



2019 Guide to Procure-to-Pay & Digital Transformation

Leveraging Artificial Intelligence, Machine Learning, and Other
Innovative Technologies to Optimize P2P Processes

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- » The Evolving State of Procurement Culture, Identity, and Technology
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What Is Digital Transformation?

Digital transformation as a function is leveraging innovative technology to digitize and automate key business functions; as a result, it effectively enables companies to become nimbler and more competitive in their markets. Beyond this simple definition, the actual steps, implementation, and end state of digital transformation are vague, and the lack of agreement on its proper application leads many to dismiss it as a buzzword. Unfortunately, this dismissal causes organizations to miss out on its long-term, far-reaching value.

Digital transformation is not using the latest technology in order to check boxes or implementing automation for automation's sake. Rather, it is a philosophy that drives action. The digital transformation philosophy entails viewing technology as an essential part of the business, yielding an advantage over its competitors, and enabling it to stay strong despite market disruptions. The digital transformation philosophy and its application entails:

- » A strategic vision of future business processes
- » A proactive rather than reactive approach to technology adoption
- » The company-wide application of technology

The way organizations think about and attempt to approach digital transformation often evolves over time. Level Research has identified three distinct ways organizations today are approaching digital transformation.

1. **Digital transformation that involves digitizing processes that are analog to create a new, enhanced method or experience.** This does not mean that technology is only used to transform manual processes alone—it can also involve improving digital processes. For example, a paper form could be converted into an online form, or an online tool or application could be transformed into a more versatile and enhanced mobile version of itself.

Using digital transformation in this way has brought ease of use and innovation to common business functions. Recent examples can be seen in mobile banking and in more dynamic airfare searches and booking capabilities. This first method of digital transformation is often used to improve the process or experience for the customer.



- 2. Digital transformation that involves automating processes in the back-office.** Whereas the previous approach improved the customer's experience, this approach implements back-office automation systems to reduce costs across on-revenue departments. It also involves leveraging innovative technologies to automate high-cost, manual activities within business operations. One example is using robotic process automation (RPA) to automate low-value, repetitive tasks in invoice processing. This approach to the digital transformation philosophy improves the process and experience for the back-office, and results in reduced friction between the front and back-office as well.
- 3. Digital transformation that involves changing or creating new business models.** With a transformed front- and back-office, businesses have the ability to create new revenue streams by selling something that could not exist without digital transformation or by fundamentally changing the way revenue is earned from an existing product (e.g., changing the product's customer).

For example, Netflix transferred the old entertainment distribution model (video rentals from brick and mortars) and online by leveraging a website and mail delivery. Not only did Netflix eventually eliminate the need for physical locations from which to rent out videos, but they also contributed greatly to the declining use of hard copy media (e.g., DVDs). Netflix revolutionized the rental business model, and they changed the way media distributors earn revenue from their customers. All of this was possible because they built the company on a digital transformation foundation.

While these three ideas can be viewed as stages or steps, they are not linear. The success and sustainability of each stage is closely dependent on the others. A transformed user experience will not be successful from a cost and operational standpoint without a digital back-office, and a digital back-office is rendered irrelevant if the front office has not matured to a modern, digital state. Similarly, the ability to transform business models and stay adaptive in a changing market is almost impossible without a digital environment throughout the rest of the organization. In order for an organization to be truly agile, it must have a digital foundation in the back-office; otherwise, it will be hindered by broken processes that will hold it back, cost it money, and increase negative risk as it tries to grow.



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Enacting all three methods and achieving a true digital transformation state enables a business to be disruption-resistant—or disruption-proof. The company will have the ability to be adaptive and nimble, and to react to market changes by leveraging technology. They will be able to respond more swiftly and completely to competition than a company that is solely focused on taking an analog process and making it digital.

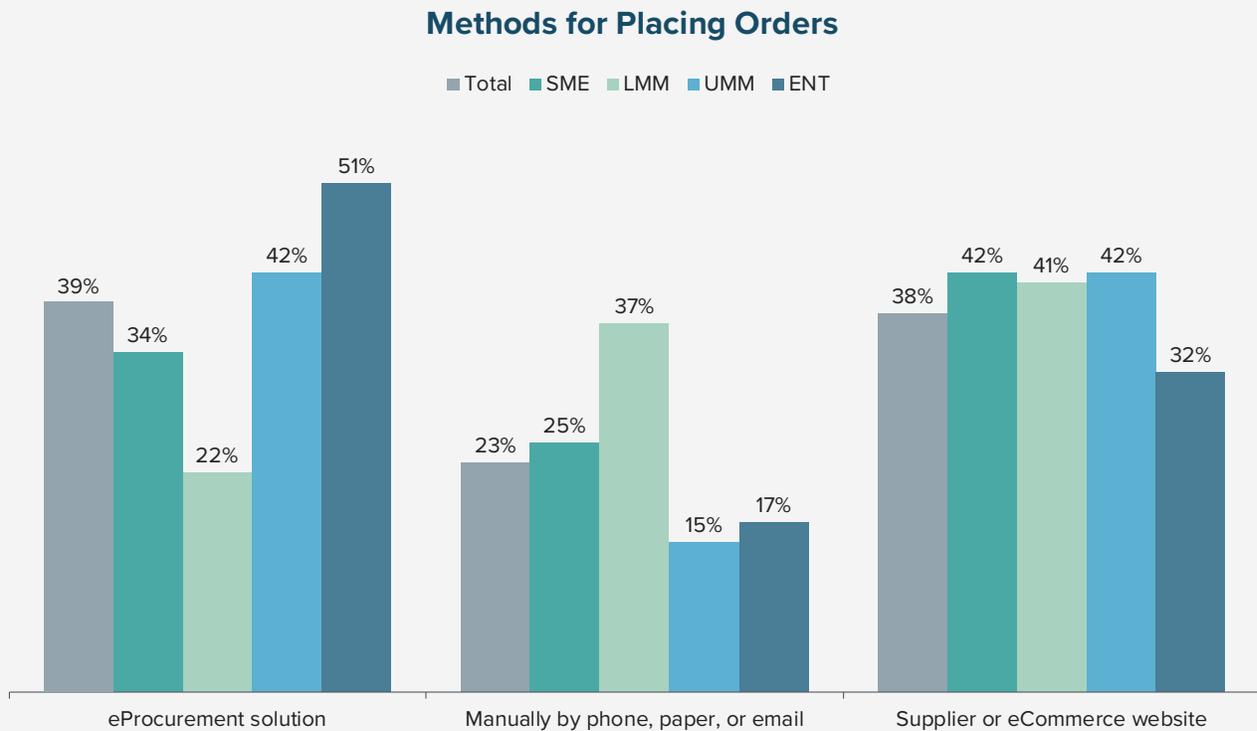
In order to explore how digital transformation looks in the context of Procure-to-Pay (P2P), the following examines current trends among North American organizations around back-office technology usage and improvement goals and strategies.



Digital Transformation in P2P

One of the basic requirements of digital transformation is the implementation of technology into key business processes. Implementing procurement and AP automation alone does not enable full digital transformation, but it does create a technological foundation for an organization. Level Research surveyed respondents from North American organizations and found that overall market adoption of electronic procurement (eProcurement) solutions is just under 40% (see Figure 1).

FIGURE 1



SOURCE: LEVEL RESEARCH PROCUREMENT SURVEY, 2019

Majority of Organizations Place Orders Through Supplier or E-Commerce Websites

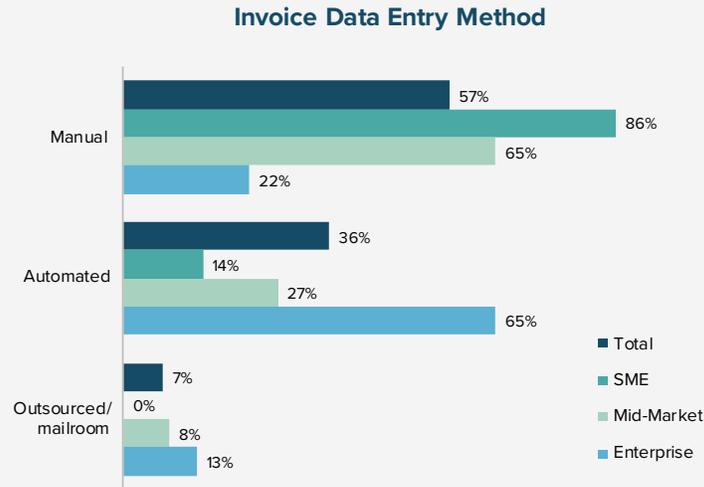
How does your organization typically place the majority of its orders with suppliers? (Select one.) (n = 337)

Level Research defines organizations with revenue greater than \$1 billion as enterprises, organizations with revenue between \$501 million and \$1 billion as upper middle market (UMM), organizations with revenue between \$51 million and \$500 million as lower middle market (LMM), and organizations with revenue between \$1 million and \$50 million as SMEs.



Another foundational solution, accounts payable (AP) automation, is used less than half of organizations; only 36% of organizations automate invoice data entry, while about 50% automate invoice routing (see Figures 2 and 3).

