the primary focus for the CIO should be in automating away waste."

## Improve the Customer Experience

There's been a continuing upswelling of "focus on the customer experience" over the past few years. You know the refrain:

- Customers are impatient.
- Expectations are high, patience is low.
- Provide a good customer journey.
- Create a positive user experience (UX is an industry in its own right and beyond the scope of this industry).

Predictions from Forrester and this article from CMSWire ([The CX Forecast for 2023 – And Your Best Action Steps](#)) both illustrate this booming need. Most of the customer service/experience articles I see focus on training employees

“In 2023, it’s expected that [customers will have higher expectations in regards to speed and problem resolution](#) when it comes to their interactions with businesses. As such, companies need to start preparing now so they can meet those expectations when the time comes. The key to success lies in having a well-prepared team that understands the ins and outs of an exceptional customer journey.”

And from [Forrester Predictions 2023](#): “B2B demand leaders deliver satisfying experiences across the customer lifecycle...or Struggle:

As demand teams face waning leads-based contributions to revenue results, the number of these teams reporting into sales organizations will spike to 20% by the end of 2023. Too many companies will make this move in a misguided attempt to improve alignment at organizations with underperforming revenue engines. But reconfigured reporting lines alone will not fix alignment issues — nor can they correct for demand organizations that myopically prioritize the delivery of more tactics ahead of generating meaningful value for prospects and customers.

Success, regardless of where demand marketing reports, will depend on demand leaders fully embracing their role in delivering satisfying experiences across the customer lifecycle. That will require marketing and sales to evolve their alignment and integration in order to support buyers and customers. This cannot be achieved until both of their internal operations are tuned to address buying groups and multiple opportunity types.”

Many of these articles focus on training employees and strategy. While that is necessary, it’s not going to be sufficient without the right technology foundation. That’s where this industry will play a key role in helping customers.

The ability to “deliver satisfying experiences across the customer lifecycle” relies on the fundamental idea of the industry – get the right information to the right person at the right time. That could be as simple as getting claims documentation correct and a check cut fast in the case of an automobile accident to using conversational AI to drill into call center logs to fine-tune customer service scripts.

## Deloitte’s Tech Trends 2023

This 14<sup>th</sup> annual report explores foundational trends:

- Reimagining the workforce
- Decentralized architectures
- Mainframe modernization

And the “three enduring eternities” of the evolution of IT interaction, information, and computation:

- Immersive Internet for the Enterprise
- Opening up to AI: Learning to Trust Our AI Colleagues
- Above the Clouds: Taming Multicloud Chaos

It's a long read, but an interesting look at the big forces shaping the IT landscape.  
[Read it online or download a copy here.](#)

I'll conclude with my never-wrong-in-20-years-and-counting prediction that things will generally get better, faster, and cheaper (well, maybe not cheaper this year) and something will take everyone by surprise.

Thanks for reading,

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Comments, criticisms, and witticisms welcomed.

## Composable Technology and Online Purchasing for B2B

*Christina Robbins, Director of Strategic Communications,  
Digitech Systems*

### Prediction #1: Composable Technology Hits an Important Inflection Point for ECM

Whether you prefer the term micro services, composable technology, or flexible consumption, the idea of architecting software to allow consumers to activate and buy capabilities in much smaller bundles—as opposed to buying licenses for whole products—will hit an important inflection point over the next several months. Though we've been talking about it for a while, in 2023 micro services will move past theoretical conversations and into reality.



It's an idea that appeals to technology manufacturers, because it can save them R&D and development dollars on little used features ([Pendo estimates as much as \\$29.5 billion annually](#)) [1] It's attractive to users, because they are able to tailor tech spending to exactly the feature set that their organization needs while minimizing expense wasted on little-used capabilities.

Much like cloud moved us from larger, transactional revenue to smaller, recurring revenue, the trend toward micro services will shift revenue patterns for technology resellers over the next few years. Micro services are likely to be billed based on what services are activated and how much they get used during a billing period. That means revenue may come in even smaller pieces and be less consistent over time. We'll also need to be extremely capable of matching capabilities to specific customer needs and expanding customer's use of services over time. Keep your eye on this important trend.

### Prediction #2: B2B Follows the Trend Toward Online Purchasing in a Big Way

The latest research indicates that some of our pandemic behaviors are becoming permanent, and it's about to impact B2B sales in a big way. As consumers, most of us purchase products online, but in the business buying space, the internet was largely used only for initial research to create a short list of possible vendors and to compile a wish list of requirements. That is changing.

