LEVVEL RESEARCH

2019 Payables Insight Report

Understanding the Value of Holistic Invoice-to-Payment Automation for Enhanced Business Outcomes

2019 | Featuring Insights On...

- Current Payables Trends in North America
- The Three AP Automation Tool Types
- Features and Functionality of Payables Software
- A Leading Payables Software Automation Provider

Underwritten in Part By

Hyland®

Contents

Executive Summary

One of the most effective ways to improve an organization's bottom line is to decrease the cost of operations that do not directly contribute to profit, redirecting the freed resources towards strategic, profit-generating initiatives. Automating accounts payable (AP) processes is a perfect example of this opportunity, as it not only reduces the footprint of a high-cost administrative department, but it also creates an opportunity to generate revenue through increased efficiency. Many organizations around the world have embraced back-office automation technology like payables management to lower costs and drive competitive advantage.

North American organizations, however, are generally behind their international counterparts in terms of back-office digitalization—especially compared to organizations in countries of similar economic development. This is in great part due to the differences between the United States and Canada and many parts of the world with regards to tax structure and the amount of regulation regarding accounts payable automation. For example, in Europe and Latin America, many governments have regulated the use of electronic Business-to-Business (B2B) invoices in order to promote better compliance with VAT laws. In North America, tax systems are primarily sales- and income-based, and electronic invoicing has as yet gone largely unregulated by local governments. Therefore, automation in the back office of United States organizations has grown at a slower rate than at organizations located elsewhere in the world.

However, accounts payable automation in the North American market has progressed significantly from a decade ago, when it was far more common to find organizations operating on completely manual invoice management and payments processes, regardless of industry or size. Today, many North American organizations have at least some technology in their back office. Whether the technology in place is best suited for an organization's needs, though, varies. At the very least, many organizations have embraced partial automation and are progressing toward optimal efficiency through continued technology adoption.

With this context, this insight report explores the varying ways that payables automation is leveraged today in increasingly digital, nimble, and competitive business environments. Drawn from a combination of 2018 and 2019 market research, including data collected from a market-wide survey conducted in February of 2019, Levvel Research finds these three notable market shifts:

» *Diversifying software options are widening the financial process automation market*. One reason for this rapid growth is the increasing availability of software for different revenue segments and at different price points. In the past, business process solutions have often been designed and priced for larger enterprises with more resources to support the investment. Now, new software providers—or old players opening new lines of business—are entering downstream markets, offering versatile, tailored solutions to SMEs and mid-market organizations.

» *Back-office automation is embracing the strategic philosophies of digital transformation*. Companies of all sizes have slowly recognized that applying technology to the back office can benefit financial and operational health just as much as targeting customer-facing initiatives can. This idea stems from the rising "digital transformation" movement, which entails a holistic embrace of technology throughout a business to facilitate nimble, strategic operations and help businesses achieve a competitive advantage.

» *Payables automation is being leveraged to enable scalable growth and disruptive business evolution*. The final reason the North American market is rapidly adopting accounts payable automation is because small organizations are recognizing the importance technology has for scalability and creating a long-term competitive advantage much more quickly than larger organizations did, making an early embrace of at least some automation in the back office the new best practice for businesses aiming to become market leaders.

This report examines the varying degrees of automation and efficiency among North American (primarily United States) organizations' AP processes, and what motivates—or prohibits—movement towards technology. It also examines the variances in the tools available for AP and payments processing, explores why organizations choose one type of tool over another, and provides a high- level summary of the features and functionality of leading payables automation software. The purpose of this report is to help organizations understand where they stand among their peers in terms of AP efficiency so that they can determine the optimal path toward automation and operational excellence.

Current Payables Trends in North America

Invoice Receipt

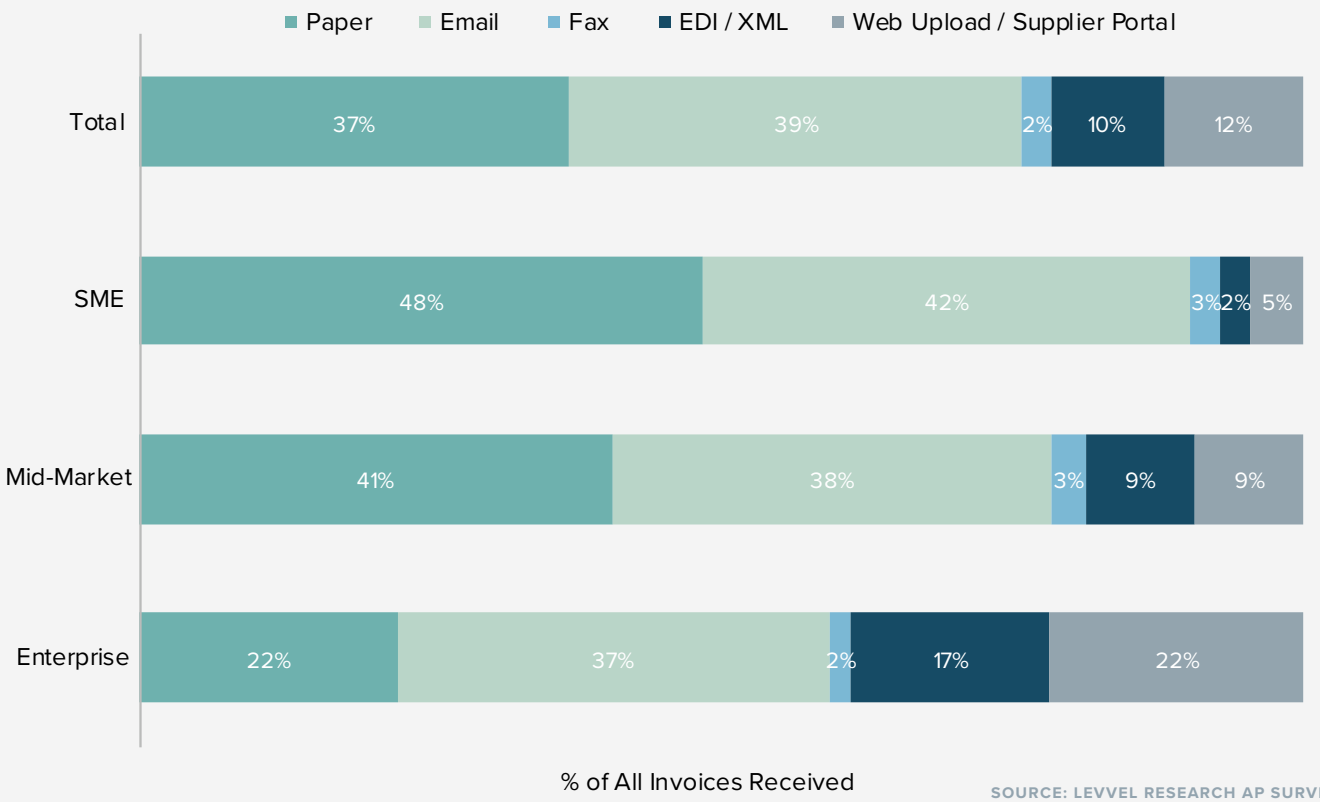
One of the clearest indicators of AP efficiency in an organization is the breakdown of its invoice receipt types. Levvel Research divides invoices into two categories: structured and unstructured. Unstructured invoices refer to those for which data is not controlled by a structured electronic format, and typically includes traditional invoice types such as paper, email, PDF, and fax. Structured invoices enable controlled data transfer and come in the form of EDI or XML invoices, or invoices entered directly into a structured format via a web portal; structured invoices can also be referred to as electronic invoices (eInvoices).

The optimal method of invoice receipt type from a cost, data control, and speed standpoint is eInvoice. Most organizations, however, receive the majority of their invoices in unstructured formats—primarily paper, followed by email. The typical factors that determine the invoice receipt type of an organization include its age and/or size; the culture of its industry (e.g., technology-forward vs. traditional); and the composition/characteristics of its supplier base.

Levvel Research asked survey respondents to indicate the percentage of each invoice type they receive from suppliers. Typically, the larger the organization, the more invoices it receives. Despite higher invoice volume, enterprises have the lowest volume of paper invoice receipt—paper accounts for only 22 percent of their incoming invoices, see Figure 1. Enterprises[1] receive a large percentage of invoices via supplier portals and EDI/XML, which together comprise close to 40 percent of their incoming invoices. SMEs and mid-market respondents indicated that nearly half of their invoice volume is still submitted in unstructured formats.

FIGURE 1

Invoice Receipt Type By Organization Size



SOURCE: LEVVEL RESEARCH AP SURVEY, 2019

Enterprise Organizations Report the Lowest Volume of Paper Invoices

Please allocate 100 percentage points to indicate the methods in which your organization receives invoices. (n = variable)

[1]For the purposes of this report, "SME" is characterized as organizations with annual revenue of $1 million–$100 million; "mid-market" is characterized as organizations with annual revenue of $100 million–$2.5 billion; and "enterprise" is characterized as organizations with annual revenue of over $2.5 billion.

The high adoption of eInvoices among enterprises can be attributed to a few factors. By definition, enterprises have more available resources with which to invest in technology than smaller organizations, and their typical business age means they have had more time to embrace and evolve with payables technology. Enterprises also have more leverage with which to motivate suppliers to use web portals to submit electronic invoices than SME and mid-market organizations do.

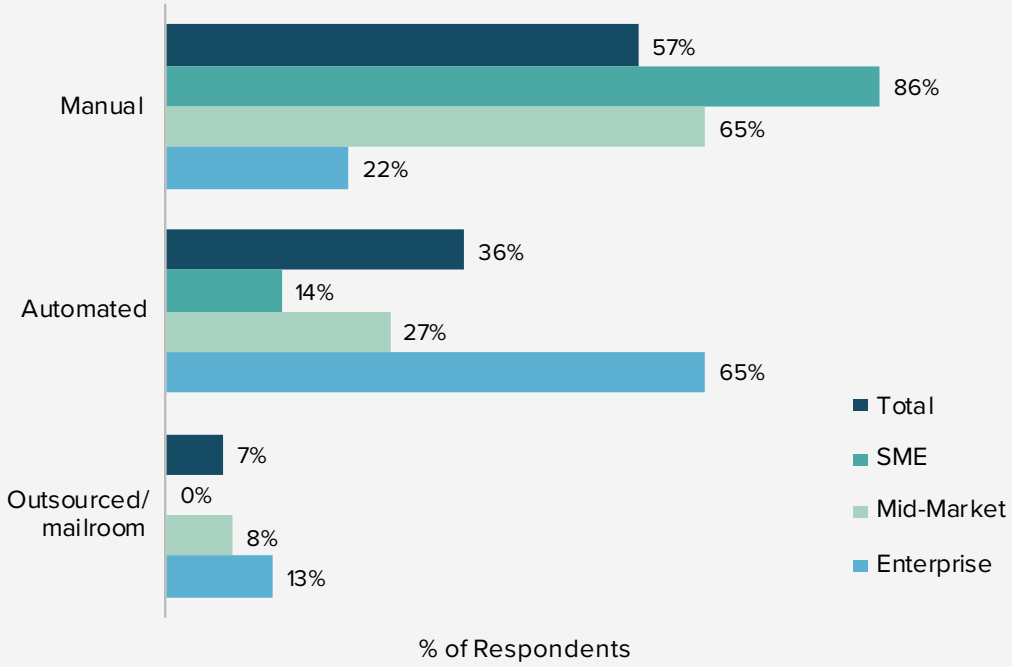
SMEs and mid-market organizations report the highest volumes of paper and email invoices. Levvel Research has found that the reasons for this are more related to invoice volume within the SME segment and resources in the mid-market segment. SMEs are less incentivized to adopt electronic invoicing software because they perceive that the challenges of the lower volume of invoices they receive do not greatly impact the rest of their business. Mid-market organizations likely experience those challenges, but they lack the resources to deal with them using automation.

