Accounts Payable Automation for Invoice Processing

RPI Consultants White Paper

Accounts Payable Automation refers to the use of software to replace manual tasks, activities, and decisions related to invoice processing. Accounts Payable Automation is being adopted by many large companies to simultaneously reduce costs and improve services.

Contents

Accounts Payable Automation is an important investment for any organization that wants to reduce costly errors and delays in operations and administration related to manual data entry and manual processes.

Overview

Accounts Payable departments are constantly being asked to simultaneously reduce costs and improve services to save time and money. Many of the errors, exceptions, and delays occur in the Procure-to-Pay (P2P) process while processing invoices for payment and procuring resources and materials. This is largely due to manual data entry and processing that is often required for invoice coding, validation, and approval routing.

In an effort to reduce errors, processing time, and costs, many organizations are choosing to invest in intelligent automation products, such as Enterprise Resource Planning (ERP) , Enterprise Content Management (ECM), and Intelligent Data Capture. These platforms can be used independently or in concert to reduce or eliminate manual data entry and processing for invoices in Accounts Payable.

Each department and workflow is unique, but in this white paper we will share industry standards and best practices for an invoice automation solution in a typical Accounts Payable department.

Automation Technology Glossary

Enterprise Resource Planning (ERP)

ERP platforms integrate data and workflows that support important business processes, such as purchasing, inventory management, accounts payable, and human resources.

Enterprise Content Management (ECM)

ECM platforms capture, manage, and store content across an organization, including records, documents, images, or electronic messages.

Intelligent Data Capture

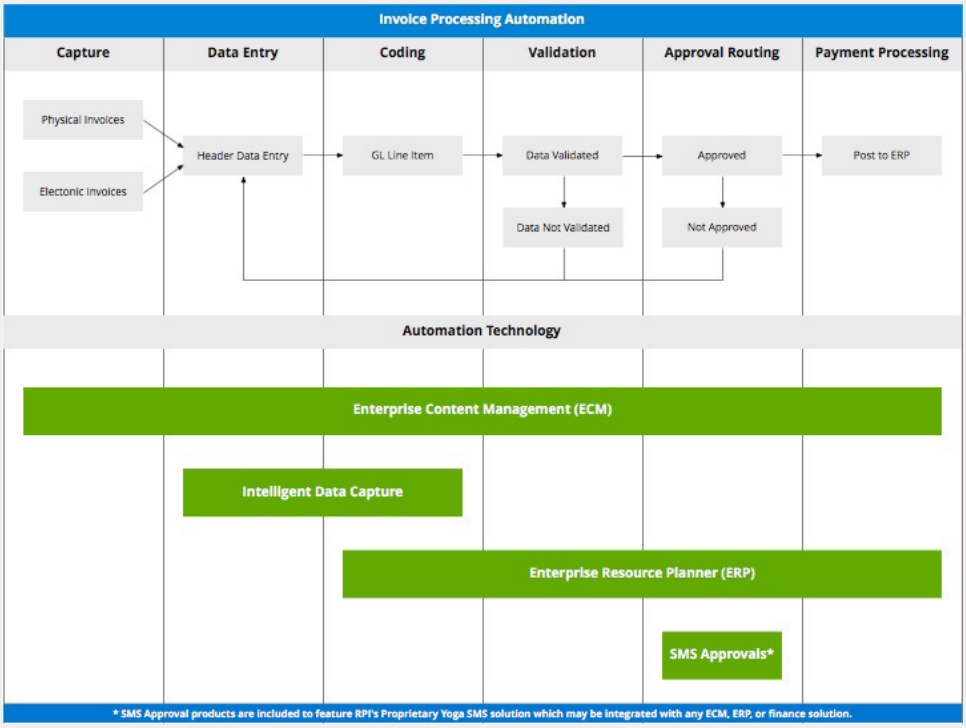
Intelligent Data Capture refers to software that intelligently reads scanned and electronic documents to extract key data and words using Advanced Optical Character Recognition (OCR).

Accounts Payable Automation

There are a lot of active processes and workflows across the Accounts Payable department, but invoice processing typically requires the most attention, time, and resources. Getting invoices paid on time, or early, prevents penalties, creates opportunities for discounts, and ensures that products, materials, and resources are available to help the business operate.

At the center of this process is the invoice, which is why AP Automation focuses on invoice capture, coding, validation, and approval routing. The following graphic demonstrates how Intelligent Data Capture, ECM, and ERP applications can be used at different steps of AP Automation.