In fact, [leadership group Vistage reports](#) that customers now prefer to complete 70% of the buying cycle without having to speak with a human being! The only thing they want to talk with technology salespeople about is how to customize a product they've already selected for their unique environment.

As an industry, it's time for us to take a hard look at two things:

1. Does your online presence provide a logical and complete flow of information to take a buyer from initial discovery all the way through customized information and product demos? The days of high-level content need to give way to dynamic content that is served directly to interested parties.
2. Does your sales team add friction to a buyer's process or remove it? If they're used to entering early to offer basic demos and explanations, it's likely they're making it harder for today's customer to work with you. It might be time to fine tune their ability to speak effectively about deeper product knowledge related to customization and implementation. By the time you're aware a prospect exists, they've already chosen to work with you and just need help fitting your products into their environment.

## Integration Platform as a Service

*Jim Roberts, President, DocuWare Corporation Jim is President of DocuWare Corporation where he is responsible for sales and partner relationships across North America.*

Technology is evolving at a quicker pace than ever before. We don't know what new business challenges 2023 will bring, but DocuWare is future-ready so that our customers can succeed. Here is my prediction for a technology trend that is going to have everyone taking notice:



Innovative Platform Engineering Modern software architectures continue to grow in complexity and end users are often required to connect their applications to the Document Management Solution – not an easy task for a nontechnical worker. In response to this, platform engineering has emerged to create links through a curated set of reusable self-service tools that make integrations simpler and faster.

Integration Platform as a Service (iPaaS) is an example of this trend. It's a hosted automation platform that enables integration of applications without comprehensive programming. Most iPaaS offerings speed up these integrations by using prebuilt connectors and standard business rules to define interactions. This means companies don't need the special skills required to code and manage an API – they basically use a service to do it for them. Each company manages their side of the API which keeps the effort low for customers on both sides.

But it's the speed to implementation, cost to implementation, low/no skill required for configuration that makes iPaaS so valuable to all businesses of any size.

## An Increased Focus on Microsoft 365

*Doug Yates, Consultant and Advisor, Intelligent Information Management Practice, is an accomplished executive and advisor in the Intelligent Information Management (IIM) Practice of Konica Minolta Business Solutions U.S.A., Inc. and its Quality Associates, Inc. (QAI) division, along with its affiliate, DocPoint Solutions.*

Commercial, Federal, and SLED organizations are going to increasingly focus on information governance and automation with their "in place" systems, which in most cases is M365.





Most organizations have digitized their documents or stored them in a file share or SharePoint, but they have not yet mastered how to manage their data in a cohesive way. Many organizations are still using email to accomplish processes or working across disparate systems inefficiently. Labor shortages are going to force these organizations to do more with less and adopt automation and Web-based forms with improved workflows. No code or low-code solutions will be preferred to speed implementation and will be initiated by departments working to stay competitive.

M365 and Google Workspace are designed to be collaborative, but in doing so, create information governance challenges. Every Team meeting creates a SharePoint site that needs to be eventually cleaned up. Now that data is getting fully digitized, is it being used to effectively improve the organization? What about the customer/employee experience? Public Sector organizations are striving to share this information with citizens and make it more accessible.

## Process Mining, AI, and the Great Resignation: 3 Trends for 2023

*Petra Beck is Infosource's Senior Analyst, Software*

### Process Mining Becomes an Integral Element of Capture & IDP

One of the overarching trends in process automation is to expand from process steps to entire processes. This may span multiple departments and involves enterprise systems and repositories.



Capturing business inputs is an important first step, but if the processing of the inputs is conducted manually the business transaction involved is still likely to be slow. Therefore, the value of Capture and IDP solutions increasingly lies in the automation of the process steps before and after the actual data extraction to achieve end-to-end automation. The same is true for RPA solutions that have evolved from task automation to process automation to provide increased value.

For enterprise-level automation projects, the first step is to analyze the process and how it is currently handled in a manual or semi-manual way. This mapping can be done by business analysts but for maximum efficiency it can be done by a process mining solution. It will identify the different process steps followed by different knowledge workers involved, including uncovering workarounds and “unofficial” approaches. This serves as foundation for process automation. Equally important is the ability to reassess and reengineer the process before standardizing and automating it.