FIGURE 2

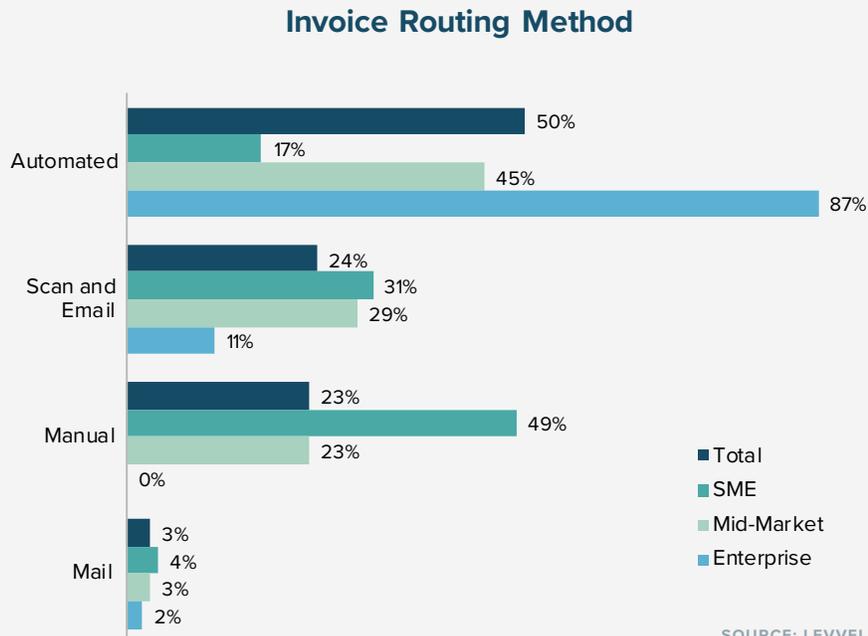


SOURCE: LEVEL RESEARCH PAYABLES SURVEY, 2019

SMEs Are Most Likely to Manually Enter Invoice Data

How is invoice information entered into your ERP, accounting software, or accounts payable software? (Select one.)
(n = 258)

FIGURE 3



SOURCE: LEVEL RESEARCH PAYABLES SURVEY, 2019

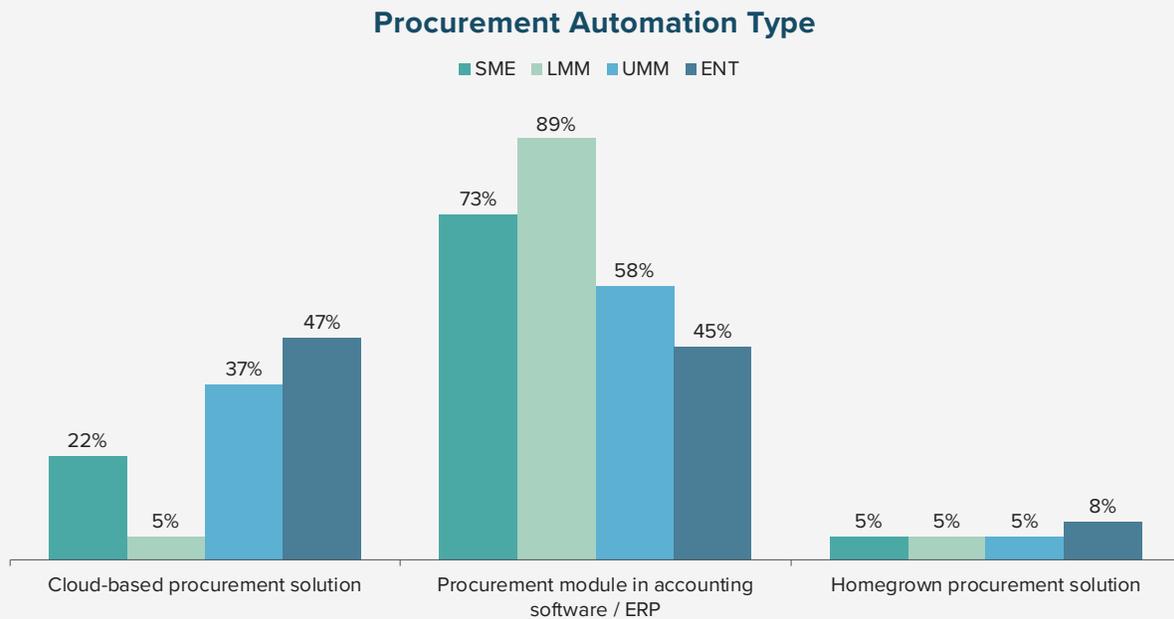
Enterprise Organizations Are Mostly Likely to Use Invoice Workflow Automation

How do you typically route invoices for approval in your organization? (Select one.) (n = 258)



Even though many of these organizations have technology in place in their back-office, it is important to note that not all of them are using systems equipped to create sustainable digital transformation. Cloud technology is a key element of an organization modernizing their internal infrastructure, as it enhances flexibility, data storage, and scalability, but only a small portion of companies are using cloud-based tools for eProcurement and AP automation (see Figures 4 and 5).

FIGURE 4



SOURCE: LEVEL RESEARCH PROCUREMENT SURVEY, 2019

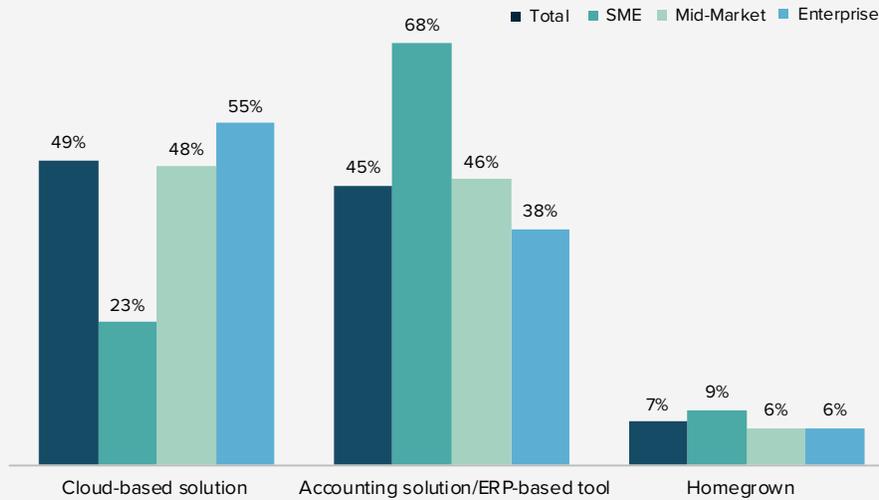
Procurement Module is the Most Commonly Adopted Automation Tool

Which automated procurement solution does your organization primarily use? (Select one.)
(n = 132)



FIGURE 5

AP Automation Type



SOURCE: LEVEL RESEARCH PAYABLES SURVEY, 2019

AP Automation Type Depends on Organization Size

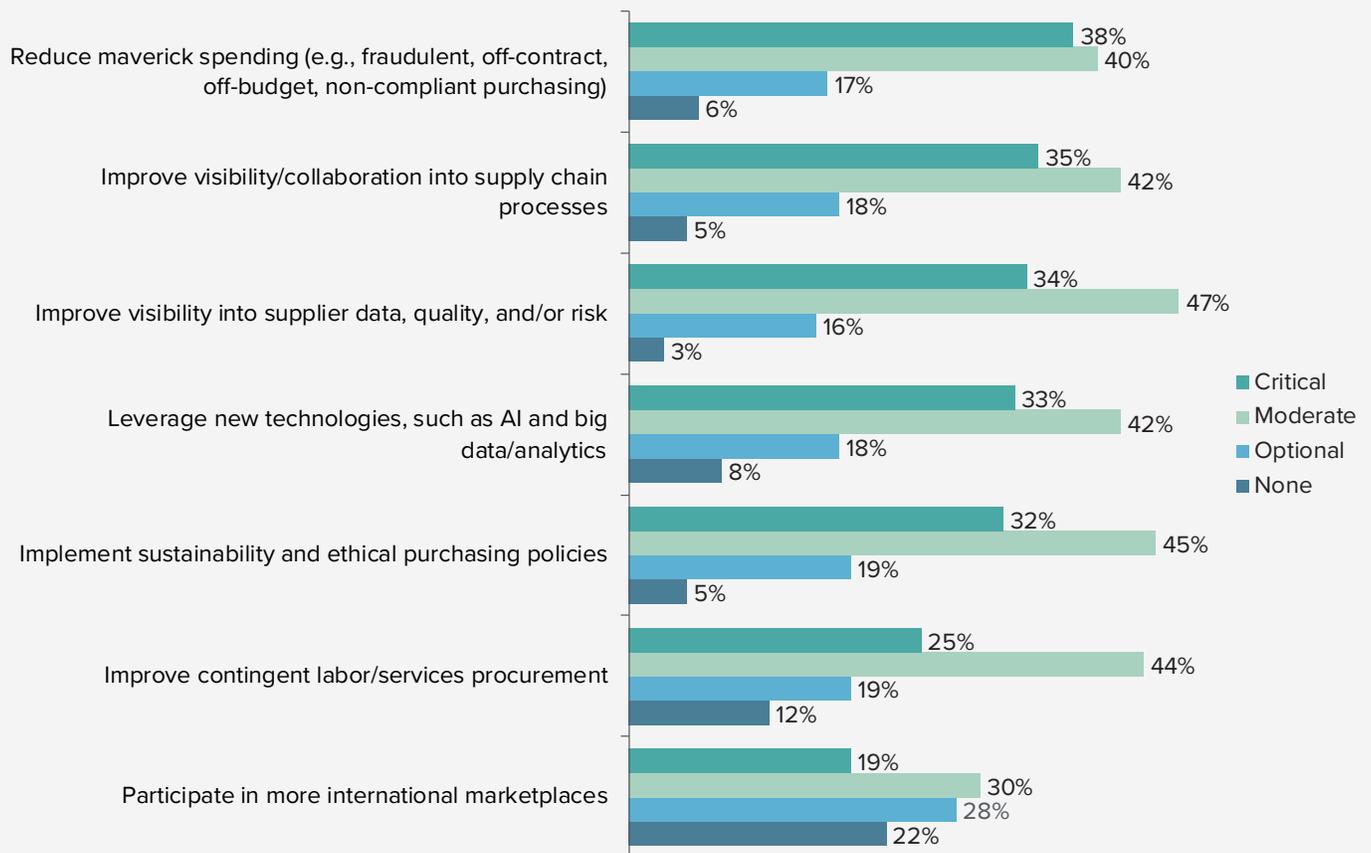
*If your organization is using an AP automation tool, which type of tool do you use for the majority of your AP processes?
(Select one.) (n = 134)*