While invoice receipt type is an important indicator of the AP automation maturity of an organization, it does not indicate that an organization's AP process is inefficient. Although EDI remains the preferred method for data control and efficiency, organizations will still need to deal with paper for years to come—and they will need to find a way to operate efficiently despite the paper. Automation in terms of unstructured invoice receipt typically means employing a data capture / imaging solution to intake data. The alternative is manually keying invoice data into the appropriate systems for verification, routing, and approval for payment.

When it comes to capturing invoice data, enterprises are most likely to capture invoice details using an automated solution. A significant majority of SMEs—86 percent—capture invoice details manually. Only 27 percent of mid-market organizations and 14 percent of SMEs use an automated solution, see Figure 2.

FIGURE 2

Invoice Data Entry Method By Organization Size



SOURCE: LEVVEL RESEARCH AP SURVEY, 2019

SMEs Are Most Likely to Manually Enter Invoice Data

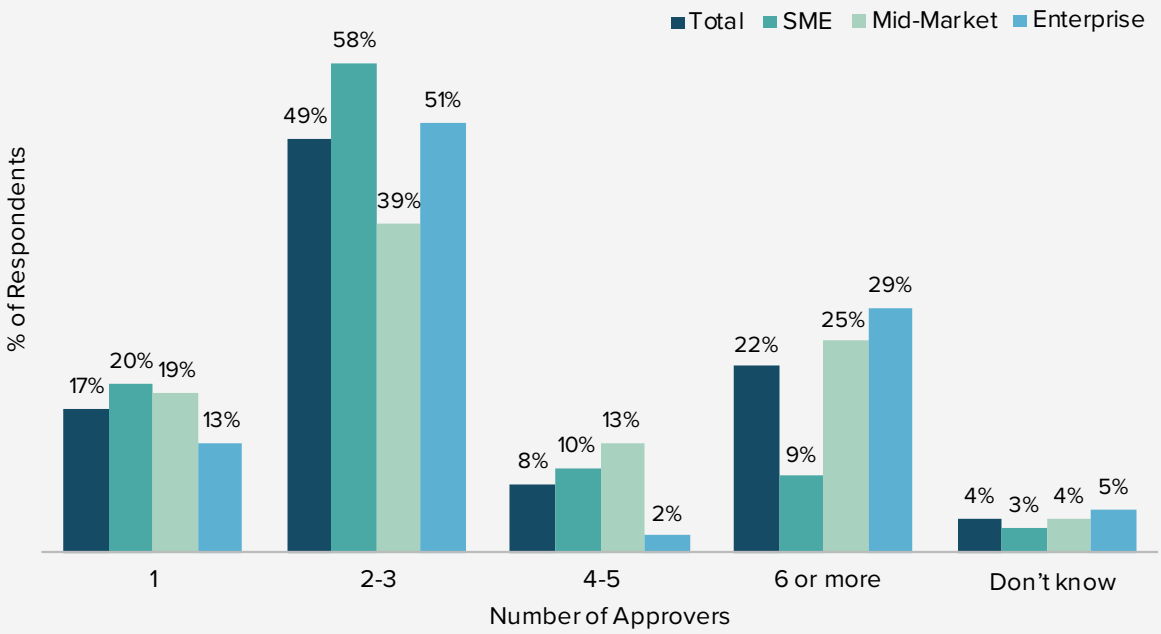
How is invoice information entered into your ERP, accounting software, or accounts payable software? (n = 258)

Invoice Approval

After invoice receipt, invoice approval workflows can vary in complexity and/or length depending on parameters such as an organization's size, industry, or number of required approvers. Enterprises typically have more people involved in the approval process for each invoice, which is likely due to the complexity of their processes and hierarchies, the high amount of annual spend that must be monitored across large-scale operations, and the high average dollar amount per invoice. The majority of organizations across all segments, however, require only two to three approvers per invoice, see Figure 3.

FIGURE 3

Invoice Approval Structure By Organization Size



SOURCE: LEVVEL RESEARCH AP SURVEY, 2019

The Majority of Organizations Require Two to Three Approvers For Each Invoice

How many people at your organization typically approve an invoice for payment? (n = 258)

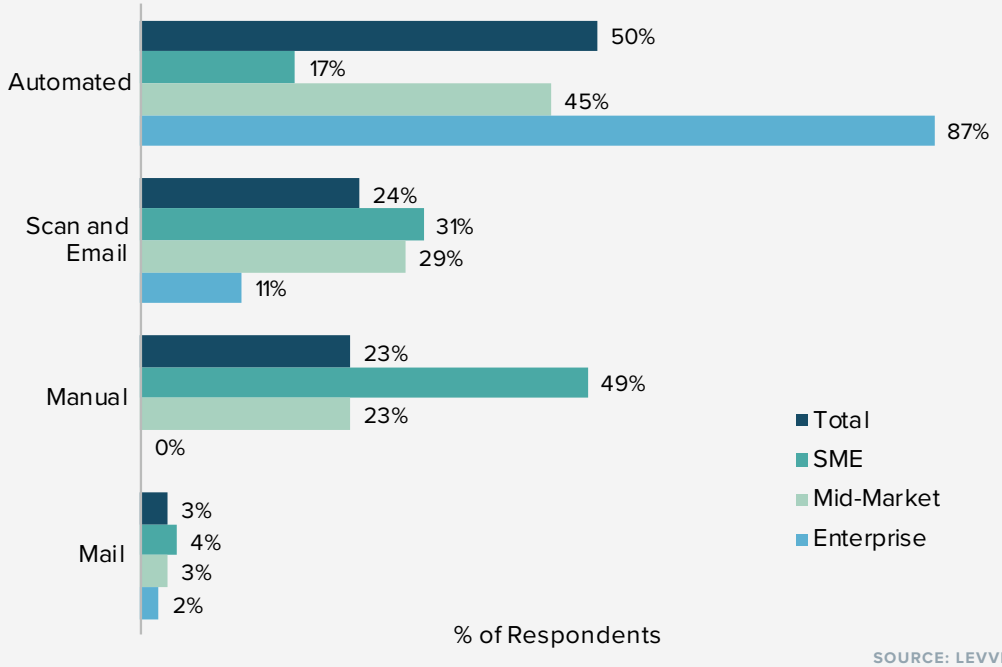
The length of invoice approval workflows is also determined by the level of automation involved. Invoice workflow automation is software that routes digital invoices to the appropriate approver or approvers as determined by the

organization's approval hierarchy rules. The manual alternative to this is either walking or sending (via mail or email) the invoice to the appropriate approvers.

Enterprise organizations are most likely to use invoice workflow automation, see Figure 4. Nearly half of SMEs route invoices for approval manually by walking invoices to approvers' desks, while nearly half of mid-market organizations and 87 percent of enterprises automate their invoice routing.

FIGURE 4

Invoice Routing Method By Organization Size



SOURCE: LEVVEL RESEARCH AP SURVEY, 2019

Enterprise Organizations Are Mostly Likely to Use Invoice Workflow Automation

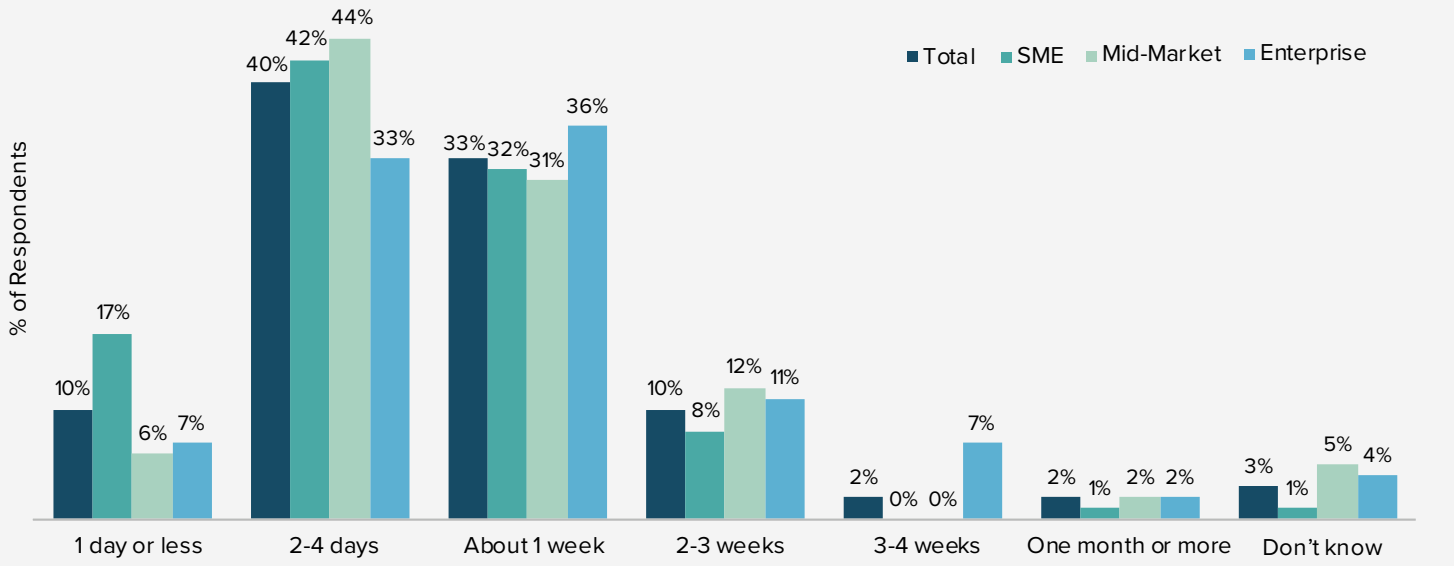
How do you typically route invoices for approval in your organization?

(n = 258)

In addition to invoice workflow automation and the number of approvers, several other factors contribute to an organization's approval time, including its industry, structure, and size. Most organizations report that they approve invoices in under one week, see Figure 5.