Infosource expects process mining to become an integral part of Capture and IDP solutions as they are elevated to enterprise-level automation.

## **The Great Resignation Causes IDP to Become a Differentiating Factor in Attracting Talent**

The shortage of knowledge workers is a major challenge for all organizations. The pandemic forced many people into different balancing acts: How could they possibly care for the kids without school and daycare in parallel to a demanding job? What are the limits to exposing themselves to growing stress caused by sickness of team members, new or different requirements caused by the pandemic, and concerns about exposure to the virus? Or it simply caused them to reconsider the importance of work-life balance.

As we return to a new post-pandemic reality many knowledge workers return to the work force, often in different industries and job roles and certainly with different requirements. Employers need to cater to the new expectations in order to attract superior candidates. Among aspects like hybrid work options those also include innovative technologies and the avoidance of mundane tasks. Here Capture and IDP solutions come into play in particular for job roles that include case management responsibilities.

## **AI Technology Becomes the Common Denominator of the Converging Capture and IDP Solutions**

When we explain the scope of the Capture and IDP market that Infosource covers, we often group the vendors we follow into three groups based on the technology used in their architecture:

- Traditional Capture vendors who have originally developed their Capture solutions using Imaging technology
- RPA vendors who have added capabilities to capture semi-structured and unstructured business inputs
- Vendors who have established an IDP platform based on AI technology

These three groups are increasingly converging as they target largely the same use cases related to Case Management and Accounting. They are also melting together as result of partnerships, and the integration of multiple services from different vendors.

When we identify high potential players in the Capture and IDP market the use of AI-based solutions is one of the distinguishing factors. It starts with the intelligent classification of inputs, which allows them to align the required data extraction and following process steps with the respective business processes. Another important aspect is to dynamically refine the classification of input types, data extracted, and workflow steps based on Machine Learning techniques. But there are also other AI-based techniques like sentiment analysis and predictive analytics that offer a step change in the intelligent automation of enterprise-level processes.

In the ecosystem of Capture and IDP vendors there is a clear correlation between the use of AI and ML technology and its current success or future potential in the Capture and IDP market.

## NOLA and Industry Predictions

*Bob Fresneda is President of TCG US Operations.*

### Fun NOLA things:

- Pelicans win a playoff series and advance to western conference finals
- Sean Payton comes back to the Saints [Ed note: Not happening.]
- Saints trade Michael Thomas, Cam Jordan, and a bunch of draft picks for Aaron Rogers [See note above]



### Industry Trends:

- Automation Anywhere or UiPath are acquired
- IDP companies expand more into process automation for larger subscription licenses
- IBM makes another ECM acquisition
- Infosource conference again kicks ass in Chicago

## Predictions for the Asia Pacific Region in 2023

*Shinichiro Oda is Infosource's Japan Representative/Regional Manager, Asia Pacific.*

This is a forecast of market activity for scanners, capture software, and large format printers in the Asia-Pacific region.

1. China is the largest market for scanners in Asia, but the Chinese economy will experience a serious recession, especially in the long-drawn-out real estate industry.

The real estate bubble is bursting, and deflation will occur as real estate prices fall, prices of steel and other materials decline, and the quality economic growth rate will be lower than the average lending rate. As a result, the financial crisis, stock price slumps, and declines in mortgage contracts will worsen corporate performance, which will suppress spending on scanners and MFPs, and make it difficult to anticipate much new demand.



2. The digitalization policies of each country are expected to be accelerated by COVID-19, and with the necessary procurement of scanners and other equipment having been completed, major business negotiations and procurement projects are becoming fewer and fewer, and replacement demand is not expected to rise much in 2023.

This trend is expected to be particularly high in developed countries such as China, Japan, Korea, and Singapore.

3. Enhanced and low-cost cloud services have been promoting digitization of business operations, such as electronic filing, OCR - easy automation of data registration with RPA, along with the promotion of telecommuting, and this trend is expected to continue to grow.

Scanning functions of scanners and MFPs will become more widespread with security function services (tamper-proof, timestamping, etc.) using cloud storage services, and RPA will make it easier for files accumulated on servers to be distributed appropriately and for capture software and ETL tools to be linked to systems appropriately. This will make it easier for capture software and ETL tools to properly connect to the system.