Whether organizations are automated and/or cloud-based or not, using more innovative technology is a priority for companies. Leveraging emerging technologies is a moderate or critical concern for the majority of organizations (see Figure 6). In general, however, organizations prefer to tackle other tactical issues directly rather than using a digital transformation perspective.

FIGURE 6

Procurement Initiatives (By Priority)



SOURCE: LEVEL RESEARCH PROCUREMENT SURVEY, 2019

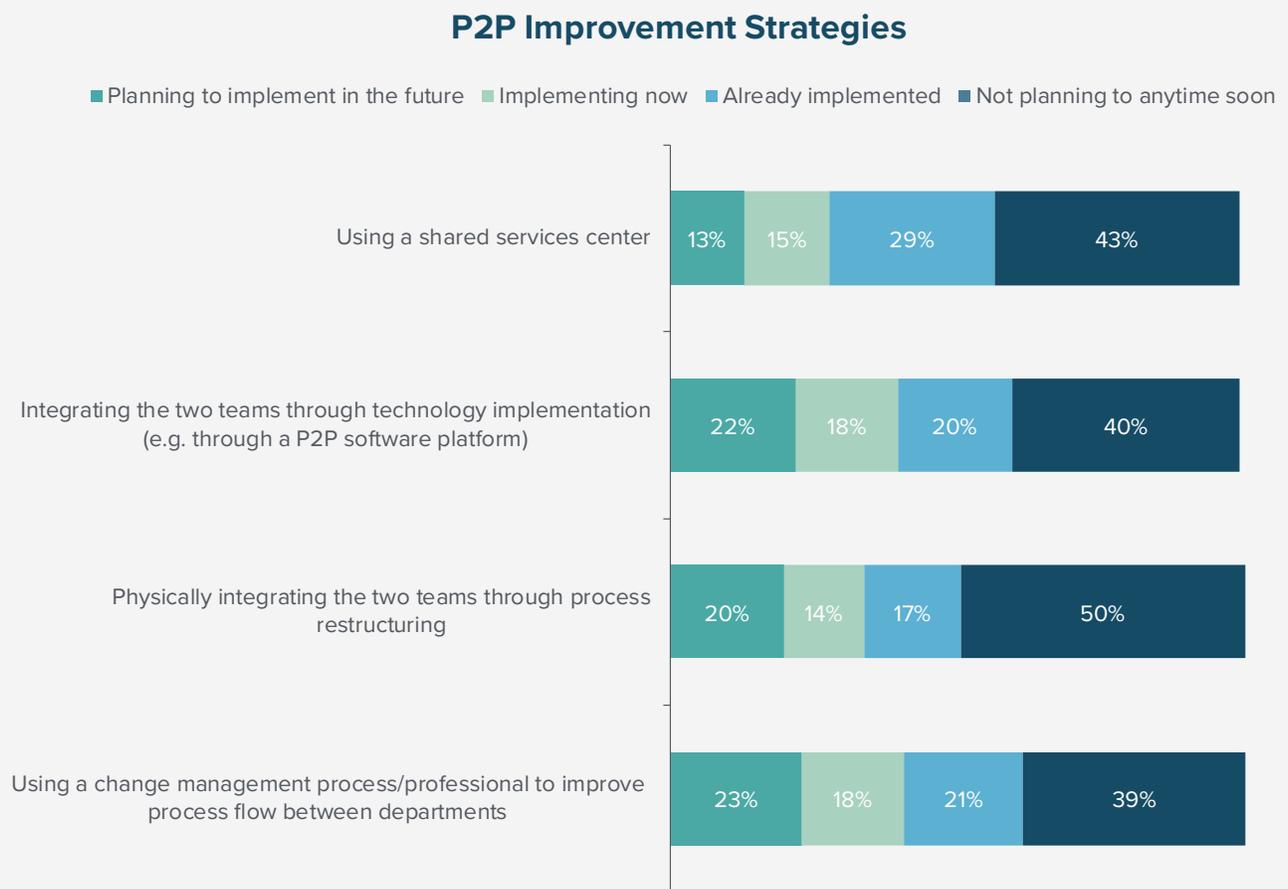
Healthcare Organizations Are Most Likely to Require Individual Department Manager Approval

Which of the following best describes the typical internal approval process for purchase requests at your organization?
(Select one.) (n = 257)



Despite these initiatives, P2P improvement strategies are lagging in implementation. When asked about whether they plan to use a P2P software solution—which Levvel Research identifies as the “digital transformation” strategy due to its technological approach—to integrate procurement and AP teams, the response was more tepid than might be expected. In fact, 40% of organizations do not plan on using this approach (see Figure 7).

FIGURE 7



SOURCE: LEVEL RESEARCH PAYABLES SURVEY, 2019

Many Organizations Have Not Implemented Digital Transformation Strategies to Improve Their P2P Processes

Which of the following strategies for improving P2P interaction best describe your organization? (Select one.) (n = 258)

It is important to note that digital transformation enables organizations to meet many of their other improvement initiatives. The cohesive digital environment necessarily leads to improvements in visibility, maverick spend, supply chain processes, and many other key P2P areas.



A key digital transformation strategy in P2P is creating synergy across procurement, AP finance, and IT. This means implementing a unified system that creates a whole that is greater than the sum of its parts. Streamlining and unifying back-office spend operations with cloud-based, integrated P2P software renders a transformed process that adds new value to an organization. This integrated approach helps in both managing spend and increasing process efficiency. In addition, automation enhances many aspects of supplier transactions and encourages supplier collaboration, offering a more holistic and hands-on approach to supplier management.

A correlating strategy is data synchronization—particularly supplier data. Controlling the intake of supplier data using a centralized, automated data management platform leads to more secure and efficient procurement and payments processes, stronger supplier relationships, and lower financial and supply chain risk. Vital data can be continuously aggregated and analyzed.