AP Automation with ERP, ECM, and Intelligent Data Capture



Most AP Automation solutions include some combination of ECM, Intelligent Data Capture, and data integration with an ERP. Typically, the ECM platform will be designed to capture invoices from different sources and then pass them to an Intelligent Data Capture product. Header Data and/or GL Coding data will be automatically extracted and verified, then exported back into an ECM workflow with the invoice image. Any remaining coding, exception handling, or coding verification will be completed in workflow.

At this point, invoices may be routed for approval using the ECM workflow, or invoices may be exported to the ERP for more robust approval routing. Additional products, such as RPI's proprietary Yoga SMS Approvals, may be used with your ECM or ERP workflow to facilitate approvals via SMS text. When all approvals have been captured, the invoice payment can be processed.

Invoice Capture

The invoice is the driving document in AP Automation, and so the first step of any AP Automation solution is to capture the invoice into your system. Invoices are often available in a variety of formats, including paper invoices delivered by mail or fax, invoice images received via email, and even electronic invoices sent via Electronic Data Interchange (EDI). This means that any software you use to capture invoices will need multiple capture methods.

Scanned Invoices

Scanning documents is the simplest method to capture physical invoices received through the mail or fax. Scanners and capture solutions can be set up with varying levels of image correction and manipulation options to ensure that scanned invoices are legible and ready to be processed.

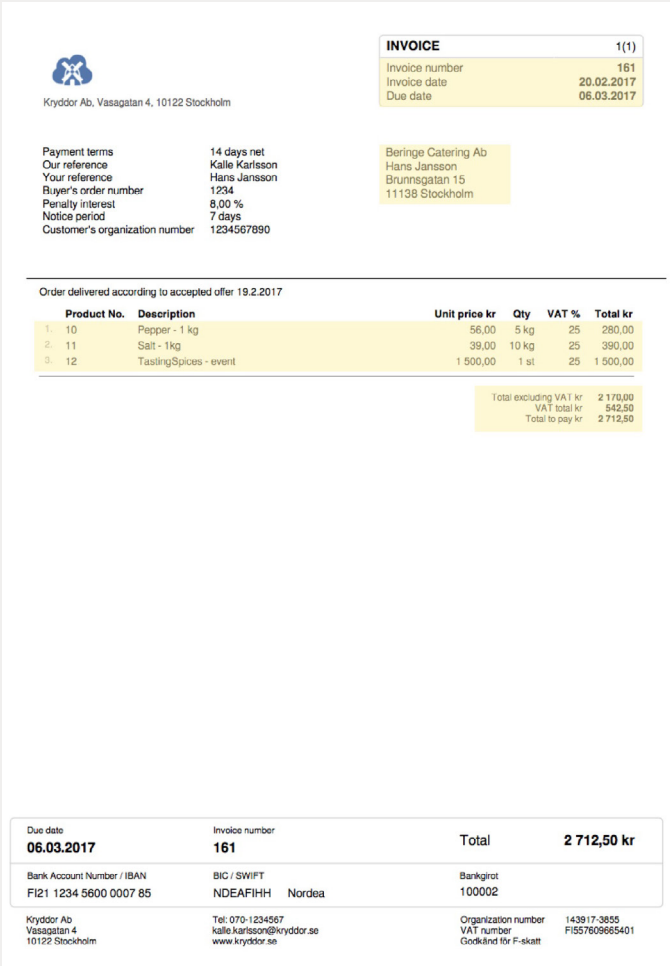
Once captured and checked for quality, invoices are then routed into your Intelligent Data Capture or ECM workflow for header data entry and GL coding.

Imported Invoices

File import is a convenient capture method that can be configured to import invoices directly from a server or a shared network directory.

This is especially helpful in situations where invoices are being scanned in through Multi-Function Devices (MFDs) from multiple users across decentralized locations or departments. It can also be used when a third-party fax service is being used to capture and export physical faxes to a shared network directory.