As a result, the demand for scanners and MFPs is likely to decline, but not rapidly, as it will become simple to transfer scanned imagefiles to a designated folder and no special driver development will be required on the input device side.

4. Demand for faxes has remained constant worldwide for the time being in the medical field, where personal information is exchanged, in police forces that handle top-secret information, and among the military and government ministries and agencies, and is expected to continue to do so for the foreseeable future.

Other than the above, the most common industries that use faxes are the distribution industry, especially in the food distribution industry, where faxes are expected to remain the mainstream due to the convenience and economic efficiency of paper-based order and supply systems.

On the other hand, there are still many problems to be solved in inputting information received by fax into the system, and whether to solve these problems with capture software, stop using faxes to place and receive orders in the first place, or continue using faxes as is depends on the situation in each country, including convenience, economy, future prospects, and legal regulations. Although AI-OCR boasts a reasonable recognition rate, as long as the misrecognition rate remains, technology for final human confirmation or error correction by other means is required. Some software vendors are working on this technology, and it is expected that by 2023, the technology to automatically input data from faxes to the system will reach a practical level.

5. The sign and display industry had been stagnant due to the lack of people on the streets after COVID-19 and the shift by advertisers to invest in Internet advertising, but the spread of the coronavirus vaccine and mass immunization have brought people back to the streets and offices, and people are beginning to realize that the effectiveness of Internet and outdoor advertising is the same and that outdoor advertising is cheaper. Conversely, China could deal a major blow to the sign and display industry with the re-emergence of the COVID-19 epidemic.

## The Rise of ECM Managed Services Providers (MSPs)

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These will rise due to the below market realities:

- A growing ECM technical debt as ECM skilled workforces retire and resign.
- Demands to improve ECM team application delivery and productivity while offloading mundane tasks – such as ECM system management and security oversight.
- Increasing ECM solution complexity, such as hybrid architecture solutions connecting core on-premises applications to multi-cloud shared services. This requires up-to-date skills, such as Kubernetes, Docker, Cloud Hypervisor configuration, etc. furthering technical debt and slowing solution delivery.
- The expanding need for ECM resellers to grow recurring solution revenue versus traditional reselling software, project implementation, and upgrade services.
- An increase in consolidation or rightsizing projects to reduce the cost of multiple ECM solutions, especially during a ‘move to the cloud’ end goal. This requires a baselining of ECM service levels and operating performance.



In response, we shall see rapid growth of ECM focused MSP's that move beyond 'break-fix', upgrades, and configuration administration to actively managing, operating, and reporting on the ECM core systems and applications. Business critical process with heavy ECM dependence will demand MSP 'white glove' subscription services.

## Network Scanning Gains More Traction (Becomes a Reality?)

*Joseph Odore is Product Marketing Manager at Kodak Alaris and Board Chair of the TWAIN Working Group. With more than 20 years of experience in the document imaging industry, he has introduced many document management and data capture solutions to the market, helping businesses of all types to work more efficiently and profitably.*



Networking scanning had been the topic of discussion throughout the scanner industry for quite some time. Most scanner manufacturers offer some type of network connected scanner with basic network connectivity up to a full-blown onboard PC with large color UI and direct integration capabilities.

Unfortunately, the adoption of network scanning continues to be minimal and depending on who you talk to has different reasons for why it hasn't done so well. One reason that is blatantly obvious, at least to me, is the lack of image acquisition standards between network-enabled hardware and software.

Software vendors use a vast range of coding platforms that best suit their needs, hardware vendors create APIs and SDKs specific to coding languages they are most proficient in... in the end, everyone loses. Which is why the TWAIN Working Group has spent the last 10+ years building TWAIN Direct, a platform agnostic, driverless network scanning specification that can bridge the gap between cloud/Web-based applications and image acquisition devices.

In 2022, the TWG hosted its first live, in- person Developers Day event, which was highly successful and has proven the TWAIN Direct specification is fast and simple to build into any Web/cloud-based application. We predict that our continued push and track record for building adoption with software vendors will motivate the scanner manufacturers to begin embedding TWAIN Direct into their network-enabled devices.