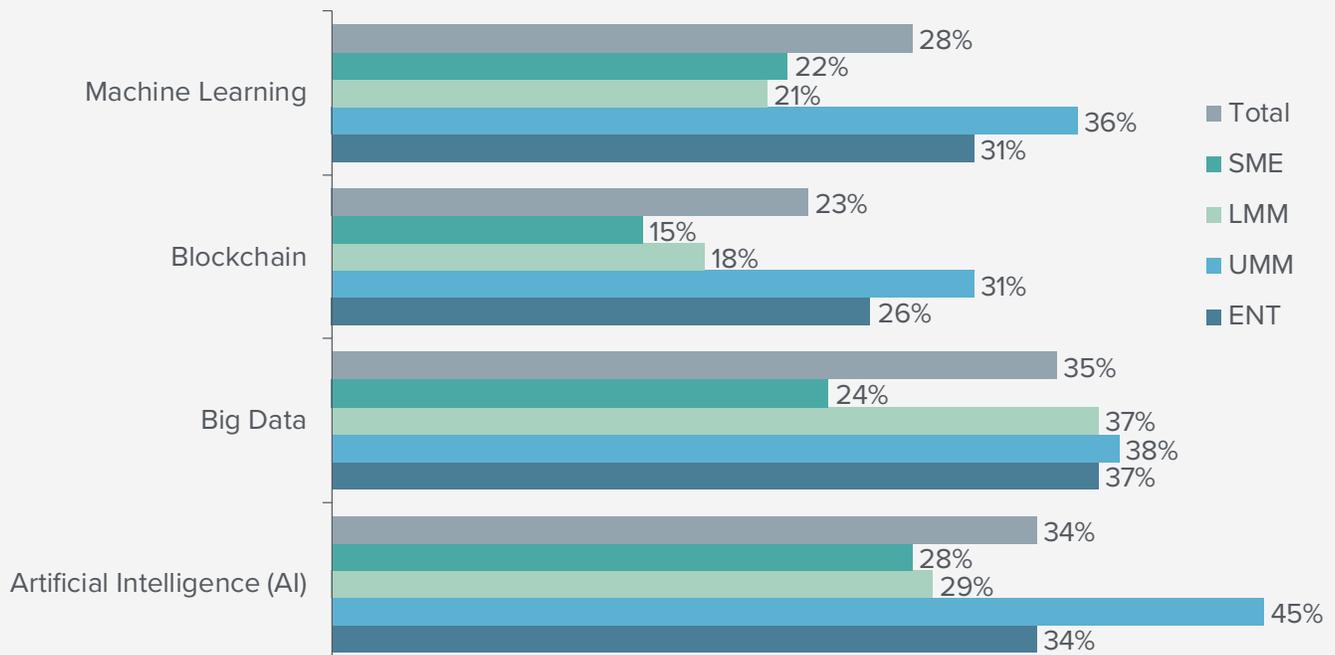
Digital transformation in P2P allows process synchronization and data aggregation to break down traditionally siloed business functions, improving process efficiency, spend control, and business decisions. For procurement, a digital state improves an organization's ability to control costs and order management, which effectively allows it to better control cash flow and even enables strategic financial planning. Automation enhances many aspects of supplier transactions and encourages supplier collaboration, and automated software tools offer a more holistic and hands-on approach to supplier management.



Beyond the basic benefits of process automation, it is important to view back-office digital transformation in line with how it leverages emerging technologies such as artificial intelligence (AI), machine learning (ML), big data, and blockchain to create true innovation for an organization. According to survey data, organizations are most familiar with AI and ML (see Figures 8 and 9); AI and ML are frequently used elsewhere in technology—even if only as a buzzword. In terms of familiarity within both AP and procurement contexts, artificial intelligence is the most well-known. When it comes to usage, however, big data is the most widely used among procurement (see Figure 10).

FIGURE 8

Familiarity With Emerging Technologies in eProcurement



SOURCE: LEVEL RESEARCH PROCUREMENT SURVEY, 2019

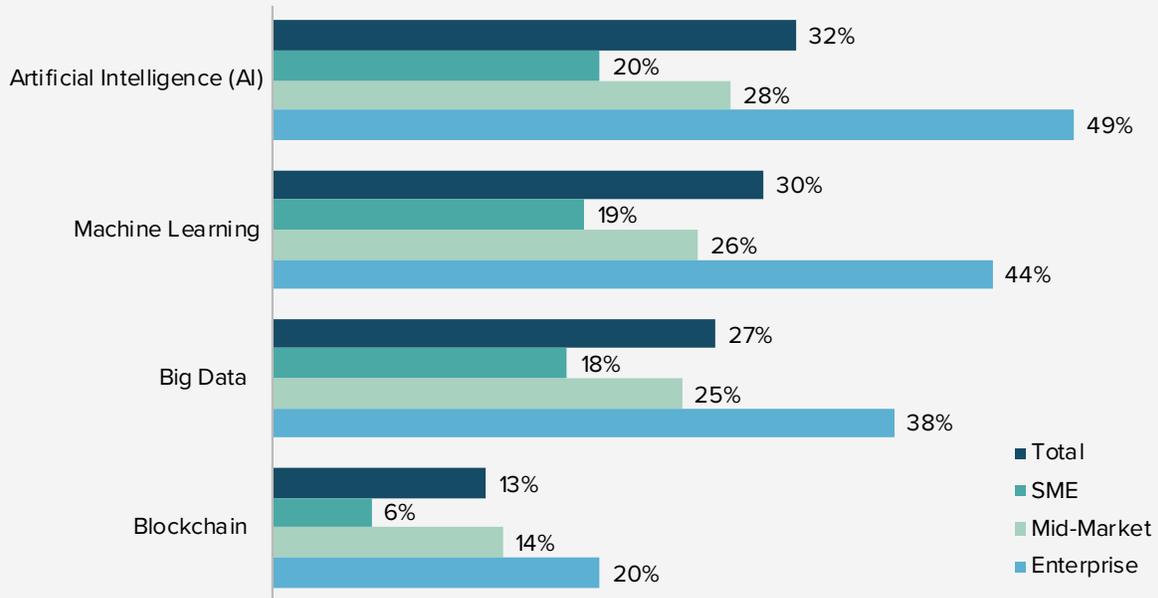
Enterprise Organizations Are Knowledgeable About Emerging Technologies

*How familiar are you with each of the following technologies as they pertain to automated procurement solutions?
(Selected "Very familiar") (n = n = 346)*



FIGURE 9

Familiarity With Emerging Technologies in AP



SOURCE: LEVEL RESEARCH PAYABLES SURVEY, 2019

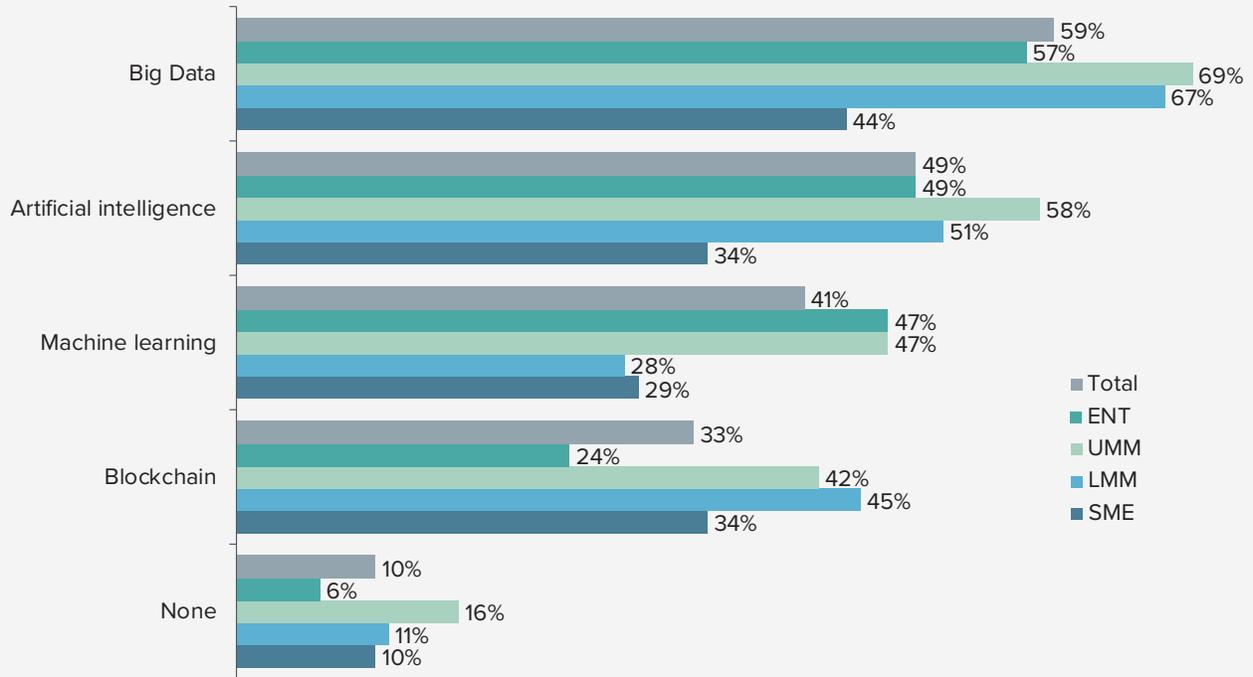
Enterprise Organizations Are Knowledgeable About Emerging Technologies

*Which of the following emerging technologies are you familiar with as they pertain to accounts payable automation?
(Selected "Very familiar") (n = 258)*



FIGURE 10

Emerging Technology Usage in eProcurement



SOURCE: LEVEL RESEARCH PROCUREMENT SURVEY, 2019

Big Data Is the Most-Used Emerging Technology in eProcurement

To the best of your knowledge, which technologies are used in your automated procurement solution? (Select all that apply.) (n = 130)



Digital Transformation in P2P Software

The following information provides a high-level overview of some key emerging, innovative, and disruptive technologies that are key components of a digital transformation within P2P.

Robotic Process Automation (RPA)

RPA does one thing well: It automatically takes any specific action taught to it by a human using a UI. RPA records what the user does, then does the same thing over and over as directed. For example, it might execute the entire process to place a frequent order on the buyer's behalf. Its ability to endlessly perform mundane tasks makes it ideal for procurement. It takes the robot out of the human, allowing procurement departments to shift their focus to a more strategic role within the company.

Because RPA forms a good bridge to integrating AI, it is the single emerging technology that is foundational to effecting digital transformation in P2P. The adoption of RPA is an excellent first step for procurement departments to take that will help them integrate more advanced emerging technologies later on. Many procurement solutions with RPA complement it with an AI component. The RPA takes the action, and the AI does the thinking to ensure every action taken is better than the last.