FIGURE 5

Invoice Approval Time By Organization Size



SOURCE: LEVVEL RESEARCH AP SURVEY, 2019

Approval Times Are Affected By Company Size

On average, how long does it take for your organization to approve an invoice from the time it is received? (n = 258)

Enterprises, however, tend to have slightly longer approval processes. Since SME AP operations are more likely to be centralized than those of enterprises, and centralized organizations approve invoices more quickly than decentralized or partially centralized organizations. SMEs' tendency to have centralized AP functions, as well as fewer staff members required to approve invoices, allows them to process invoices more quickly than mid-market and enterprise organizations.

The overall level of AP efficiency an organization has is determined by its mix of automation. To be fully automated is to receive 100 percent of invoices in an electronic format or to have a data capture tool in place to automate invoice

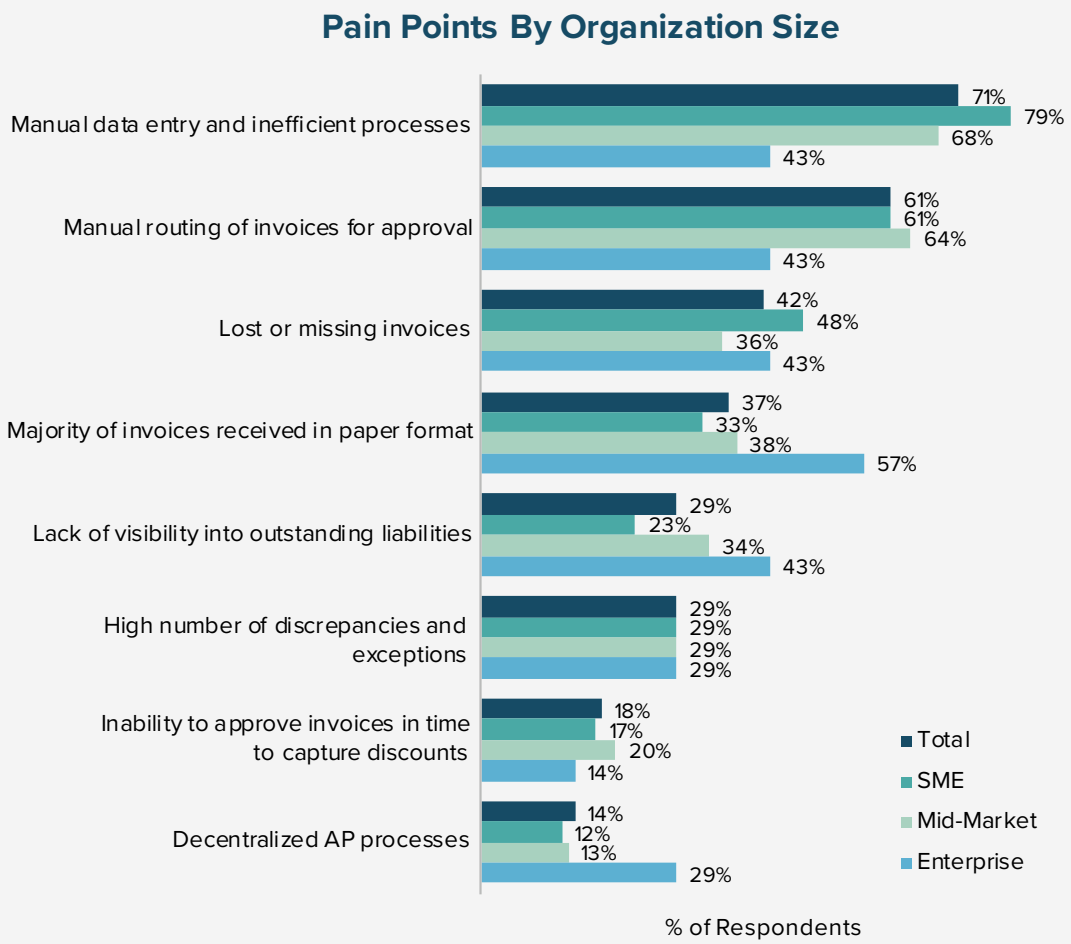
entry, and to have an invoice workflow tool for automated invoice approval. This effectively creates a “touchless” invoice environment within the AP department.

A few benefits occur when organizations have a touchless invoice environment. Automated departments approve invoices more quickly, as 52 percent of automated organizations reported they typically approve invoices in fewer than four days, compared to 41 percent of manual organizations. Automated departments also report more efficiency between back-office departments: 43 percent of organizations with automated departments said they experience few issues and are satisfied with their Procure-to-Pay process, compared to only 9 percent of manual organizations.

Accounts Payable Pain Points

When organizations use a fully manual AP approval process, they report various additional challenges in their AP process, see Figure 6. The most common pain points for organizations across all revenue segments are manual data entry, manual routing, and lost or missing invoices.

FIGURE 6



SOURCE: LEVVEL RESEARCH AP SURVEY, 2019

Manual Data Entry and Routing Are the Greatest AP Pain Points

What are the top three biggest pain points you experience in your workflow process? (Select up to 3) (n = 129)

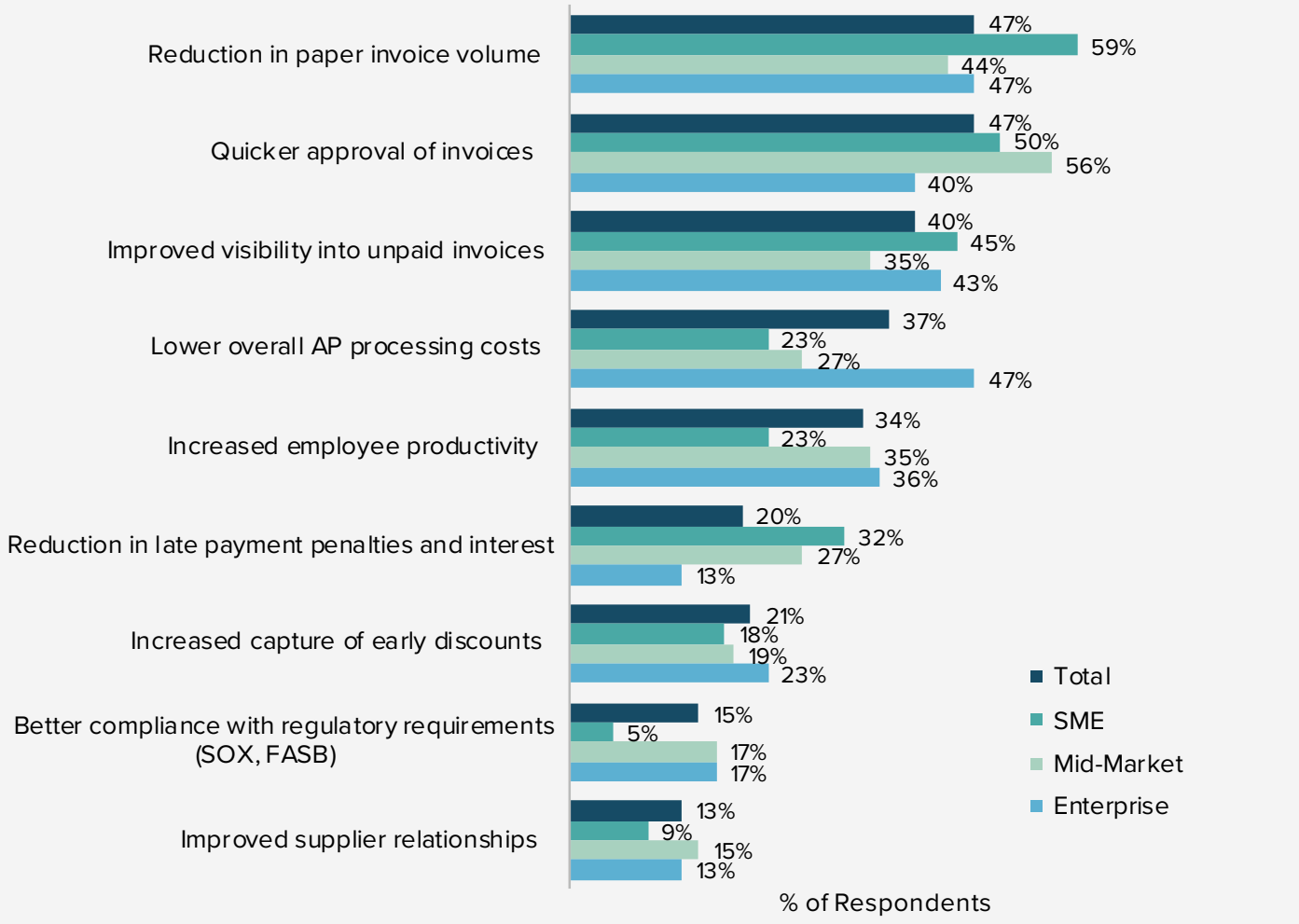
Organizations are attempting to eliminate these pain points by automating their accounts payable processes, creating a touchless invoice environment. By doing so, they also hope to reduce the cost of administrative operations and redirect those funds towards revenue-generating centers. In addition, they can experience the improvements that AP automation has on the process itself.

Improvements from Automation

The greatest overall reported improvements resulting from automating AP are a reduction in paper invoice volume and faster invoice approvals, see Figure 7. When compared to the mid-market and SMEs, enterprises disproportionately achieve lower AP processing costs through automation. Levvel Research attributes this to the fact that the cost benefit of automation correlates with the size of the organization; the larger the organization, the greater the savings.

FIGURE 7

Improvements From AP Automation By Organization Size



SOURCE: LEVVEL RESEARCH AP SURVEY, 2019

Reduction in Paper, Quicker Approval Times, and Increased Visibility Are the Top Benefits of Automation

What are the greatest improvements you have seen since implementing an AP management solution? (Select 3)
(n = 134)

To achieve these benefits, North American organizations are increasingly implementing AP automation technology. The following section explores the various types of tools that organizations of all sizes employ, how those tools work, and the features organizations look for when considering an AP automation tool.

How Organizations Approach AP Automation Adoption

To avoid the pain points presented by manual AP, and to achieve the benefits of AP automation, organizations are increasingly automating their AP processes. When organizations use technology to do so, they use one or more of the following approaches:

- An AP management tool built into their existing ERP
- A tool developed by internal technology resources, either organically or as a plug-in to existing ERP/accounting systems
- A third-party, cloud-based plug-in automation tool

A Comparison of AP Automation Tool Types

Many ERP providers offer built-in AP automation solutions for organizations that would like to automate their payables management. Using the built-in tool can be appealing to organizations that are already comfortable with their ERP environment, as well as organizations that view it as a much easier technology adoption entry point in terms of time and money. However, ERP-based solutions typically offer a poor user experience, are difficult to update and integrate with other tools, and lack much of the advanced functionality seen in other automation solutions.