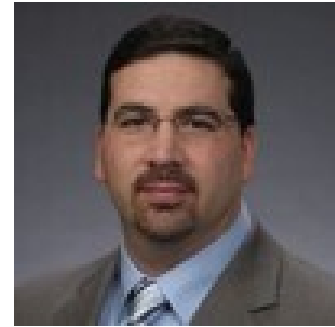
As of today, Visioneer has integrated TWAIN Direct into their VAST technology platform and we expect to see at least one new hardware manufacturer offer TWAIN Direct support, with numerous software vendors adding it into their platforms. TWAIN Direct is a develop-once, support-all specification, eliminating the hassles of building, testing, and maintaining vendor-specific integrations. Software vendors will begin to see the true value of being able to focus on revenue-generating development projects vs managing device support projects that only slow their organizations down.

## **Hybrid and Remote Work Models Will Mature – and Win – in 2023**

*Scott Francis, Technology Evangelist, [PFU America, Inc.](#)*



As the “return-to-office” debate continues into 2023, the organizations that continue to offer flexible positions will win the heated battle for the best talent, as hybrid and remote work options become competitive differentiators. More companies will embrace flexible work models, and find ways to transparently measure employee efficiency, optimizing teams for not only the best results, but to better balance team responsibilities. In addition, even typical “in-person” industries like healthcare, hospitality, and manufacturing will migrate their back-office employees to remote work, freeing up valuable space for patient and guest rooms, or equipment storage.



## Rising Energy Costs Will Force Companies to be Smarter About Their Cloud Spend

*Fred Forslund, VP & GM International, [Blanco](#)*

As inflation spikes worldwide, driving up costs of energy here and across Europe, economic pressures will result in higher costs for cloud storage in 2023. This will lead many companies to slow down the cloud migration process, and even rethinking their multi-cloud provider strategies. Higher costs will also make companies evaluate the data they're storing in the cloud to determine whether they're paying to keep redundant, obsolete, and trivial (ROT) data they no longer need, and which can be securely erased.

Companies will also grow more creative about cloud provider contract negotiations and may consider shifting workloads and applications to SaaS platforms rather than the cloud, driving efficiencies and lowering costs.



## The Logj4 Vulnerability Will Drive Open-Source Innovation in 2023

*Joey Stanford, VP of Privacy & Security at [Platform.sh](#)*



Last summer's Logj4 vulnerability, which may have impacted [one in ten companies](#), was a wakeup call for companies. Call it a silver lining effect, but I believe Logj4 will lead to more secure open-source innovation in 2023 by encouraging businesses to support open-source software monetarily by hiring experienced developers to perform vulnerability checks and for better software integration. There will also be actions on a federal level, such as the requirement to establish Software Bill of Materials (SBOMs) to ensure more secure software projects going forward, which will benefit companies using, and committed to, open source, and confirms its rightful place in the future of Web development

## Scanning at Home?

*Tim Anderson is a Group Product Manager at Epson America and responsible for their Commercial Document Scanners. Tim has been working with technology hardware for the past 20 years for Epson, InFocus and IBM.*

Back in 2015, the research folks at IBM presented a paper called "Device Democracy." Their thesis was built around the proliferation of IoT devices, but in the wake of COVID-19 and the clear importance of hybrid work today, it's a great term that captures one of the challenges facing modern IT departments.

As workers were fleeing the office in the wake of the pandemic in 2020, they took their laptop and maybe a second monitor. Fast forward to 2021 and 2022, firms were figuring out that they needed to send out a standardized "kit" of devices to enable their remote workers. In 2023, we will see these firms move beyond a generic, one-size-fits-all kit and begin the process of customizing the set of tools needed around workflows and the requirements of individual team members.



Hand scanning a 50-page contract with a phone app was tolerated as a necessary inconvenience in 2020. In 2021 and 2022, workers might have ventured into the office one day a week to batch through stacks of paper workflows. In 2023, however, these paper workflows will increasingly be standardized to be processed in home offices. This change will require innovations around connectivity and even hardware design. Device democracy means scanners will be venturing out to where the knowledge workers processing paper workflows are... the home.