Sample Invoice with Header & Line Item Data



Kryddor Ab, Vasagatan 4, 10122 Stockholm

INVOICE 1(1)
Invoice number 161
Invoice date 20.02.2017
Due date 06.03.2017

Payment terms	14 days net
Our reference	Kalle Karlsson
Your reference	Hans Jansson
Buyer's order number	1234
Penalty interest	8,00 %
Notice period	7 days
Customer's organization number	1234567890

Beringe Catering Ab
Hans Jansson
Brunnsgatan 15
11138 Stockholm

Order delivered according to accepted offer 19.2.2017

	Product No.	Description	Unit price kr	Qty	VAT %	Total kr
1.	10	Pepper - 1 kg	56,00	5 kg	25	280,00
2.	11	Salt - 1kg	39,00	10 kg	25	390,00
3.	12	TastingSpices - event	1 500,00	1 st	25	1 500,00

Total excluding VAT kr 2 170,00
VAT total kr 542,50
Total to pay kr 2 712,50

Due date 06.03.2017 | Invoice number 161 | Total 2 712,50 kr
Bank Account Number / IBAN FI21 1234 5600 0007 85 | BIC / SWIFT NDEAFIHH Nordea | Bankgirot 100002
Kryddor Ab, Vasagatan 4, 10122 Stockholm | Tel: 070-1234567, kalle.karlsson@kryddor.se, www.kryddor.se | Organization number 143917-3855, VAT number FI557609665401, Godkänd för F-skatt

Each ECM platform will have multiple import methods and configuration options, including everything from manual imports, scheduled import tasks, and real-time import monitoring services. Each import job can have unique import settings, which allow you to use the filename or an associated data text file to import images and apply keyword indexing. Imported files can be moved directly into your Intelligent Data Capture or ECM workflow for header data entry and GL coding.

Emailed Invoices

Many ECM products include email capture services or modules that monitor email accounts to import messages and attachments. These features include Perceptive Content's (ImageNow) Email Agent and Hyland OnBase's Mailbox Importer. Imported documents can be indexed with data from the email and automatically routed to your Intelligent Data Capture or ECM workflow.

For some of RPI's clients, these products do not provide sufficient data auditing or indexing options. To solve this problem, RPI developed its own proprietary product called Yoga Capture. Similar to other products, Yoga Capture monitors inboxes, downloads attachments from emails, and automatically prepares attachments for indexing and import into your ECM platform. However, RPI's Yoga Capture also stores all email and attachment data in a separate database for advanced auditing and reconciliation, which can also be used to create scheduled reports.

Electronic Data Interchange (EDI)

The core motivating factor behind AP Automation is to reduce time spent on manual data entry and processing. If a company receives a large number of invoices from a single vendor, it may make sense to work with that vendor to receive invoices through Electronic Data Interchange (EDI). This format allows vendors to send raw invoice data through an EDI clearing house rather than preparing and sending physical invoices through the mail. Invoice data is converted into an EDI file, typically referred to as an 810 document, and then delivered to the company via email or SFTP.

EDI files make it easier to prepare and process large amounts of invoices by eliminating the need to manually review and extract raw invoice data and GL line items. However, you will still need to ensure your ERP, ECM, or Intelligent Data Capture solution is configured to import, parse, and in the case of ECM, generate readable invoice images from the EDI file.

Header Data Entry and GL Line Coding

Header Data Entry and GL Line Coding is often the source of most invoice errors, exceptions, and delays in processing. This is especially true when AP Processors manually review and enter data from invoice images into an ERP or ECM platform. When mistakes occur, hopefully they are found during a validation step but often they are found by the approver. In either case, mistakes force the invoices back to AP Processors for correction.

Automating data entry and GL coding saves time by reducing or eliminating reliance on manual data entry or processing. At a minimum, automation solutions can extract header data and route invoice images in a digital workflow. This allows AP Processors to work faster and AP Managers to better track and audit invoice exceptions. At best, solutions with Intelligent Data Capture products will identify, extract, and validate 100% of invoice data and completely automate the hand off for invoice approval routing.