Homegrown solutions are custom-designed for the organization's needs and legacy technology systems, and they can continue to be customized in-house. Because they are a bespoke solution, however, they can be challenging and expensive for IT teams to develop, maintain, and update. They can be a drain on internal resources, as in-house teams must maintain them and continue to develop them as business needs change. For organizations experiencing rapid growth, homegrown tools must be redeveloped for every stage the organization goes through.

Based on industry knowledge, Levvel Research asserts that cloud-based solutions are likely to be more robust and generally include more features than homegrown and ERP-based solutions.

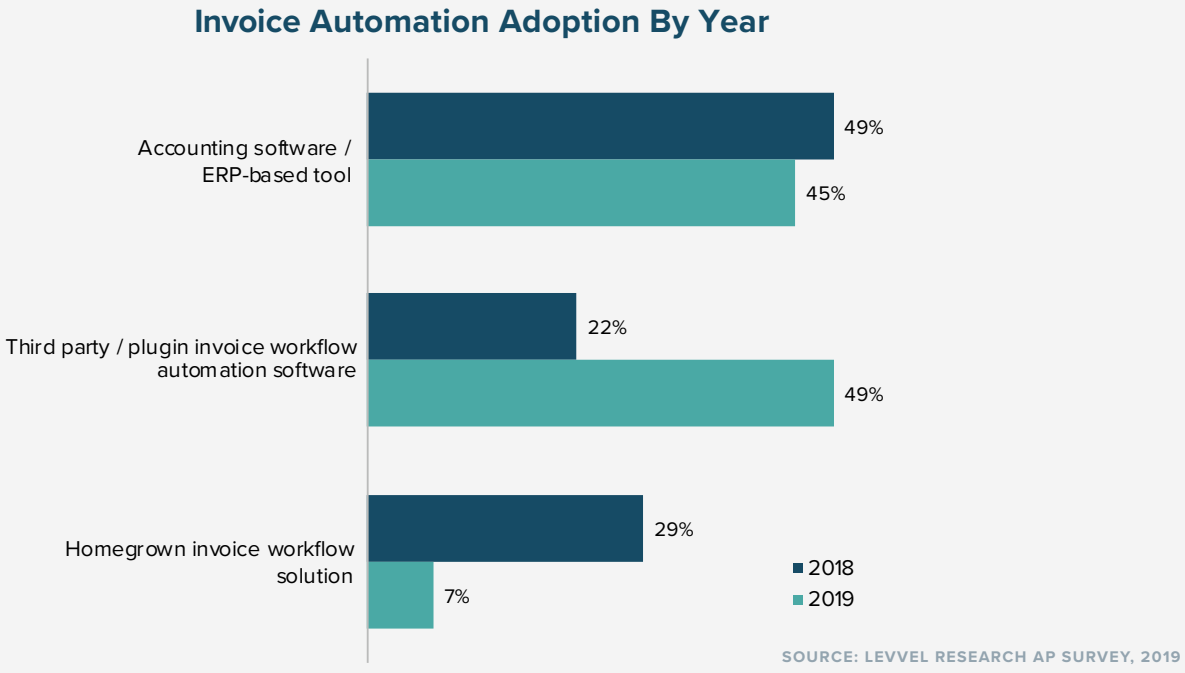
Levvel Research's assessment of the market aligns with general sentiment regarding an organization's AP solution. When survey respondents were asked if the number of features available were adequate in their current solution, those using homegrown or ERP-based solutions were more likely to believe that their

solution did not have enough features. On the other hand, those using a cloud-based solution not only felt more content with the features in their solution, but were also more likely to believe their solution is modern and cutting-edge, rather than outdated, as users of other types of solutions believe.

The most versatile and scalable options available today for organizations across revenue segments and business types are cloud-based AP automation solutions. Cloud-based plug-in software is increasingly flexible, dynamic, and affordable; many options are available on the market that offer modules tailored to the needs of different sized organizations (e.g., a platform designed for mid-market companies) and even industry-specific modules (e.g., an AP solution designed for the oil & gas industry). Cloud-based solutions improve control, invoice lifecycle times, costs, and productivity with capabilities such as real-time access to data, mobile applications, and supplier self-service portals.

Awareness of the value of cloud-based AP automation tools is growing, as is demand. Levvel Research has found that while the usage of homegrown AP automation tools has rapidly diminished from last year, the adoption of cloud-based tools has greatly increased in the same time period, see Figure 8.

FIGURE 8



Cloud-Based AP Automation Adoption Has Significantly Increased

If your organization is using an AP automation tool, which type of tool do you use for the majority of your AP processes? (n = 338)

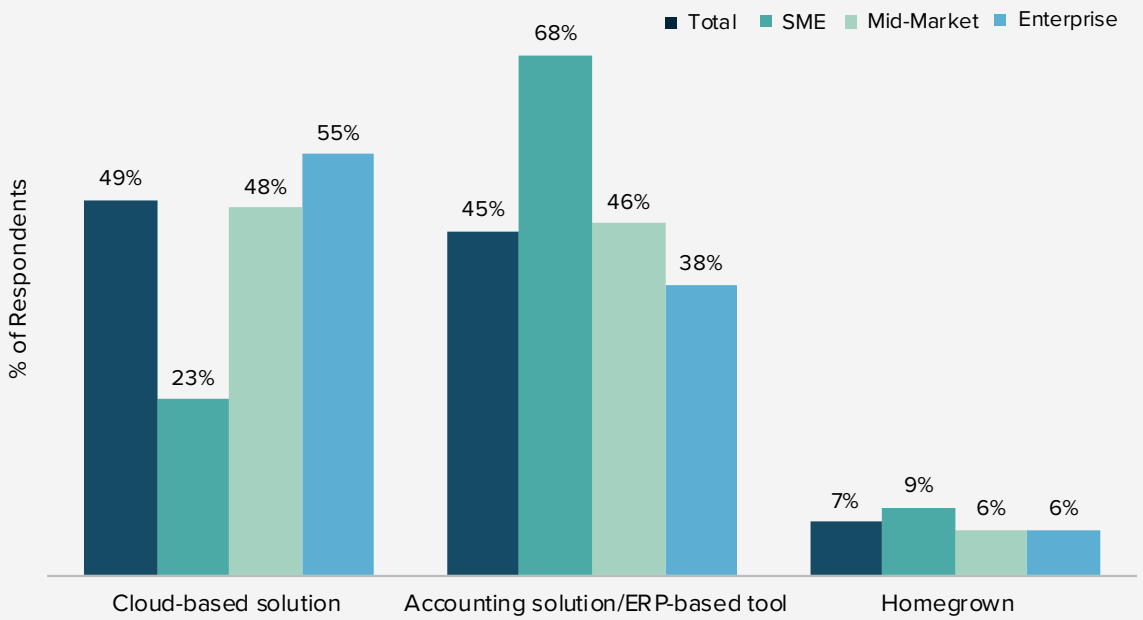
Organizations may find that the optimal solution for their current state is a combination of multiple types of tools. For example, an organization with an existing ERP in place may not want to overhaul their system in order to accommodate a new type of AP feature that is not currently supported. They may instead choose to plug in a cloud-based tool that targets a specific function, such as electronic payments.

Adoption Based on Size

Levvel Research has observed that the size of an organization affects the type of solution it chooses to adopt, see Figure 9. Homegrown and ERP-based solutions are more popular among SMEs, but their popularity decreases as organizations increase in scale. When SMEs begin to automate AP, they are more likely to consider tools that cater to their accounting solution (or their ERP) with add-on options for their existing invoicing capabilities.

FIGURE 9

AP Tool Usage By Organizations Size



SOURCE: LEVVEL RESEARCH AP SURVEY, 2019

AP Tool Type Based 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? (n = 134)

Adoption Based on the Existing ERP

Because ERPs have different technical integration requirements, organizations must be concerned with solutions' compatibility with their existing ERP. It can be challenging for companies to find an AP solution that integrates well—or at all. Large, multinational organizations, which are more likely to have several systems in place that would be challenging to overhaul and replace, are thus more likely to consider the AP automation options that integrate best with their current systems.

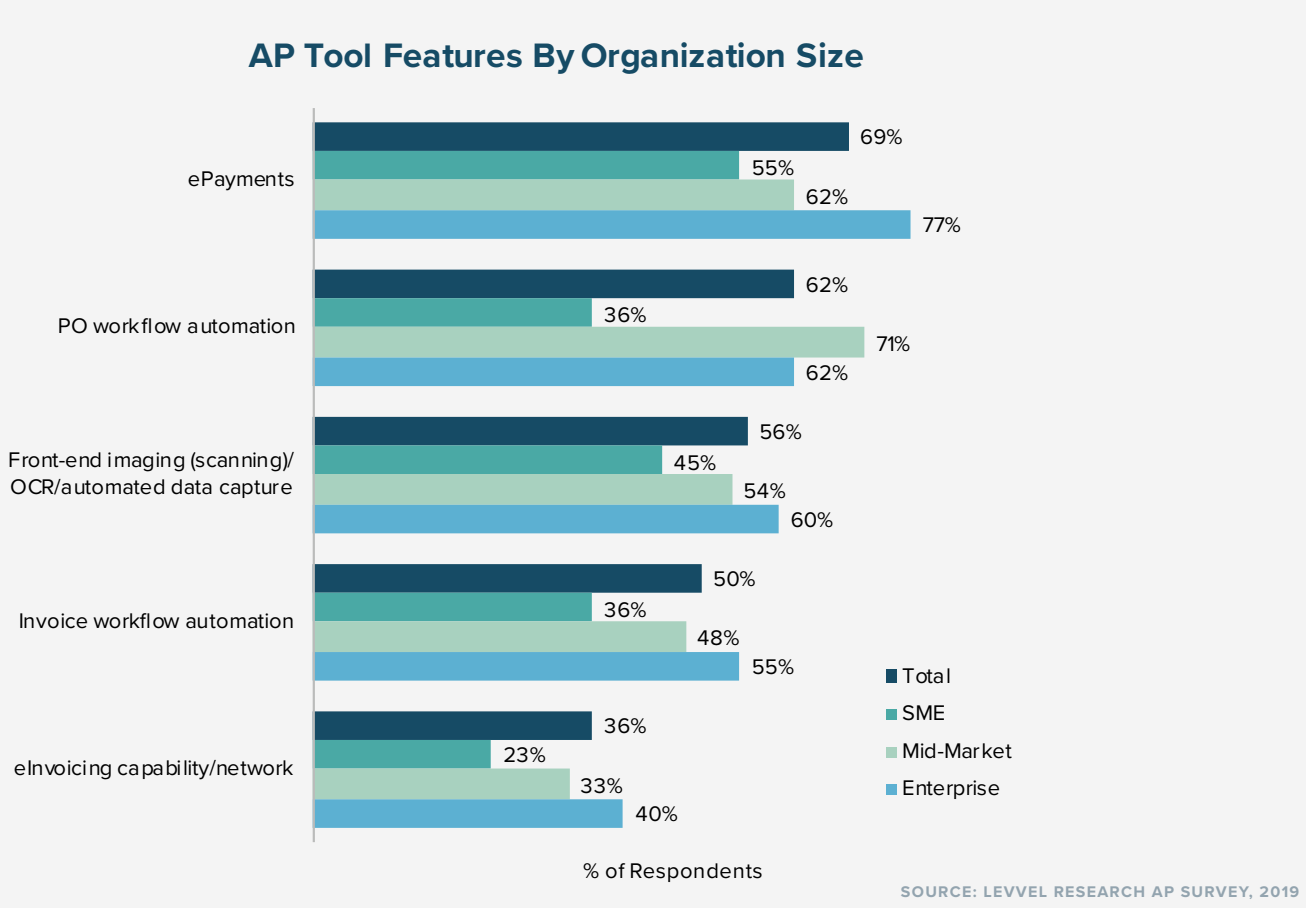
Because of this, Levvel Research has observed a trend of increased adoption of independent, cloud-based software that is compatible with many different ERPs, as well as niche solutions that prioritize full integration with a single ERP. Some companies, especially those that lean on one specific ERP for their back-office requirements, choose the latter. While this can lead some of these solution providers to mirror the design of the ERP itself, which is often outdated and unintuitive, other providers with a niche ERP focus have begun to break that pattern. They are offering a more intuitive, modern UI and feature set—without sacrificing their ERP-specific functionality.