## Expect Consolidation of IDP Vendors in 2023

*Ralph Gammon, Market Analyst for Capture Software, Infosource*

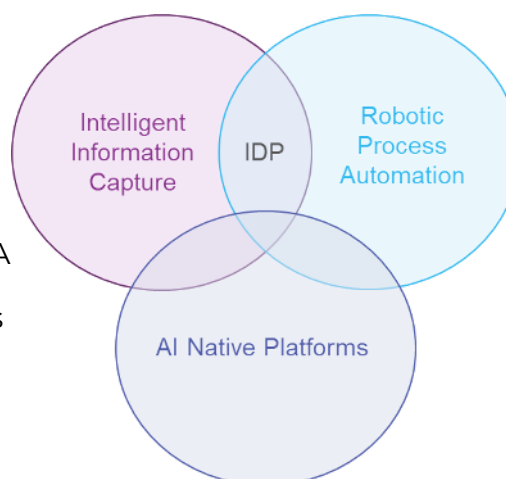
Over the past couple years, the Capture market has gone wild. No, I'm not talking about explosive growth, although the market held up well during pandemic as digital transformation initiatives mostly continued. I'm mostly talking about the number of vendors. From maybe 30-40 vendors (globally) that we covered five years ago, our spreadsheet has grown to well over 100 entries – with new ones being added almost weekly



Five years ago, for 2018, we had the WW Capture market pegged as worth about \$4.35B. Since then it has grown to a projected \$6B for 2023. That's a 6.8% CAGR, which is solid growth considering that 2020-2022 were all affected negatively by the COVID-19 pandemic, but is it really enough to support at least 100 new entrants into the industry? Yes, we expect growth to accelerate to an 8.7% CAGR for 2021-2026, but still we expect there to be some consolidation, especially as rising interest rates and a bleak economic outlook have made venture funding harder to come by. We already saw Ephesoft sell out to Kofax after it failed to raise another round in 2022.

The bulk of new companies in the Capture space are focused on Intelligent Document Processing (IDP). This involves the leveraging of machine-learning and AI-based technologies to deploy a learn-by-example approach to document classification and extraction. It is designed to make set-up easier and enable automated processing of a wider breadth of document types.

IDP technology can be complementary to traditional Capture applications, and many traditional Capture vendors have developed their own IDP as well. RPA vendors have also ventured into unstructured inputs through IDP. There is clearly a convergence of all these platforms taking place in the market. The traditional Capture vendors and the leading RPA players have the most capital and the largest install bases. What they don't necessarily have is some of the AI-expertise of the IDP vendors.



AI is an exciting technology that is rapidly growing in adoption. IDP is one of the first areas where we are seeing it deployed successfully to solve business problems but it's potential is so much more. We expect the leading Capture and RPA vendors to recognize this and start seeing what companies they can find available in the IDP space, to both expand their document processing capabilities and potentially leverage AI in an even wider set of use cases in the future.

## AP Automation Will Retake Center Stage and More Human Engagement Will Decrease Onboarding Leakage

*Bill Galusha, VP of Intelligent Document Processing at ABBYY.*

In the age of cost and labor reductions to weather an economic downturn and offset inflation, organizations will have a renewed focus on core processes, such as accounts payable automation, to support CFOs and their finance teams. Finance departments must spend less manual effort for managing accounts payable tasks such as processing invoices, expenses, inventory management and early payment discounts.



They'll take a cue from their innovation teams who leveraged intelligent automation solutions during the pandemic for business continuity with customer facing and business-critical operations and extend them to the back-office finance function. This includes using process mining to identify process deviations, bottlenecks and the best workflow to optimize procure-to-pay and cash flow and using artificial Intelligence and machine learning within documents to automate the extraction of key finance data and input into ERP systems. With AP taking center stage in 2023, enterprises will realize the benefits of intelligently automating their finance processes with more accuracy, faster processing, and a healthier bottom line.

Stop the onboarding leakage with more human engagement. The fight to win new customers online will be greater in 2023 with research showing 81% of consumers expect more self-service digital options. However, I believe we'll see businesses add more human interactions alongside intelligent automation to simplify the onboarding process.

Companies are challenged with reducing dropout rates as high as up to 60%, meaning millions of lost potential revenue. Decision makers surveyed in ABBYY's recent State of Intelligent Automation Report stated they believe if abandonment was reduced by 50%, it would increase customer acquisition by 29% and increase revenue by 26%.

This is no easy feat for companies that want to turn strangers into customers. While many survey respondents (43%) believe technology provides a better customer experience, almost a quarter (24%) blamed dropouts on a lack of the human element. So, while it may seem counter intuitive, that's why more than a third of organizations will incorporate more human engagement in 2023 as part of the onboarding process to ensure good relationship building. Reducing abandonment rates requires a more user-friendly, faster, streamlined process with less manual input by customers.