A full RPA implementation can eliminate process inefficiencies and provide real cost savings in procurement, without requiring new staff to be hired. Current implementations, however, are usually not fully committed to, resulting in little or no change. If the full transformative potential of RPA is to be unlocked, and the gateway to other emerging technologies opened, then procurement departments must create a vision for a full, complete implementation of RPA.

Artificial Intelligence and Machine Learning

Level Research views AI and ML as the two emerging technologies that have had the biggest impact on digital transformation thus far. While some of the other technologies are in the theoretical use case phase, have yet to be incorporated into solutions, or are in the early stages of incorporation, ML and AI are further along maturity-wise and have already become key components of some P2P software. AI and ML can be used in many ways in both payables and procurement. Level Research has seen the technology used to improve optical character recognition (OCR) and data processing of purchase documents.



OCR with AI goes beyond imaging and digitizing information. The algorithm also handles tasks such as identifying errors and completing translations. Users can also recommend processes and feed the software corrections to prevent errors from recurring. By itself, OCR is useful for documents that have a standard, identical format; invoices, however, vary wildly from country to country, supplier to supplier, and industry to industry. AI gives OCR the ability to continue to pull in the necessary information despite invoice idiosyncrasies. In the most advanced solutions, AI is being used to identify line items in invoices and match them to POs—even if multiple POs were placed and combined into a single invoice. ML take AI one step further, allowing the solution to improve with every document it processes. After enough exposure to invoices, for example, ML algorithms learn the patterns and habits of individual suppliers and know exactly where to find the information that needs to be captured.

AI and ML can also be used to improve the invoice and PO approval workflow process by learning where these documents should be routed to based on line items, dollar-amount thresholds, and spend categories/GL codes. Additionally, if software notices that a document has been waiting for approval for too long, or that the normal approver is unavailable, it can redirect it to the appropriate approver. While a lot of the use cases for AI and ML might seem task-oriented, the technologies can provide strategic and tactical capabilities as well.

AI and ML programs are used to analyze organizational spend patterns and assess whether individual department or employee spend is off and flag it as potential fraud. It can also be used to improve the purchasing experience. Buyers can see which items are out of stock, receive predictions on when they will be available, and get recommendations on alternative items or suppliers. Because purchases, preferences, and habits are logged and analyzed by the software, buyers can receive insights such as recommendations for future purchases, suggested restocking dates, and items that are frequently bought in conjunction with what the buyer is purchasing.

Leading solutions offer a custom purchasing walkthrough and the creation of analytics dashboards and documents via chatbots using natural language processing (NLP), instead of via multi-step search processes. The user types in what they are looking for in conventional language, and the chatbot recommends which supplier they should order from and provides a price and estimated arrival date. These AI-enabled assistants also warn users when frequently purchased items are out of stock and either recommend a replacement item or provide an



estimated restocking date. The prospect of ordering hardware for new hires by typing “order five laptops” or pulling custom reports by typing “biggest North American suppliers” is an example of the exciting capabilities that AI and ML bring to the table.

Big Data

Big data is an understated emerging technology, but its usage can give a competitive edge to organizations of all sizes and industries. The large quantity of information generated and captured by P2P software has traditionally been seen as too big to grapple with or to generate any significant analysis from. Big data, combined with AI and ML, offers the ability to get insight into this information, yielding a strategic advantage to organizations that use the necessary technology. Big data applies traditional statistical modelling to all of the historical information stored in the software to generate trends, then goes a step further to make predictions that can support future strategic decisions. Because the predictions and key figures provided by this technology are based on real-time information and data pulled from a wider pool than has traditionally been digestible, the level of accuracy and reliability it maintains is difficult for any other technology to achieve.

AP software has always been used in conjunction with ERPs and other financial systems that store a large amount of important financial and supplier information; it is vital that payables management offers proper control of this data. Beyond data housing and control, AP providers have offered reporting and analytics to give organizations strategic insights into their own information. Recently, AP and procurement providers have begun to apply the concept of big data to take strategic analysis far beyond its traditional boundaries. Big data methods integrate traditional statistical modelling, then take the analysis multiple steps further. This allows providers to use their data to analyze past information and trends, and then make predictions that can support future decisions. Applying predictive analytics techniques and machine learning, this technology enables the C-suite to use information for strategic decisions. While most of the functional advancements thus far have been seen in procurement and sourcing technology, Level Research predicts big data will play a larger role in payables in the years to come, especially as more organizations try to use data to optimize their supply chain, supplier base, and cash flow.



For procurement, many organizations choose solutions that process and manipulate big data. Big data technologies parse extremely large sets of data—which are becoming more prevalent today as an increasing amount of transactional data is being recorded—using powerful computing capabilities. It draws real-time, actionable insights and visualizations, and, with its widely sourced data, generates more accurate KPIs and benchmarking.

Blockchain

Blockchain’s usage in P2P is still largely viewed as speculative. Very few solution providers have cited concrete plans on how they intend to incorporate blockchain technology, and even fewer have actually utilized it in their software. There are many promising use cases for blockchain in P2P—it has the potential to simplify, improve security, and add transparency to the P2P process in ways that none of the other emerging technologies can; but as of right now, it remains to be seen just how much or how soon blockchain will affect P2P. Its efficacy in payments (blockchain’s original design intention) is obvious and has already been adopted by technological leaders. It also has the potential to make the entire purchase order to invoice to receipt process redundant, speeding up and transforming the goods order operation as we know it. It would also make the process much easier to audit, with retention of all document and fund transfers permanently stored on a single ledger.

In relation to AP, blockchain is likely the newest emerging technology. Blockchain is not integrated into many mainstream payables platforms, and the concept is not yet widely enough known to be trusted and implemented by organizations. Blockchain has already been adopted by a handful of providers in their business-to-business (B2B) electronic payments tools, though, and as new innovations emerge in the realm of blockchain, Level Research predicts that its influence on AP will continue to grow. Currently, blockchain developers look to utilize it to increase the security of data and money transfers, facilitate connections among groups and individuals, and decrease latency in transfers between parties.

Blockchain is not as well used or understood in the procurement space, but there are several potential innovative uses for a supply chain built on an immutable data record. With transactions that are constantly verified and recorded, organizations can have a dependable, transparent, and comprehensive log of all supplier transactions. Blockchain may experience wider adoption by mid-market organizations because of their greater flexibility in resources for adopting



technology solutions than SMEs, combined with a more manageable number of suppliers than enterprises.

Real-Time Payments

Real-time payments (RTP) is a new rail for clearing and settling transactions between accounts at financial institutions. First launched in 2017, RTP was created by The Clearing House (TCH) to better meet business and consumer expectations for a faster, smarter, more secure ubiquitous payments solution. RTP tremendously improves traditional payment processes, both by making the transfer of funds immediate and by supporting the attachment of additional messages, such as remittance or other payment-related information.

Level Research anticipates that RTP will continue to be integrated by large banks and downstream to smaller financial institutions in the coming year, with 90% adoption by 2020. Once it is available as a payment option for consumers and businesses, RTP may replace more traditional payment rails such as credit cards or ACH.

Level Research sees RTP impacting the P2P space in transformative ways. Instant payments reduce payment delays and increase organizations' rate of capture for early payment discounts. The inclusion of payment information in an RTP transaction will reduce the burden on AP departments, as billers can send messages (either attached to an accompanying payment or by itself) to any of their customers on the network and can receive an immediate response, all with access to real-time status of payments or invoices. RTP messaging capabilities offer unprecedented visibility into payments for businesses and create new value propositions for clients. RTP may change the focus and functionality of supplier portals and disrupt existing invoice workflows.

From a digital transformation perspective, RTP might be used to differentiate a current service. For example, business payments providers will have access to a new, faster supplier payment method to offer their customers. However, it remains to be seen just how much RTP will affect current invoice automation providers, as it potentially eliminates the need for invoices altogether.



App Networks and Partner Ecosystems

Some providers have taken the approach of treating their solutions as more of an app network, often via a partner ecosystem. This could create a new normal in the back-office in which providers get both the comprehensive view of spend and transparency offered by P2P and the flexibility and customizability of a best-of-breed approach.

In procurement, we have seen providers create app network environments via acquisitions, internal research and development, and increasingly via partnerships with other software companies. The partnership approach blurs the lines of companies once considered competitors, creating a symbiotic relationship in which each provider focuses on their core competency to give end users the best product possible. Additionally, apps are constantly being updated and refreshed, and as advanced technology becomes available, new apps become available. The app network and partner ecosystem also means that organizations are able to add features and capabilities of different software solutions as they see fit. As organizations grow in size and their processes become increasingly complex, they are able to supplement their back-office and add automation when and where they see fit—without much of the long rollout, training, and implementation a traditional best-of-breed adoption would require.

In response to this challenge, several P2P solution providers are moving their software offerings to platform and/or business network approaches. Again, this is occurring via acquisitions, extensive in-house development, and an increasing number of partnerships between eProcurement and payables providers and other, niche tools for functions such as supplier validation and spend master data file management. Level Research predicts that the increasing permeation of digital transformation through the back-office will increase the importance of P2P platforms over the next few years, at least for upper middle market, enterprise, and/or multinational companies.