AP Modules

AP solutions include a combination of several different modules, including front-end imaging and automated data capture (e.g., OCR), invoice workflow automation, eInvoicing, supplier management, electronic payments, and supplier portals. Organizations do not necessarily choose a solution with all of these modules. Instead, they select a provider that offers the features they find to be most valuable.

Relative to SMEs, the mid-market and enterprises more commonly adopt a solution with PO workflow automation and automated data capture features, which is indicative of the higher volume of invoices and more decentralized/ complex AP processes among those organizations. The majority of SMEs with an AP solution adopt one that offers an ePayments module, one of the easiest payables tools to implement, see Figure 10.

FIGURE 10



SOURCE: LEVVEL RESEARCH AP SURVEY, 2019

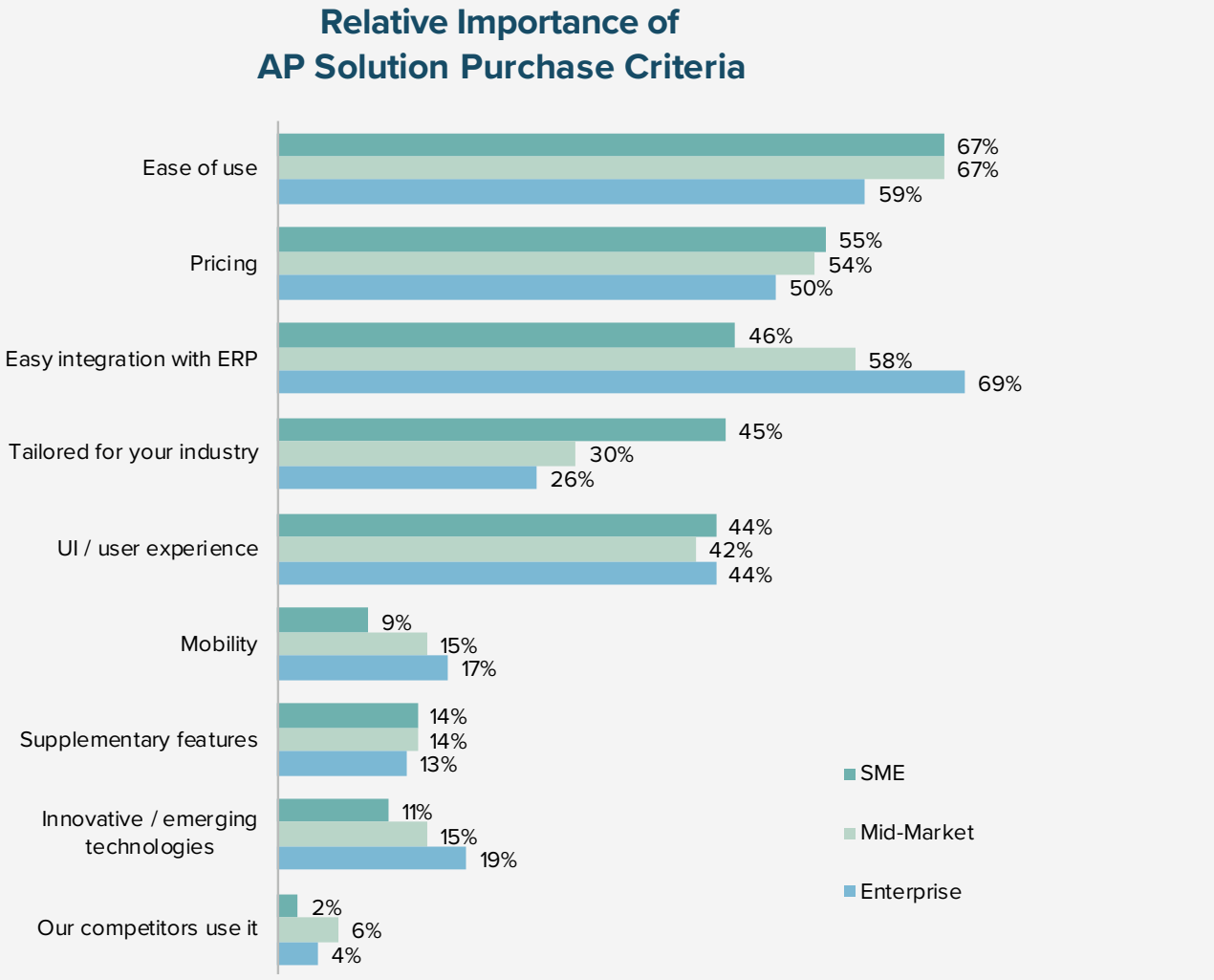
AP Tool Features Based on Organization Size

Which of the following features does your primary AP management tool have? (n = 134)

Most Valuable Features and Characteristics

Levvel Research surveyed the relative importance of various features and characteristics considered as purchase criteria for an AP solution. Overall, ease of use, ERP integration, and pricing were perceived to be the most important features. Figure 11 shows the percentage of respondents who designated the criteria as "most important." (This data was generated from a MaxDiff analysis. Refer to page 40 for scores and rankings.)

FIGURE 11



SOURCE: LEVVEL RESEARCH AP SURVEY, 2019

Purchase Criteria for AP Solutions

For each set, please select the least important criteria and the most important criteria.
(n = 258)

"Ease of use" scores high for a few reasons, including the value that usability has on ensuring high user adoption and employee productivity. Contributing to ease of use are user experience (UX) and user interface (UI), which together were also important criteria for a solution. Some providers give their platform's UI a more streamlined, modern design, while others make their UI similar to that of an ERP's, which may simplify the adoption process because users are already familiar with its look and feel. Another important aspect of a solution's ease of use is a mobile application UI that is consistent with the desktop version; a substantially different mobile application with distinct features and design may cause users to feel as if they are using—and are required to learn—two separate systems. Overall, though, mobile functionality ranked seventh in solution purchase criteria.

Ability to integrate with an ERP was the third highest criteria considered by potential AP solution adopters. For the enterprise market segment, however, integration with an ERP was the most important criteria. The segment valued it at twice the rate of SMEs, and far more than mid-market organizations. Levvel Research attributes this to the fact that enterprises are not only more likely to have an ERP in place, but are also more likely to rely on their ERP for facilitating business operations, which often spans multiple locations. Because enterprises' ERPs store large amounts of company data, it is unlikely that organizations of this size would choose a solution that could not integrate with their existing systems.

The relative indifference toward solutions being "tailored to their industry" from respondents overall is to be expected. Despite seemingly significant distinctions between industries or organizations of different sizes, baseline payables operations are largely the same across the board. In addition, more solution providers are pitching themselves as "industry agnostic" in order to broaden their customer bases. Industry-tailored solutions resonated most for SMEs; this may be because SMEs often have limited buying power, and if they are going to purchase a solution, it is more likely that it will be tailored to their specific industries' needs.

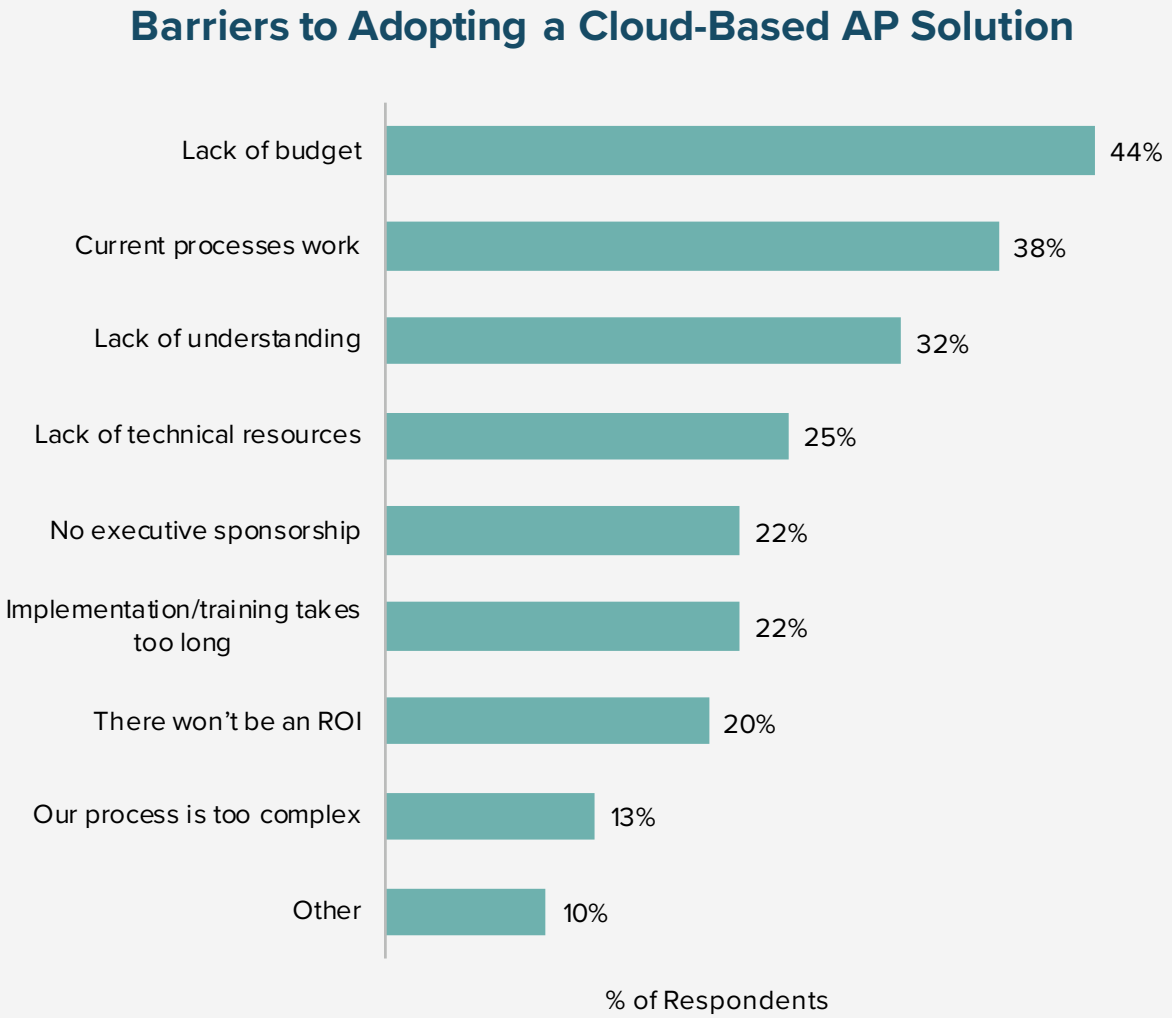
Technology buzzwords such as "artificial intelligence" (AI), "machine learning" (ML), and "blockchain" pervade the software market today. They are often used to validate a company's claim to be a leading provider in the space, creating a competitive edge. However, according to Levvel Research survey data, emerging technology was one of the least important priorities when selecting AP automation software, ranking only above the software's usage by competitors.