## 2023 – The Year of Privacy

*Jesse Wilkins is an information management professional with more than 25 years of experience as an end user, trainer, consultant, and solution provider.*

In 2023, new privacy requirements for how personal information is collected, stored, managed, and retained will catch more than one large organization unprepared. The resulting fines and bad press will prompt significant calls to reimagine how information is collected, managed, and used. Organizations will look to AI as the magic answer for finding and securing personal information. Some solution providers will continue to let them do so.



The distinctions between structured and unstructured data and records and non-records will continue to blur because privacy regulators don't care about any of that. Rather, they are looking for what organizations have, how they got it, how they use it, and what they do with it once the original purpose for collection is satisfied. This will present significant challenges – and opportunities – to solution providers and practitioners alike.

New laws and regulations, and updates to existing ones, will require increasingly stringent and specific requirements for managing personal information. At least one state will require encryption of personal data; at least one state will specify mandatory maximum retention periods for some personal data.

There will be no U.S. federal comprehensive privacy law passed in 2023, but several more states will add their patches to the increasingly messy U.S. privacy law quilt.

## Tightening Up the Cloud: Security and Sustainability

*Will Milewski is Hyland's Senior Vice President, Cloud Platform Engineering, with proven leadership in cloud, SaaS, development operations and data center management. His background in architecture, run-time management, design, implementation, execution and operational excellence support Hyland's cloud vision to be the world-class leader delivering cloud-based content services and intelligent automation solutions*

Over the past year, we've seen companies on high alert as attackers devastated organizations across the board, and I don't expect this will change in 2023. As more companies migrate their capabilities to the cloud, these new cloud-native ecosystems will require organizations to be exhaustive and thorough in boosting their cloud security measures. I expect to see an increased investment in security assets, the implementation of bolstered security benches with DevSecOps engineers, and more businesses coding security rather than adopting it.



I also anticipate more financial institutions are going to explore cloud-based payment platform infrastructures to keep up with competitors who are modernizing their payment options. Additionally, hybrid cloud computing is another trend to look out for as organizations want benefits of the private cloud like scalability and speed, but also want the security and regulatory advantages of the public cloud.

Lastly, sustainability as it relates to data storage will continue to be top of mind for businesses when choosing what platforms to work with. We will continue to see the big players like AWS and Microsoft roll out new sustainability initiatives to combat environmental concerns which several organizations will follow. Whether that's implementing their own initiatives or adopting sustainable technologies from Big Tech, a big priority for 2023 will be focused on being green. Optimizing a cloud migration strategy will ensure that energy expenditure is under control, in turn wasting less resources and reducing organizations technological carbon footprint.

## AI Continues to Enhance IDP

*David Gerber, Vice President of Tech M&A, Corum Group*

Over the last five years, we've seen great improvements, and some definitive innovation when it comes to IDP. I don't believe the same can be said for ECM and BPM, with possibly the exception of low-code platforms.

Improved IDP capabilities include improved accuracy, improved classification, faster implementation times and improved user experience. Things that still challenge IDP are proven scalability (not marketing brochure scalability), integration capabilities and intelligent analytics.



The truth is, it's becoming more difficult to tell the difference between IDP solutions. Some IDP vendors are trying to be all things to all people, while others have a narrower focus in particular sectors, i.e., accounts payable invoices, or claims processing documents.

A missing link is continues to be that companies lack the knowledge and experience when it comes to automating operational processes the right way. That causes companies to purchase products, not solutions, which generally frustrates the heck out of business unit end users. End users prefer not to be forced to work across multiple systems to get their work done (hello RPA), which means making IDP a ubiquitous part of the operating system, or line of business applications, financially judicious.

Information gained from companies and buyers in the M&A arena, along with research data from McKinsey, Gartner, and Deep Analysis, say that information collection and aggregation are becoming more recognized by focused line of business (LOB) applications. My prediction is that we will start seeing more enhanced AI functionality added to IDP/BPM solutions, more acquisitions from key LOB application companies (ERP, HR, Logistics, etc.), and additional portfolio additions from private equity firms.

# DOCUMENT IMAGING REPORT

Business Trends on Converting Paper Processes to Electronic Format

DIR is the leading executive report on managing documents for e-business. Areas we cover include: Document Capture; OCR/ICR, AI, and Machine Learning; RPA; ECM; Records Management; Document Output; and BPM.

DIR brings you the inside story behind the deals and decisions that affect your business.

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