Emerging technologies lay the groundwork for advanced solution platforms, which can support various widgets and applications that target specific purchasing functions. The ability to add the features and capabilities that different applications provide as they become necessary to the business enables the solution to truly scale with the organization. Since new apps are being added as technology evolves, the platform-based approach provides a level of dynamics and access to emerging technology that traditional solutions cannot offer.



Because a platform brings all of these capabilities into one place, users can easily access what they need without switching browsers or systems, and use applications that mirror consumer applications in UI and UX. Many of these platforms also support partner solutions, creating ecosystems that maximize both functionality and ease of use. When platforms are connected to a network, the applications can work together in the backend and streamline all data processing.

Global Networks

Emerging technologies also lay the foundation for networks, which allow for increased collaboration and connectivity. They give buyers and suppliers into a unified space to discuss terms and handle exceptions, and they give visibility into the life cycle of the supplier relationship. When as many suppliers and buyers are on the network as possible, all parties have real-time visibility into their supply chain operations. At its fullest potential, the network enhances every facet of the supply chain. On a global scale, these networks can seamlessly connect international players.

E-commerce

The role traditional e-commerce plays in influencing eProcurement is evident. For insight into the future of purchasing, examine the current process for personal shopping. Employees increasingly wonder why their purchasing experience at work is disparate from their purchasing experience at home, and are increasingly demanding that their purchasing process at work look and feel similar to their personal purchasing process. Leading eProcurement providers already borrow from the consumer experience to offer a clean and easy to navigate UI, powerful search capabilities, and useful filtering. eProcurement players that have not already done so will be forced to mimic a modern online shopping experience or risk losing business to traditional e-commerce players.

While Amazon is traditionally known as a consumer marketplace, it is unavoidable in today's procurement world. Amazon offers Amazon Business and Business Prime in an effort to lure business customers away from their traditional procurement methods. They also offer purchasing cards, approval workflows, reporting and analytics, and business and quantity discount pricing to present their offering as a legitimate, standalone procurement platform. Additionally, Amazon integrates with many ERPs and even cloud-based eProcurement



systems. It has been the goal of seemingly every eProcurement software to present an “Amazon-like shopping experience,” but now they must determine how they will interact with the company their solution is based on—as a competitor, or as a partner.

A dated e-commerce experience poses a risk to organizations in the form of end users relying on the same sources they utilize in their personal lives for business spend, which leads to increased off-contract expenses. As more vendors offer their products on online marketplaces or their own e-commerce platforms, buying organizations must approach their supplier research and product purchasing differently—that is, with greater control, transparency, and diligence.

Communication and Collaboration Tools

Within procurement, purchasing approval and order placements are being upended by communication and collaboration tools such as Slack, which remove the need for email chains or logging into systems and which ultimately save time for individuals. For example, employees can directly contact higher-level managers in an organization and receive an immediate response to their request for a new laptop. While this is an interesting use case and an example of innovative technology improving back-office efficiency, it reduces the procurement department’s control over spend activity. It also contributes to the challenges and risks that come from digital transformation technology gaps.



Qualifications for Digital Transformation

In order to prepare for digital transformation within P2P, organizations should consider the following key qualifications.

Holistic Transformation

A holistic approach to transformation essentially means creating back- and front-office synchronization. There is the temptation to approach front-office transformation first because it is what outside parties—primarily customers—see and interact with, and organizations do not necessarily worry about the inside. However, if organizations do not take advantage of back-office transformation, the inefficiency and problems of back-office processes will eventually affect the rest of the company.

Customers will be able to tell or feel if an organization is not holistically investing in technology, and it will affect their user experience. For instance, when an individual goes to pay a medical bill online with a healthcare institution that has not invested in modernizing the core infrastructure behind the scenes (e.g., payment technology) the process will be difficult and in some cases, prone to failure. An example within P2P is if a retailer's online storefront is excellently designed for the end user, making the actual shopping process so easy and intuitive that it leads some customers to choose that retailer over a competitor with an inferior website. If that retailer's procurement processes are completely manual, however, it is likely that eventually a disruption in order fulfillment will cause negative effects to the consumer, such as delays in final product delivery. Beyond the customer experience perspective, organizations gain more value by bringing automation and modern capabilities to the back-office from an economic perspective.

Scalable Technology

When organizations have a digital transformation environment and a strong technology foundation, they are often able to grow with greater efficiency and at a faster rate than many of their competitors. In fact, digital transformation is changing the current business landscape by allowing small upstarts to challenge long-standing giants in certain marketplaces. One example of this is how peer-to-peer payment applications such as Venmo and Zelle have greatly disrupted the market for banks and other financial service institutions. Virtually any business in any industry can enable this competitive advantage if they create a strong digital foundation.



One way to translate this to P2P software implementation means simply selecting a solution that can scale with the organization. Not only should the solution provider offer a strong technical foundation (e.g., cloud-hosted software) and innovative technology such as emerging tech or a B2B marketplace, but they should also offer software that is robust enough to support a company's growth needs. Many procurement and payables providers offer their capabilities in modules, allowing customers to purchase new capabilities within their overall software suite as they grow.

Digital transformation does not mean that a small organization must completely transform their entire back-office in one go; small organizations generally have small accounting and purchasing needs and therefore modest technology needs. Digital transformation does mean that small organizations should look into the future and proactively leverage technology. This will allow them to stay nimble and broaden their competitive landscape. It also means potentially avoiding the obstacles and growing pains that many of today's enterprise organizations, founded decades ago, had to overcome or are still overcoming, such as trying to reduce huge volumes of paper invoices only after they have cost the organization millions of dollars in processing costs.

Foundational Technology

Organizations may become fixated on implementing an emerging technology du jour; while technologies such as blockchain and ML have their place for larger organizations, they cannot just be thrown at a company's current operations. These are tools that are meant to be placed on important building blocks—a stable technology foundation at the core of the business. For many organizations this means adopting public cloud technology, modernizing internal technology development using more flexible project management methods (e.g., Agile), and installing technology infrastructure that supports dynamic business change and improvement (e.g., DevOps).

For example, ML is built into many of the valuable online services today like Google and Amazon, and therefore it is much more accessible to an organization than before when that business had to buy servers to support the tech. However, this means the business is required to be able to leverage public cloud technology and allow some of your data to be used in the cloud.



An Innovative Solution Provider

Digital transformation is the hot term amongst P2P providers right now. Interest in the term started to pick up steam in late 2017 and early 2018, but since the start of 2019, it has exploded as every provider is anxious to present their solution as having the capability to digitally transform organizations' business processes.

Many P2P solution providers will espouse digital transformation in their marketing and messaging to try to attract customers, without actually enabling a digital transformation for these customers. The same is true for technologies like AI and machine learning; these providers may pitch a revolutionary AP or procurement solution leveraging these technologies, but in reality they may be only using these tools in very basic, rudimentary ways that do not provide a great deal more efficiency than a tool without the tech. For example, many providers say they use AI technology but are only leveraging it with their OCR tools, which has been a standard capability for that product for years. Is the provider also using machine learning to improve OCR accuracy over time? If the provider using machine learning in any other areas, like invoice workflow?

It is important to evaluate a solution provider that leverages innovative technology in truly impactful ways, and that demonstrates a commitment to digital transformation not only in their business model, but in their own business. It will become evident after proper vendor evaluation if they have taken the digital transformation philosophy to heart in their own practices, and if they can truly offer AI, machine learning, data analytics, and other tools in ways that improve strategically P2P processes. The use of these tools will often determine whether a P2P solution improves an AP or procurement department according to solely tactical parameters, or enables it to become a strategic arm of the business.



Conclusion

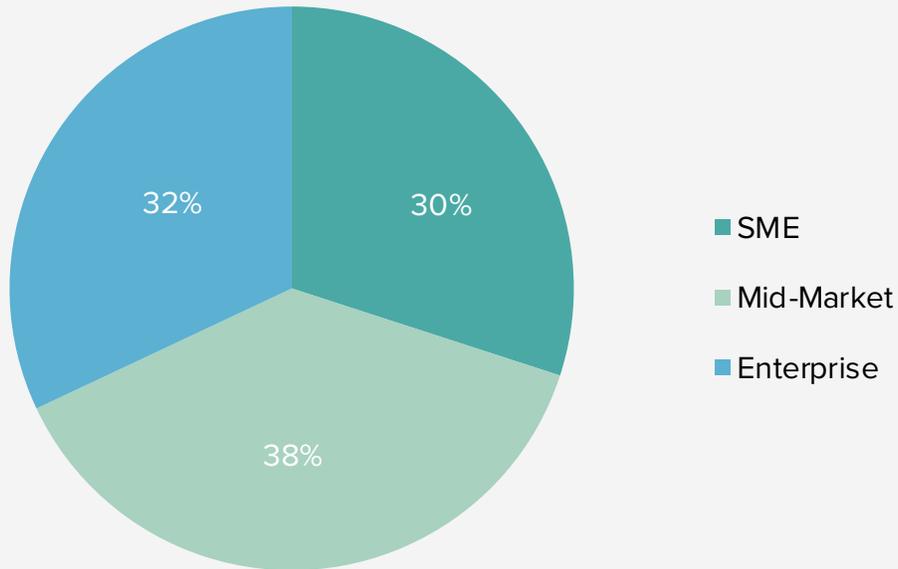
Because back-office departments do not explicitly generate revenue for the company, it is easy to deprioritize them when it comes time to invest in digital transformation. However, it is important the P2P teams and the greater business understand that digital transformation is necessarily a holistic strategy. It is not only a high-level and front-office consideration, but an initiative that inherently benefits the entire organization and allows back-office teams to discover and take their rightful place as a strategic operational arm—not just a collection of cost centers. In a true digitally transformed state, finance and purchasing teams play a key role in driving their company forward. This holistic perspective is a requirement if a digital transformation is to be successful and an organization it to achieve the end result of agility, competitive advantage, and innovation in its market.