One purpose of performing this particular analysis was to determine whether the focus of payables software providers aligns with the general demands and values of North American organizations. Overall, Levvel Research has determined that while software providers focused on usability and technical flexibility (i.e. ease of use and integration capabilities) are addressing customers' top interests, some other technology components (e.g., mobility and emerging technologies) are, in fact, not as important to businesses—at least not at this time. Ultimately, when considering a payables solution, organizations prioritize functionality that supports and enables their current state—and does not drain their resources. This does not mean that software providers' should abandon innovative technology in their product roadmaps; only that they should not forget customers' primary values while enhancing offerings and services.

Barriers to Adoption

Barriers to cloud-based AP automation solution adoption are similar across revenue segments. The most common barrier to adoption is a lack of budget. Many organizations also believe that their current AP processes are adequate, or lack an understanding of the automation tools available on the market, see Figure 12.

FIGURE 12



SOURCE: LEVVEL RESEARCH AP SURVEY, 2019

Lack of Budget is the Top Barrier to Adoption

What do you perceive to be the greatest barriers to adopting a cloud-based AP automation solution in your organization? (n = 199)

Levvel Research has found that many organizations are unaware of the options that have been added to the software space in the last decade. An increasing number of solutions accommodate the limited resources of SME and mid-market companies. In many cases, a “lack of budget”—the most commonly cited barrier to adoption—is a sign that an organization is not well-educated on the options available. The organization may also be unaware of or not considering the ROI that automation will bring, which will more than cover the cost of the solution.

Payables Software Features and Functionality

Payables software solutions consist of five major components. The following sections dive into each feature, describing who most benefits from the component and detailing its specific capabilities.

Invoice Receipt

Who Benefits

Automated invoice receipt most directly impacts AP staff who are responsible for manual tasks such as data entry. Automation lessens the burden of time-consuming, low-value tasks placed on AP clerks and accountants, as well as reduces the costs of paper-based activity. Management and C-suite levels can spend less time addressing discrepancies or solving disputes, and can instead focus on strategic initiatives.

Specific Capabilities

Several levels of automation can be applied upon receipt of an invoice. Simple digitization of an AP department would get rid of paper and instead use scanned images or PDF invoices. AP staff can utilize front-end imaging and scanning to electronically input invoices into their accounting systems. The simplest way to "go digital" is to request forms via email or another information portal. Otherwise, AP staff must scan paper invoices and save corresponding images or PDFs in a database; this step is time-consuming, however, since it requires the manual rekeying of invoice information.

The data capture process can be automated using optical character recognition (OCR), which automatically recognizes text within a scanned image of a paper invoice or a digital PDF file, extracts relevant data, and converts it into a machine-encoded document. After invoice data is extracted, the OCR-converted fields are verified against a set of configurable validation rules and appropriate back-end information (e.g., invoice numbers within the AP system). This automated validation technology ensures consistency and compliance before information is entered into and processed by the invoice management system.

Advanced data entry technology may combine OCR with artificial intelligence (AI) or machine learning (ML) capabilities that can intelligently fill in, for example, recurring fields from similar vendors or invoice information such as date or payment type. ML capabilities improve over time as an algorithm learns the

invoicing patterns of an organization. In this way, OCR can ensure a high level of accuracy.

OCR technology can be used in several invoice receipt methods, including mailroom services, email extraction, and online portals. Scanning technology can also be used to extract data from the subject and body of emails, in addition to its attachments. Some solutions support language translation of scanned data.

It is important to note, however, that OCR is generally not a comprehensive data entry solution. Invoices scanned with OCR often require additional manual rekeying, further verification, or supplementary information written in, such as special approval requirements or exceptions. Instead, OCR should be treated as a tool that can significantly reduce the time needed to process the majority of incoming invoices.

Although OCR is an important capability and a large first step into increasing AP department automation, scanning a paper document or sending a PDF to be processed is still a manual process. Ideally, OCR should be used to begin a digital transformation initiative among suppliers, while the organization encourages and even incentivizes those suppliers to submit invoices in structured formats. The perfect AP process should be touchless, with invoices transmitted only in an electronic format.

Electronic invoicing eliminates the need for any manual data entry. There are three methods of electronic invoicing:

1. Traditional direct integration with the supplier's back-end AR system, typically achieved via Electronic Data Interchange (EDI) of XML files.
2. Online forms (usually as part of a supplier portal), which ensure that a uniform invoice is submitted every time.
3. A print-to-cloud solution that validates PDF elements instantly and notifies suppliers in real time if their invoice is missing necessary elements.

Invoice Management / Invoice Workflow Automation (IWA)

Who Benefits

Invoice management solutions affect all levels of an organization. Invoice workflows that were once manual, sometimes requiring authorization via hand, email, or even stamp-to-paper approvals, are now managed by automated software. Instead of AP team members spending time tracking down the correct approver(s) for each invoice, an IWA solution automatically routes invoices to appropriate managers electronically, as well as sends notifications and reminders to prevent delays. These alerts and custom controls reduce the time necessary for middle and upper management to oversee approvals. Invoice management solutions also record entire workflow histories, which helps with auditing and identifying errors. Those at the C-suite level will see the cost savings resulting from reduced invoice approval times and increased early payment discount capture.

Specific Capabilities

IWA solutions manage how different types of invoices are routed for approval and processed. AP departments can customize workflows to their specific needs; for example, they can send one department's invoices to a designated approver, set up approval chains with multiple approvers, or require additional information for specific types of invoices.

User roles and access rights can be set to correspond to the organization's existing hierarchy, as well as configured for various exceptions. Many solutions give client administrators control over individual user access rights. Administrators can then delegate the types of approvals for each employee, their level of visibility, and their authorized dollar thresholds.

Some solutions will complete PO-based invoice matching, which involves automatically linking invoices to purchase orders or other receipt documents. Then they will route the invoice to the appropriate approval chain based on predefined business rules. Non-PO invoices are routed directly to the appropriate approvers, unless the solution offers the ability to dictate unique workflows based on invoice contents.

Advanced solutions provide field-level matching, meaning that they match specific characters in invoice line items with their counterparts in the POs. Some solutions create notifications or workflows driven by fields with invalid or missing

data. Users may also assign non-PO invoices to categories within the general ledger, and advanced solutions allow specific line items to be assigned to multiple cost centers or multiple POs.

When combined with eInvoicing capabilities, cloud-based IWA completely automates organizations' invoice processing, enabling immediate payment for invoices that meet all validation rules. This is especially useful for low-value or recurring invoices, and allows AP staff to focus on exceptions and other tasks.

Solutions often provide exception management. Many systems put the responsibility for exception and discrepancy resolution back on suppliers, returning the document to them for correction before allowing it to enter the main workflow system. Other systems push invoices that fail validation through predefined routing procedures that allow for the correction of errors. The software can provide an image of the original invoice in order to identify handwritten, typed, or OCR errors. These flagged invoices may have discrepancies between an invoice, a PO, and a contract; they may be duplicates; or they may be missing information such as PO number, location code, or payment terms. Advanced exception management allows for the creation of custom workflows depending on the type of exception. Another advanced capability is setting thresholds for non-PO invoices, which helps to identify potentially fraudulent spend.

Once invoices have been validated, matched, and routed into the appropriate queue, a variety of approval workflow capabilities ensure that they are are approved in a timely manner. Most invoice workflow solutions are highly configurable; they are built to be adapted to an organization's existing approval hierarchies to enable more complex routing (e.g., among different departments and cost centers). Organizations can easily set up and adjust workflows according to their own business rules and legal requirements, as well as the invoice type, amount, or other content. Advanced solutions facilitate this customization through visual workflow editors with detailed process steps and drag-and-drop functionality.

When invoices require review, approvers can typically be notified via email or mobile alerts. Some solutions offer approval capability directly from within email notifications, while others provide a link to log into an online system where users can view, code, and approve invoices. Many solutions also offer mobile approval capability through native and/or responsive web-based apps. Offering email and

mobile options for approval ensures an invoice can continue to progress when approvers are out of the office.

Most solutions come bundled with alerts and reminders for approvers, out-of-office delegation rules, and escalation procedures for overdue invoices. Prioritization capabilities allow organizations to move invoices with early payment discounts to the top of the processing queue, ensuring that they are approved in time to qualify for the discount. In addition, some solutions feature workload-balancing features that redistribute the invoices in an approver's queue to other employees if that approver's workload exceeds a certain number of invoices.

IWA interfaces give users and managers visibility into approval processes. Solutions can track the real-time status of an invoice's progress or an approver, reorganize workflows of unapproved invoices, store complete document histories, and provide auditing trail information.

Electronic Payments

Who Benefits

ePayments solutions directly impact employees at the staff level by reducing the need for time-consuming tasks such as paper check processing. Instead, solutions can handle payment reconciliation and data maintenance tasks, freeing up staff for other tasks. Mid-level and upper management staff see a great reduction in maverick spend, fraudulent payments, and security concerns that result from less controlled payment methods like checks. C-suite professionals can strategically manage payments and optimize cash flow, and see bottom line improvements from reduced costs and from higher rebate capture through commercial card use.

Specific Capabilities

ePayments software enables organizations to optimize their existing payment processes by automatically sending an invoice to payment after it has been approved. A basic solution initiates a payment either from an ERP or by notifying the AP department, while more advanced solutions manage payments through to the end. ePayments solutions also facilitate ACH transfers and integration with back-end AP and AR systems.

ePayments solutions can be implemented as stand-alone tools or as an integrated feature within a payables platform. If part of a larger software suite, ePayments may be an in-house or a partner-provided service.

ePayments tools streamline and enhance the tedious steps of payment management. While they support traditional payment methods such as checks, ACH, wire, and traditional purchasing cards, they also offer more detailed remittance information and other functionality, which traditional methods lack. Additionally, many solutions offer web-pay portals that provide vendors with real-time invoice and payment transaction status. These portals also support different payment types, as well as automatic formatting of remittance information based on supplier preferences.