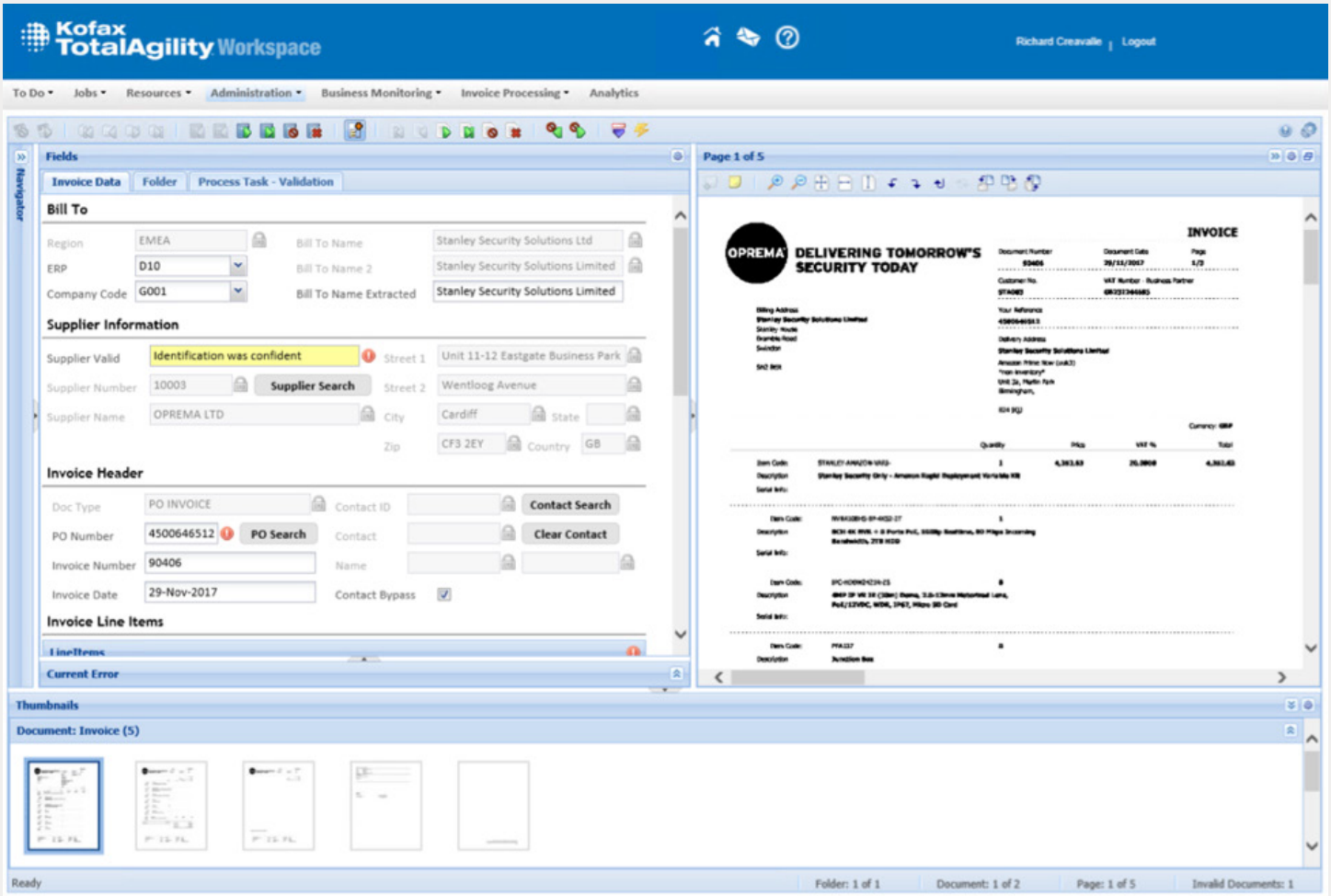
Intelligent Data Capture with Advanced OCR

Intelligent Data Capture is at the core of any AP automation solution and can be used to perform simple tasks, such as extracting and applying header data to captured invoices, or extremely complex tasks, such as validating data against outside data sources like an ERP or vendor database.

There are many Intelligent Data Capture products available, but most will share core features and follow a process similar to the following:

1. Intelligent Data Capture utilizes Advanced Optical Character Recognition (OCR) to read an image and recognize characters the same way as a human would.
2. Using the recognized characters, or based on pre-configured templates, the image is classified by type, such as PO or non-PO invoice.
3. Based on the image classification, header data and/or line item data is extracted and validated against an ERP, vendor database, or other data source.
4. Validated invoices and are exported to be processed within an ECM or ERP workflow.