Methodology

The findings presented in this report are based on an online surveys conducted by Level Research in the spring 2019 among more than 500 procurement and AP decision makers and influencers in organizations with at least \$1M in total revenue across all industries. Respondents were screened for their familiarity with their organization’s accounts payable, invoice receipt, and invoice routing processes. The data was weighted to represent the proportions of SME, mid-market, and enterprise organizations in Level Research’s database. This distribution is shown below.

Organization Size Distribution



SOURCE: LEVEL RESEARCH



DocStar

Founded in 1996, DocStar provides a collaborative enterprise content management (ECM) platform and automated AP solution to streamline business processes for organizations of any size. DocStar document management software, enterprise content management software, and automated AP solutions enable these organizations to embrace digital transformation with flexible technology. While DocStar highlights its ECM tool, it supports processing for many different documents and workflows within the Procure-to-Pay process. With DocStar, customers gain control over documents, improve retention, and increase efficiency. In February 2017, DocStar was acquired by Epicor Software Corp

Founded	1996
Headquarters	Schenectady, NY
Number of Employees	70
Number of Customers	2000+
Target Verticals	Manufacturing & Engineering, Healthcare, Food & Beverage, Banks and Credit Unions, Financial Services, Distribution
Awards/Recognitions	KMWorld: 100 Companies That Matter in Knowledge Management 2017 and 2018; Top 20 Document Management Software: Capterra; Best Enterprise Content Management Channel Vendor 2013-2016: Business Solutions; Best Places to Work 2013, 2014, and 2016: Albany Business Review

Solution Overview

With DocStar, organizations can better leverage their supply chain and operational areas, such as Finance and Human Resources. DocStar ECM integrates with many third-party business applications, including Epicor, Microsoft Dynamics, Sage, Oracle, and Infor. DocStar is offered both in the cloud and on-premise. The solution allows selection of .NET region codes and supports English, and Spanish.

DocStar manages Procure-to-Pay documents and workflows using configurable and dynamic routing capabilities, AI-based data capture technology, and advanced document matching. DocStar and its parent company, Epicor,



recognize the value of innovative technologies and prioritize embedding these technologies into their products. DocStar leverages intelligent data capture (IDC) and robotic process automation (RPA) in its business-process automation engine in order to continually increase its OCR accuracy rates. With a digital transformation mindset, DocStar has designed its product to be very user-centric, offering a wide variety of features within a clean and modern user interface. DocStar will also soon leverage the newly released, AI-based, Epicor Virtual Agent (EVA) within its solution to enhance the document management process for its customers.

Procure-to-Pay

DocStar uses intelligent data capture to digitize procurement and AP documents from virtually any input device from any location. It offers field-level two- and three-way matching based on customizable business rules, and supports automatic rerouting of invoices to appropriate internal team members and/or suppliers.

DocStar invoice approval workflow functionality is customizable, real-time, and automatic. It uses an intuitive graphical canvas, with which users can create custom rules to process and route content for approval and distribute items automatically based on predefined business conditions. Users can choose from over 90 workflow functions, creating combinations based on their preferences. DocStar provides real-time notification of workflow alerts and information—also available through a mobile device—and users can monitor progress through the workflow dashboard. The workflow solution can complement existing business applications and technologies.

DocStar offers automated electronic payments functionality through an ePayments partner, which supports commercial card, ACH, and wire payments, and offers support functionality for global payments.

DocStar offers reporting and analytics features, including the ReportWorks designer, which can customize and create reports and dashboards based on an organization's specific needs. Docstar ECM includes integrated security and audit trails, as well as advanced archival, retention policies, search, and retrieval functionality for managing business data. DocStar also has a partnership with DocuSign that brings in a secure electronic agreement system with review and signing capabilities that can be customized to define the signature approvals structure.



Implementation and Pricing

For a customer implementing DocStar ECM, the typical adoption process requires engagement with DocStar Professional Services. The length of the implementation process varies based on the sophistication of the desired ECM and business process automation. DocStar offers on-demand training at no additional cost, as well as support via phone, email, and live chat. DocStar also enables continuous communication with the client to increase the value of the product for everyday users. For example, the company gathers user feedback via “betterizers”, which allow customers to submit ideas on how to improve the DocStar product.



Esker

Founded in 1985, Esker provides automated solutions for business processes across the globe and is headquartered in Lyon, France. It diversified into fax software and expanded to the US market through acquisitions in the 1990s before transitioning to a cloud-based document management solution in the early 2000s. Esker's leading automation solutions provide customers with AI-driven tools for optimizing purchase-to-pay (P2P) and order-to-cash (O2C) cycles. In 2015, the company also acquired TermSync, a company which offers a cloud-based accounts receivable (AR) automation platform. Esker has a world-wide presence that reaches across North America, Europe, Australia and Asia, and its solutions are built to support international companies with multiple languages and ERPs. Esker also offers close integration with SAP® software and the Oracle ERP, making it highly suitable for companies reliant upon these technologies.

Founded	1985
Headquarters	Lyon, France
Other Locations	Madison, WI; Buenos Aires, Argentina; Madrid, Spain; Varese, Italy
Number of Employees	600+
Number of Customers	6,000+
Number of U.S.-Based Customers	2,500+
Target Verticals	Life Sciences, Manufacturing, Chemical, Building Materials, Electronics
Partners/Resellers	Oracle, SAP, Sovos, Taulia
Awards/Recognitions	2018-19 Cloud Award, P2P Technology of the Year by Paystream Advisors

Solution Overview

Esker's integrated cloud platform provides multiple services and business packages to automate complex business processes and orchestrate actions across multiple departments. The company supports integration with many leading ERPs and offers multiple-ERP system integration capabilities for multi-national organizations dependent on many different systems. The platform is fully customizable for teams and individual users. In order to support clients' regulatory and policy objectives, Esker regularly undergoes independent verification of its security, privacy and compliance controls via several leading global security services.



The Esker Anywhere™ mobile application enables users to keep track of process performance trends and perform P2P and O2C functions, such as invoice approvals and purchase requisitions, from any mobile device.

Esker's AI Engine combines machine learning and deep learning to manage and analyze structured and unstructured data from the most complex business processes. Its primary areas of expertise are document and image recognition, content recognition, and analytics and reporting. Esker's suite of AI-driven solutions is designed for multiple-use cases and promote greater speed, accuracy, agility and analysis.

Procure-to-Pay

Using RPA technology, users can program Esker's solution to perform repetitive manual tasks quickly and accurately, such as retrieving invoices from supplier vendors. Relying on structured data, RPA automates workflows or clerical processes by emulating human interaction within a graphical user interface (GUI).

Esker's Purchasing solution automates spend requests and goods/services ordering with online purchase requisition and order forms, which can be completed on their web-based platform.

Esker's automated approval workflow ensures that the correct level of authorization is applied to each purchase request, assuring that all purchases comply with company policies and budget. Esker users are also granted access to products from preferred suppliers to further ensure purchasing compliance and ease of use. Esker Anywhere™ enables managers who are out of office to approve purchase requisitions and track performance and productivity metrics from any location.

Once the buyer acknowledges the approvals, they can complete the order from a vendor with just a few clicks. Once the goods/services are received, a goods receipt is automatically entered into the system.

Esker's Accounts Payable automation solution eliminates the paper used in manual AP invoice processing, using AI-driven data capture, touchless processing and electronic workflow capabilities. Esker's multi-channel solution is able to process both PO and non-PO invoices regardless of format—including mail, email, fax or EDI—in an electronic workflow. Automatic approvals can be configured for invoices without exceptions. Because Esker enables the pre-approval of purchase orders, PO-based invoices can easily be matched with the



corresponding PO and goods receipt. After an invoice's data is extracted, verified and approved, it can be archived automatically in an ERP or accounting system.

Esker's AI Engine "learns" how users manage orders, process invoices and handle exceptions, and continues to improve its understanding of transactional data over time in order to make more accurate suggestions.

Esker's self-service supplier portal gives suppliers free access to invoice payment status 24/7, as well as direct resolution of exceptions and discrepancies. Users are able to brand their portal interface to match their company's corporate identity with customizable color and logo components on Esker's platform.