Many platforms also offer global payment services, which manage the more complex components of cross-border supplier payments, including regulatory compliance, international tax requirements, and international Do Not Pay lists.

More advanced ePayments tools will also support commercial card programs. "Commercial card" is the umbrella term for payment cards used in B2B payments, and they differ from consumer cards (i.e., personal credit cards). Common types of commercial cards include the following:

- **Purchasing Cards** – Organizations provide purchasing cards (p-cards) to individual employees for the purchase of business goods and services. Users are restricted to a certain dollar threshold or a list of pre-approved merchants. P-cards are typically used for goods and services instead of travel, and are ideal for purchases in which the traditional invoice approval prior to payment does not add value (e.g., low-dollar purchases). Some p-card programs are known as "one card" programs when they also allow for travel and expense (T&E) expenses, eliminating the need for an employee to carry two cards.
- **Corporate Cards** – Employees use these cards for business T&E purchasing.
- **Fleet/Vehicle Cards** – Organizations implement this type of card to pay for fuel and vehicle maintenance. The cards allow for reporting and tracking by vehicle, providing controls specific to this expense category.
- **Ghost Cards/Accounts** – Traditional ghost cards function like p-cards, with reusable account numbers and spend limits that refresh each month.

A common use case is providing a ghost account number to a supplier, which retains the number and processes charges to it as employees make purchases.

- **Single-Use Cards** – These are a common type of virtual account (VA). They are also called virtual card accounts, virtual account numbers, or ePayables. Once an organization approves a supplier's invoice(s), AP initiates the payment process by providing the supplier with a single-use virtual account number to process the charge. The spend limit is equal to the approved invoice(s) and does not refresh.
- **Other Virtual Card Programs** – As with single-use cards, other VA programs rely on approved supplier invoices. One VA option is a straight-through payment in which a supplier receives a direct payment through the card network or issuer, rather than having to process a charge transaction. Organizations tend to target VAs for high-dollar and/or complex purchases that warrant an invoice review prior to payment. VA cards are one of the fastest-growing tools offered today, and are offered by leading ePayments providers.
- **Declining Balance Cards** – These cards have a set limit and expiration date that do not refresh. Among other use cases, organizations use them for special projects with a predetermined budget, such as meetings or events, for relocation expenses, and for infrequent travelers whose activity does not warrant a corporate travel card.

Leading ePayments solutions also provide other payment management services, such as mobile applications, audit trail functionality, payments approvals, and customized commercial card support.

Some ePayments solutions also feature working capital tools; often, these are simple discounting tools that can be leveraged during the invoice management process. Working capital optimization involves strategically optimizing cash flow by reevaluating and restructuring payment times and terms to make them more favorable for an organization. More advanced working capital tools that can integrate into a payables platform are usually available through separate providers, supporting features such as dynamic discounting management (DDM), supply chain financing (SCF) programs, and other strategic tools that may restructure payments and ensure rebate capture.

There are a few perceived and actual barriers to entry for working capital tools. Most SCF offerings are marketed towards enterprises with a lot of spend under management; many SME and mid-market organizations either do not see enough ROI in the technology based on their spend under management, or simply do not have the resources for a working capital tool. However, these offerings, particularly DDM, have tremendous potential to grant financial stability to smaller, scaling companies. Competitive payables solutions geared to the middle market are putting a greater emphasis on early payment discount capture. This is as simple as designing the option to request a discount within the invoice approval interface, or offering an advanced DDM tool in the reporting module. Levvel Research predicts that more down-market organizations will look for this built-in feature in AP solutions in the years to come.

Reporting & Analytics

Who Benefits

Reporting and analytics tools benefit users at all levels in an organization, but are particularly useful for administrators and decision-makers with more strategic tasks and goals. Reports summarize spend activity and help managers and the C-suite to identify spending trends, optimize spend policies, and improve efficiency. Reporting dashboards give visibility into potentially fraudulent activity, spend occurring out of company policy, employees who are delaying invoice approval workflows, and suppliers that frequently send duplicate or incorrect invoices. The insights generated by advanced reporting and analytics tools aide C-suite professionals in targeting trouble spots and provide a holistic overview of the organization's cash flow.

Specific Capabilities

Payables platforms include comprehensive reporting and analytics capabilities that provide unique and valuable insights in many areas of the business. These features typically can either export reports in various formats or provide an overview of spend-related activity in an interactive dashboard. Reports provide a level of transparency that improves an organization's ability to audit, analyze, and prove its spend procedures. Reports can include many important elements, including first-pass success rates, exception rates, and open invoices statuses. They are often created from templates, which automates much of the manual analysis, but they can also be customized to a user's needs. The solution

provider may also create new reports that are specifically tailored to the client's organization and processes.

Advanced analytics tools offer internal benchmarking capabilities, drag-and-drop report building, and drill-down capabilities. The ability to analyze specific report details allows an organization to view a single set of data from multiple perspectives, which creates reports that are tailored for use by different operational areas. Reports and dashboards can be used to make user interfaces more efficient; for example, the homepage for an approver can be customized to only include relevant invoices. Users can import data from different sources and leverage it to gain new perspectives into spend, such as integrating maps tools to show the locations where spend is occurring.

Supplier Management

Who Benefits

While self-service tools are created for the supplier, supplier management functionality benefits the buyer as well, as it can increase supplier adoption of a company's payables solution. Automated supplier management also reduces the manual work required to address disputes and queries, increasing time and cost savings, and enhances transparency among all parties. Better visibility and communication facilitated by supplier management functionality improves both supplier relationships and supply chain operations as a whole.

Specific Capabilities

Supplier management features centralize, control, and optimize supplier data. Supplier management functionality features a supplier self-service portal where suppliers can upload invoices, check on payment statuses, and update payment information. Platforms provide a single point of contact between buyers and suppliers, mostly to resolve errors, exceptions, or other disputes. Supplier portals reduce low-value activity and labor duplication by consolidating queries into one platform. They also help manage various compliance requirements throughout the supplier relationship life cycle. Some solutions permit buyers to create custom business rules at the point of supplier portal invoice upload; these rules create instant error notifications and allow PO flip from within the portal.

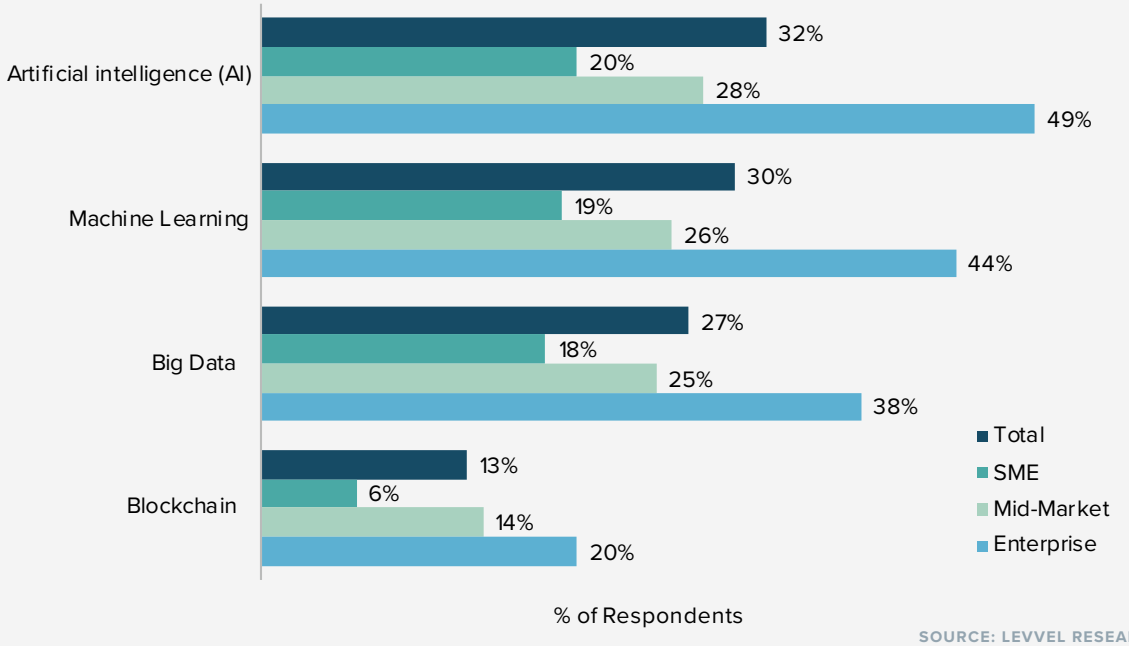
Emerging Technologies in AP Automation

AP automation solutions are increasingly integrating emerging technologies, including artificial intelligence (AI), machine learning, robotic process automation (RPA), blockchain, and big data. The conversations around these technologies usually relate to how organizations can enable strategic financial process management, but for the most part these conversations are being driven by the software providers. As these emerging technologies have entered mainstream conversations about technology and more resources become available, solution providers are finding it easier to incorporate advanced data processing and machine learning algorithms into their offerings.

When asked if they are familiar with different emerging technologies, organizations were most likely to say they are familiar with AI and ML, see Figure 13. Larger organizations are more familiar with emerging technologies than SMEs and mid-market organizations; this is likely reflective of the relative stability enterprises have in their markets compared to smaller, scaling companies that are focused on more tactical concerns, and less able to embrace digital transformation.

FIGURE 13

Familiarity With Emerging Technologies By Organization Size



SOURCE: LEVVEL RESEARCH AP 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? (n = 258)

Although more recent technologies like blockchain and predictive analytics (sourced from big data), are not as well known among organizations, they are just as likely to change the way that many business ecosystems operate in the future. However, their effect on the back-office automation space thus far has been limited, with the exception of a few innovative Procure-to-Pay providers.

In order to better gauge the perception of emerging technologies' role in the back office, Levvel Research asked respondents to give written opinions on how emerging technologies would impact the AP function or field in the next five years. While some respondents answered that they did not predict there would be any impact and some did not know what the impact would be, many did have views on the value of these tools.

The most common technology mentioned was AI; most of the sentiment and understanding towards its use is optimistic in scope, but vague in execution. In other words, many respondents said they believe AI will change payables management in a big way, but were either unclear or not forthcoming about how. There was also interest in big data for its strategic analysis value, and in blockchain for the control it could bring to data and payments.

Levvel Research shares the optimism of the respondents, but agrees with the overall sentiment that the true impact of the more innovative technologies is a few years away and will largely be dependent on software providers' product development decisions—and competitive innovation. These payables software providers could aid in the spread of these technologies by increasing investment in resources, time, and talent to develop new approaches and implement current approaches in their own product lines.