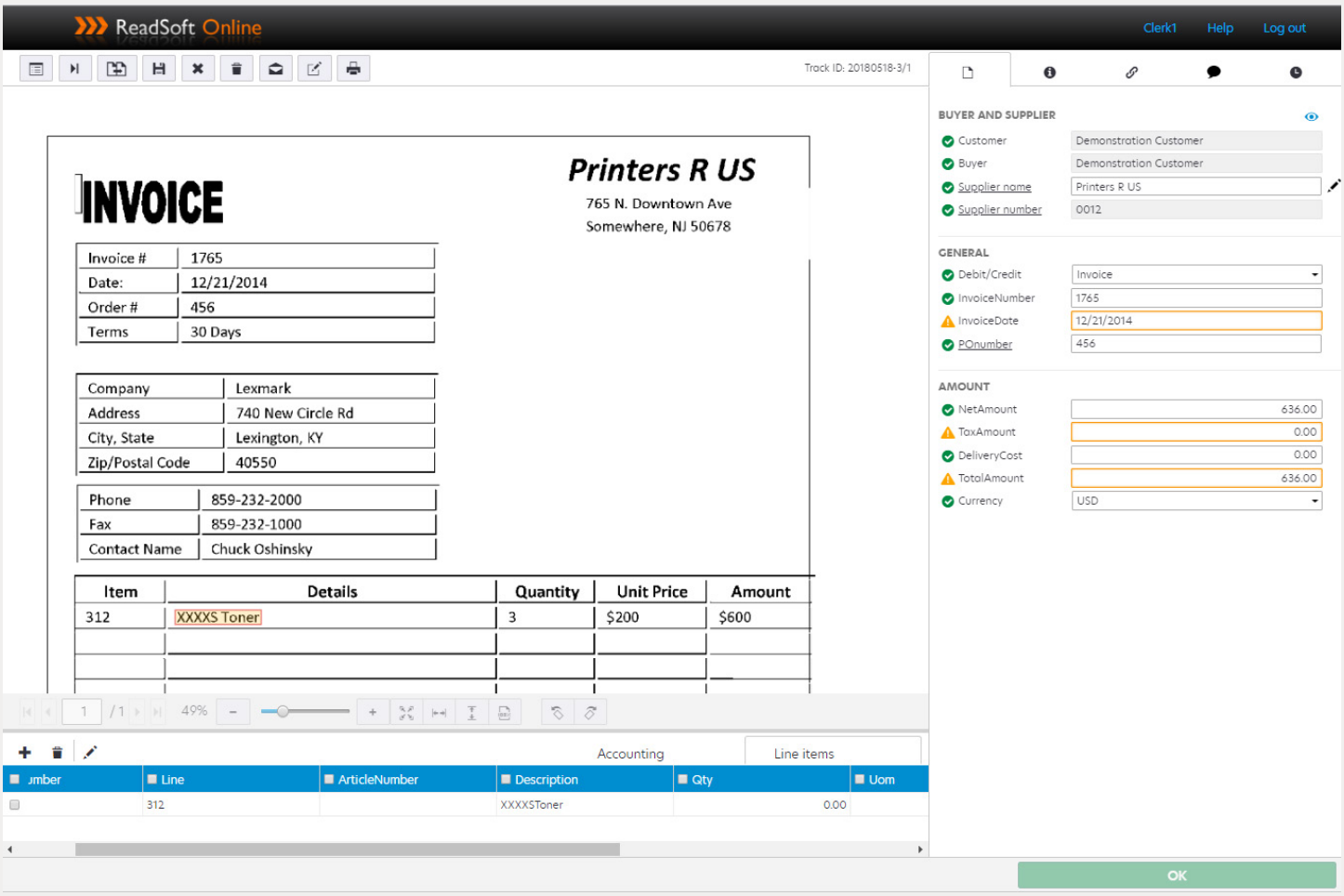
Sample Invoice Data Verification Screen in Kofax TotalAgility



Verification

During the data extraction and validation steps, each piece of captured data is weighed against a configured confidence percentage. If a certain value does not meet the OCR engine's confidence threshold, the image will be routed to a manual verification step. Most products will include a separate queue or view for these documents and highlight the failed fields. From here, users can manually verify the field to continue and complete document processing.

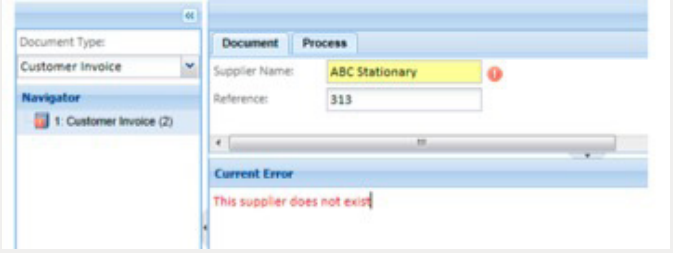
Sample Verification Screen in Kofax ReadSoft Online



Exceptions

The verification step also allows users to assign exceptions. Assigning an exception will allow the document to process out of the Intelligent Data Capture solution but will send the exported document and data with an invalid reason code to be reviewed and resolved.