Esker's solution leverages AI-based analytics and tailored reporting dashboards in order to empower AP, procurement and finance managers with real-time visibility. The dashboards' customizable windows enable users to manage daily invoicing and purchasing tasks, organize priorities, monitor productivity and spend, and detect any potential problems. These dashboards can also include personalized KPIs, AP and procurement metrics, mobile capabilities, and direct access to actionable data. Esker's solution can generate charts and reports, as well as complete process audit trails.

Implementation and Pricing

Implementation timelines for Esker's solution vary depending on the degree to which the customer aligns its business processes with the core Esker solution. The launch can occur as early as 4-6 weeks after the project start and can also be extended depending on the type and number of enhancements being requested.

The highly-trained Esker Customer Experience team works closely with customers during their implementation process. The CX team provides customers with engagement calls on a regular basis to discuss any customer needs, as well as training on administration functions, dashboards and views, document recognition, and reporting. The Esker EX team offers onsite and virtual tours to help customers identify ways to maximize productivity and efficiency with their solution, and it provides continuous support through report and document recognition assistance, administrative and user reviews, and new solution feature reviews.



Pricing for Esker's solution depends on the level of implementation. Help desk pricing does not change for SLA priority. Users can opt to pay additional fees for after-hours support or for cases that require immediate response times.



Paramount WorkPlace

Paramount WorkPlace develops, sells, and supports advanced web-based and native mobile requisitioning, procurement, accounts payable, and expense solutions for mid-market and enterprise organizations across a range of industries worldwide. WorkPlace Payments provides enterprise users with the option of adding automated ACH payments within the WorkPlace Spend Management solution for a fully centralized standalone P2P platform. The user interface offers flexible Procure-To-Pay automation and robust expense reporting that is easy for employees, effective for management, and powerful for accounting.

Founded	1995
Headquarters	Detroit, Michigan
Other Locations	Georgia, Vermont, Washington; Ontario, Canada
Number of Employees	50-75
Number of Customers	750, with over 131,000 global users
Target Verticals	RSM, Professional Advantage, DXC, BDO Canada
Awards/Recognitions	President's Club for Microsoft Dynamics; Blackbaud Financial Edge and NXT Procurement Platform of Choice; Microsoft Gold Development Partner

Solution Overview

Paramount WorkPlace software solution can be deployed in SaaS/cloud-based and on-premise environments. It is offered as a standalone solution as well as a certified out-of-the-box seamless integration to leading ERPs including Microsoft Dynamics (GP, NAV, SL, AX, Dynamics 365 Business Central), Sage ERP (100, 300, 500) Sage Intacct, Blackbaud Financial Edge NXT, Acumatica, Acumatica Construction, SAP, and Oracle-NetSuite via ERP-specific APIs. WorkPlace also offers tailored integrations for other ERPs and industry-specific solutions using its Data Integration API toolset. The solution features multi company, multi-language, and multi-currency support as well as global taxation options (including HST, VAT, and GST). For system security, the solution leverages roles-based controls and several industry-driven authentication protocols including single sign-on, LDAP, active directory, OAUTH2, and two-factor authentication.



WorkPlace offers an intuitive user interface for both its desktop and mobile app solutions. The modern design allows companies to onboard users quickly and ensures strong user adoption rates. The WorkPlace native mobile app provides purchasing, full requisition entry and approval functionality from a user's mobile App. Users can browse and shop company catalogs, request items for purchase, save items to cart, and submit items, as well as review, approve, reject requisitions, add attachments, and add comments.

Procure-to-Pay

Paramount WorkPlace requisition solution can be configured to different types of users, roles, departments, and vendor marketplaces. The Internal WorkPlace catalog system and punch-out capabilities allow requestors to search for indirect goods through a catalog style shopping experiences, as well as a traditional transaction style interface.

The solution supports centralized purchasing across multiple locations, allowing users to request, enter, and process transactions under the same controls company-wide. This capability allows organizations to better contain and control indirect spending whether their processes are centralized or decentralized. WorkPlace offers cost controls that integrate with and help enforce organizations' budgets, vendor contracts, and project rules, as well as an automated 3-tier tax engine for effective financial integration and reporting. Line level multi-company and inter-company capabilities provide a single centralized procurement portal for larger organizations to integrate with multiple entities in their ERP.

Purchasing approvers can approve requests within the application, on their mobile App, or from notification emails. The solution's parallel, line-level approval engine offers approvers unlimited approval levels and approval paths. Built-in collaboration tools include email notifications, web form questionnaires, delegation, automated escalation rules, ad hoc approval routing, and logged communication notes throughout the approval workflow.

Depending on an organization's preferences, POs can be automatically generated and issued to vendors upon approval or reviewed and consolidated by central purchasing teams. WorkPlace also includes full PO and change order management. Document retention, revision number tracking, quantity status, and a detailed audit log are available for every PO line and for users involved throughout the purchasing lifecycle.



Paramount WorkPlace offers multiple user-tailored receiving options, including filtered desktop receiving, one-click PO receipt, and detailed transaction entry. Users can be automatically notified when their requests have been fulfilled, unmatched invoices have been received, or when their expected orders are not received by the specified delivery date. Upon receipt of an order, the solution supports both 2- and 3-way matching with automatic purchasing accruals that can be integrated at the GL journal level.

WorkPlace offers AI and machine learning, and optical character recognition (OCR). Invoices are entered into the solution through the supplier portal, by scanning the invoice via OCR, or by manually entering the information. WorkPlace's Smart Invoice Capture tool incorporates rich machine learning functionality capable of recognizing patterns of user behavior and recommending data inputs, reducing the time users spend on keying and correcting data.

Scanned invoices can be automatically or manually matched to a PO. Paramount WorkPlace's solution offers 2- and 3-way matching for loading one or more PO lines from one or more different POs. The supplier portal supports PO and non-PO invoicing. WorkPlace uses advanced OCR capabilities to improve purchase order invoice matching success rates. This reduces the required spent processing transactions and troubleshooting data entry and financial reporting errors and allows procurement and payables tools to spend more time on strategic initiatives and critical thinking.

The approval workflow tool can handle any approval structure and organizational hierarchy. Configurable approval workflows support header, line, PO, and non-PO rules-based routing with unlimited approvals and approval path capabilities. Unmatched invoices are automatically sent through an exception workflow based on custom invoice variances, such as quantity or amount thresholds. The solution also offers escalations and reminders, out-of-office forwarding, and workload balancing for invoice approvals. Invoice approvers can approve or reject invoices from their mobile devices either directly from the notification email or through the mobile app (only for non-PO invoices).

After approval, the solution posts approved transactions to the general ledger. Once payment has been processed, remittance information is automatically transmitted to the respective suppliers, and payment information is updated and available for internal stakeholders to view from the originating transactions.



For payment, the Paramount WorkPlace solution integrates with corporate cards that support Open Financial Exchange (OFX) communications. The solution also offers configurable file import mapping capabilities to accommodate client-specific banking requirements. A credit card interface is available to users at no additional charge.

Suppliers and vendors have access to a free self-service vendor portal with automatic PO notifications and the ability to submit PO, non-PO, and service invoices. They can upload invoices and attachments from the portal, and are automatically notified by email when POs are available to view and match. They can also manage their own contact information; additions and updates are automatically fed to the WorkPlace approval workflow for review. The system automatically syncs approved changes with the client's associated ERP. WorkPlace Supplier Network currently has over 850 suppliers registered. Companies can engage with new suppliers from the network or invite their own to register and participate in the network.

Paramount WorkPlace is focused on empowering CPOs and CFOs to analyze financial data strategically with a 360 degree view of their KPIs all from one dashboard. To enable this, WorkPlace offers reporting tools and data analysis tools from a single dashboard that allows users to manage, evaluate, improve, and optimize many areas of their business. Users have the freedom to define their own metrics, customize the view, select from over 20 standard charts, create unlimited personalized charts, drill deeper into the data, and export the data for use in other applications. The Paramount WorkPlace solution includes over 70 out-of-the-box printed reports, dashboard charts, and metrics that cover all P2P modules.

Implementation and Pricing

Implementation of Paramount WorkPlace varies depending on the organization's size and the licensed solution. The typical go-live duration is 60-90 days. Paramount WorkPlace and authorized resellers offer one-to-one comprehensive training and department-wide training, as well as training workshops and on-demand custom training. Customers receive unlimited support, including free technical support via toll-free phone, email, or chat, and access to an online customer center with learning materials.

Pricing structures include an perpetual annual license or monthly SaaS payments.



About Level Research

Level Research, formerly PayStream Advisors, is a research and advisory firm that operates within the IT consulting company, Levvel. Level Research is focused on many areas of innovative technology, including business process automation, DevOps, emerging payment technologies, full-stack software development, mobile application development, cloud infrastructure, and content publishing automation. Level Research's team of experts provide targeted research content to address the changing technology and business process needs of competitive organizations across a range of verticals. In short, Level Research is dedicated to maximizing returns and minimizing risks associated with technology investment. Level Research's reports, white papers, webinars, and tools are available free of charge at www.levvel.io

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