Despite the relatively low adoption of these technologies, it is still important to highlight some of the ways they are being used in payables management and other back-office software today.

- **AI/ML** – AI can be used to improve approval routing workflows, shorten invoice life cycles and increase the ability to capture early payment discounts. For example, a solution that leveraged these technologies could automatically detect errors or discrepancies, and make intelligent decisions on what to do with the invoice next. A further way AI/ML can be used in AP automation is the ability to split invoice line items and match them across multiple POs. It could be leveraged to develop intelligent, interactive chatbots that perform tasks like reminding an approver they

have an invoice waiting in queue. AI/ML can be leveraged in invoice workflows to detect changes in routing made over time and to suggest approval workflows along more efficient paths.

While AI/ML are predicted to replace human labor, Levvel Research does not expect a dramatic decrease in the need for back-office (human) labor in the near future. More realistic changes in the next few years will be a reduction in temporary hiring and outsourcing, as well as a move to shift back-office professionals' roles from administrative to strategic modes. The capital freed up through the reduction in labor costs can be reinvested into further innovation and strategic pursuits.

» **Big Data** – AP software has always been used in conjunction with ERPs and other financial systems that house 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 those at the C-suite level to use information for strategic decisions.

Most of the functional advancements thus far have been seen in procurement and sourcing technology, but Levvel 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.

» **Blockchain** – In relation to AP, blockchain is likely the newest emerging technology. It is most applicable to ePayments. Currently, 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. However, as new innovations emerge in the realm of blockchain, Levvel 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 has already been adopted by a handful of providers in their business-to-business (B2B) electronic payments tools.

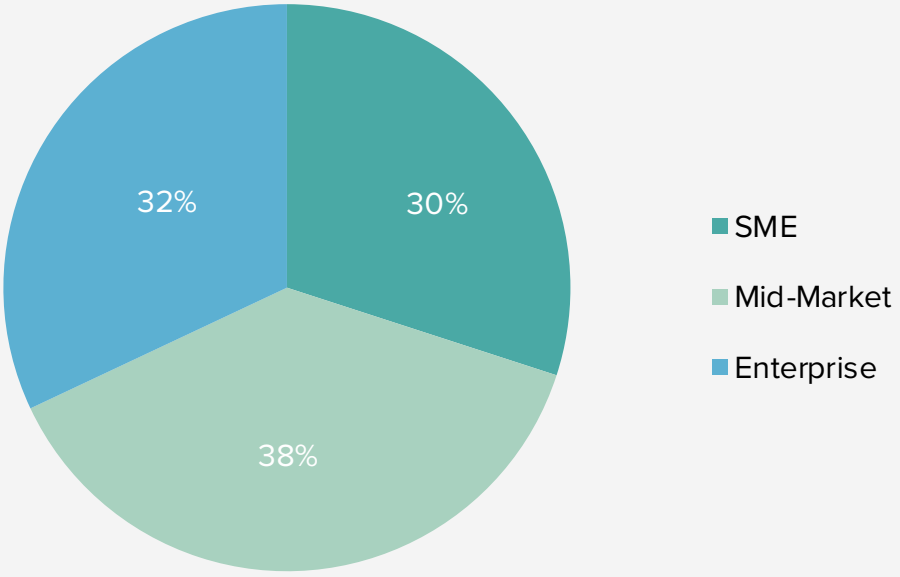
Conclusion

The question of whether an organization should automate its payables processes has become irrelevant. It has been replaced by, “How should an organization automate its processes?” There is no single answer that applies to every organization. Rather, there is a set of considerations that each organization must weigh against its unique parameters, including its structure, operational requirements, and business goals in the market. Levvel Research recommends that organizations explore how embracing AP automation technology can enable their competitive advantage.

Methodology

The findings presented in this report are based on an online survey conducted by Levvel Research in February 2019 among more than 250 finance and accounting 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 Levvel Research's database. This distribution is shown below.

Organization Size Distribution



SOURCE: LEVVEL RESEARCH

MaxDiff Analysis

MaxDiff (or "best-worst scaling") is used for obtaining preference or importance scores for multiple features. Respondents are shown multiple subsets of items to evaluate and are asked to indicate the most and least important items within each group. (In this survey, respondents were given three randomized groups of three criteria each.) The goal in using MaxDiff is to achieve importance or preference scores for each item. The scores in Table 1 represent the percent difference between most appealing and least appealing for each attribute. MaxDiff also delivers a ranking among the items tested and a metric distance between each item. The higher the score (i.e. the higher the ranking), the more important or stronger the preference. For example, "ease of use" has the highest ranked score for SMEs and mid-market organizations (at 0.63 and 0.62 respectively), while integration with ERP is the top score for enterprises at 0.61.

A positive score means that the attribute was selected as most important more often than least important. A negative score means that the attribute was chosen as least important more often than most important. If a score of an item is two times larger than another item, it can be interpreted that it is twice as important (e.g. for enterprises, "integration with ERP" is nearly three times as important as UI/UX).

A MaxDiff analysis was performed for the insights discussed in the "Most Valuable Features and Characteristics" beginning on page 21. Figure 11 depicts the ranking of solution criteria by percentage of respondents who selected the feature as "most important" using the MaxDiff modeling.

TABLE 1

MAXDIFF SCORES FOR AP SOLUTION PURCHASE CRITERIA

	SME	Mid-Market	Enterprise
Ease of use	0.63	0.62	0.52
Pricing	0.42	0.46	0.41
Integration with ERP	0.33	0.43	0.61
UI/UX	0.18	0.21	0.22
Tailored for industry	0.24	-0.05	-0.09
Supplementary features	-0.31	-0.23	-0.33
Mobility	-0.28	-0.29	-0.31
Innovative/emerging technology	-0.41	-0.33	-0.24
Our competitors use it	-0.79	-0.71	-0.78

SOURCE: LEVVEL RESEARCH AP SURVEY, 2019

Hyland

Hyland is a leading content services provider that enables thousands of organizations to deliver better experiences to the people they serve. Hyland's flagship product, OnBase, is a single enterprise information platform for managing content, processes, and cases. OnBase provides enterprise content management (ECM), case management, business process management and data capture—all on one platform. Hyland's portfolio of content services offerings also includes leading data extraction software, Brainware by Hyland, adding advanced OCR capabilities to its product portfolio.

Founded	1991
Headquarters	Westlake, Ohio
Other Locations	Olathe, Kansas; Irvine, California; Sao Paulo, Brazil; London, United Kingdom; Tokyo, Japan
Number of Employees	3,300
Number of Customers	19,000
Target Verticals	Manufacturing, Retail, Wholesale, Transportation and Logistics, Professional Services, Accommodation and Food Service, Healthcare, Higher Education, Insurance, Financial Services, Government
Partners / Resellers	DataBank, Konica Minolta Business Solutions, KeyMark Inc., Requordit
Awards / Recognitions	Leader, 2018 Gartner Magic Quadrant for Content Services; Leader, Gartner Magic Quadrant for ECM, 2010-2017; Strong Performer, Forrester Wave: Cloud-Based Dynamic Case Management, Q1 2018

Solution Overview

OnBase by Hyland can be deployed as an on-premise or hosted solution. The solution provides no-code integration capabilities with multiple business applications and live data integrations through the OnBase Enterprise Integration Server with ERP systems such as SAP, Workday, Infor/Lawson, Dynamics, and Oracle.

Payables Management

The OnBase platform features several native capabilities for handling invoice capture, including OCR, which can be deployed should that be the best option to meet end-user needs. OnBase also seamlessly integrates with data extraction software Brainware by Hyland to streamline invoice capture. Brainware scans and imports all business document types, including invoices. The tool can accept invoices in multiple formats including images, PDF, XLS, XML, and EDI, and can be submitted by fax, email, FTP, and via the web. Brainware extracts data from submitted documents via OCR and also provides intelligent capture for semi-structured documents. This technology can capture line-item details and handwritten characters.

Document scanning and indexing is completely integrated within OnBase. The system supports Kofax, ISIS, and TWAIN scanner interfaces, licenses for multiple page volume levels, and both centralized scanning and scanning from remote offices. Hyland offers various capture methods, including ad-hoc scanning from desktops, remote locations, and front-office functions; scanning with a third-party application; MFP integration for high-volume scanning; and email-based capture. Hyland also offers mailroom services through its Imaging Services team for customers that want to outsource the data capture process.

OnBase automates several key AP business processes, including routing to appropriate business units, two- and three-way matching, approval hierarchies, dispute management, and posting to accounting applications. OnBase Workflow operates on a business rules engine that can adapt to any business structure. It is easily configurable, allowing designated users to create and deploy complex workflow hierarchies on demand. OnBase can also reroute invoices back to suppliers when necessary.

Users access invoices and related content from their ERP application, email inbox, or mobile device. Managers can view real-time dashboards that provide visibility into the status of invoice processing, allowing them to identify bottlenecks and adjust workload distribution. OnBase Workflow supports workload balancing by user or role, as well as out-of-office forwarding, escalations, and reminders.

Workflow Approval Management, a direct add-on to Workflow, allows business users to configure required approvals and business rules to evaluate documents and dynamically assign approvers for any Workflow process—without any custom

development. Approval hierarchies from existing business systems, such as ERPs, can also be leveraged to automatically manage approval assignments. Invoices without a PO are routed to an AP review queue for GL coding or approval assignment. Additionally, PO invoices with PO or vendor exceptions will be routed to either AP staff or the buyer associated with the PO.

Once invoices and payments are approved, OnBase can submit payment details to the customer's ERP in the correct currency to initiate payment to the vendor. OnBase also stores all client content with advanced document archival methods, preserving the documents according to clients' preferences and providing advanced search and retrieval functionality.

OnBase Report Services includes over 140 preconfigured reports for evaluating the processes OnBase manages. OnBase presents reporting data in a variety of formats and reports can be exported in XML, HTML, or Excel formats, or saved as a PDF, JPEG, or TIFF. Organizations can also create custom reports to meet their specific business reporting needs—without the need to engage IT resources. Dashboards present data in a variety of graphical formats including charts, graphs, scorecards, and maps, and interactive features allow users to easily monitor performance and analyze trends in real time.

Implementation and Pricing

Implementation times vary by solution and customer needs. During implementation, Hyland offers a variety of on-site and online training classes and events for both end users and customer trainers. Customers can access detailed documentation and user guides, as well as user community websites that provide a place to learn more about OnBase and collaborate with other users. Hyland offers customers dedicated support from account management teams, as well as 24/7 access to technical support.

The licensing and pricing of OnBase is designed with diverse customer needs in mind, allowing for à la carte purchases of modular components.

About Levvel Research

Levvel Research, formerly PayStream Advisors, is a research and advisory firm that operates within the IT consulting company, Levvel. Levvel 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. Levvel 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, Levvel Research is dedicated to maximizing returns and minimizing risks associated with technology investment. Levvel Research's reports, white papers, webinars, and tools are available free of charge at www.levvel.io