Sample Exception Processing in Kofax TotalAgility

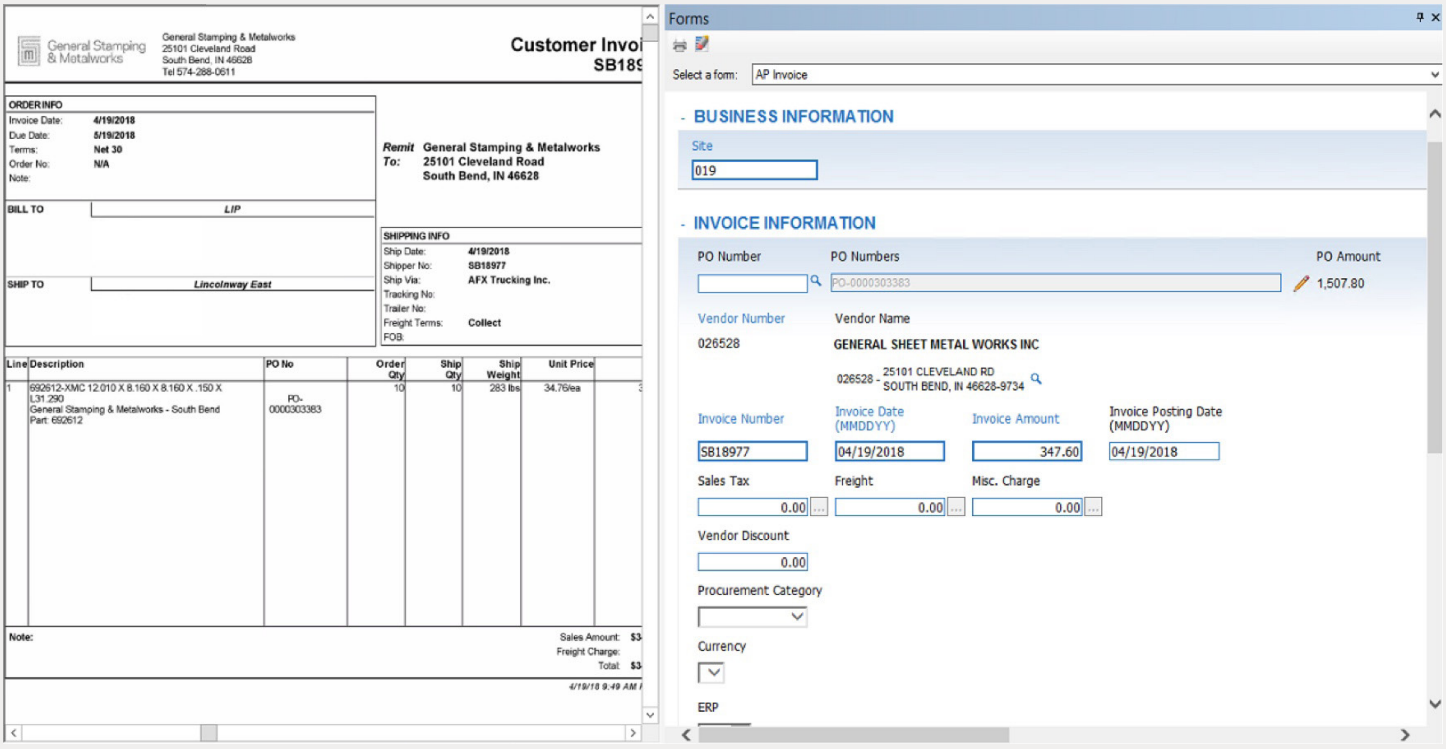


Invoice Coding with eForms

When performing header data and GL coding in an ECM workflow, Electronic Forms (eForms) are crucial to automating time intensive tasks like data validation, integration, and payment posting. eForms are visual representations of invoice, vendor, PO, and GL Coding data that are attached to the invoice record or document. eForms drive automated data validation, either through client-side or server-side validation against outside data sources (see Header and GL Coding Validation).

AP eForms are typically created and attached to an invoice after it has been captured or imported into your ECM workflow. If the invoice has passed through an Intelligent Data Capture solution, any and all extracted data from the invoice will automatically be populated into the eForm. AP Processors will be able to edit or manually fill AP eForms following capture or as a way to manage rejected invoices for incorrect coding.

Sample Invoice with Perceptive Content (ImageNow AP eForm)



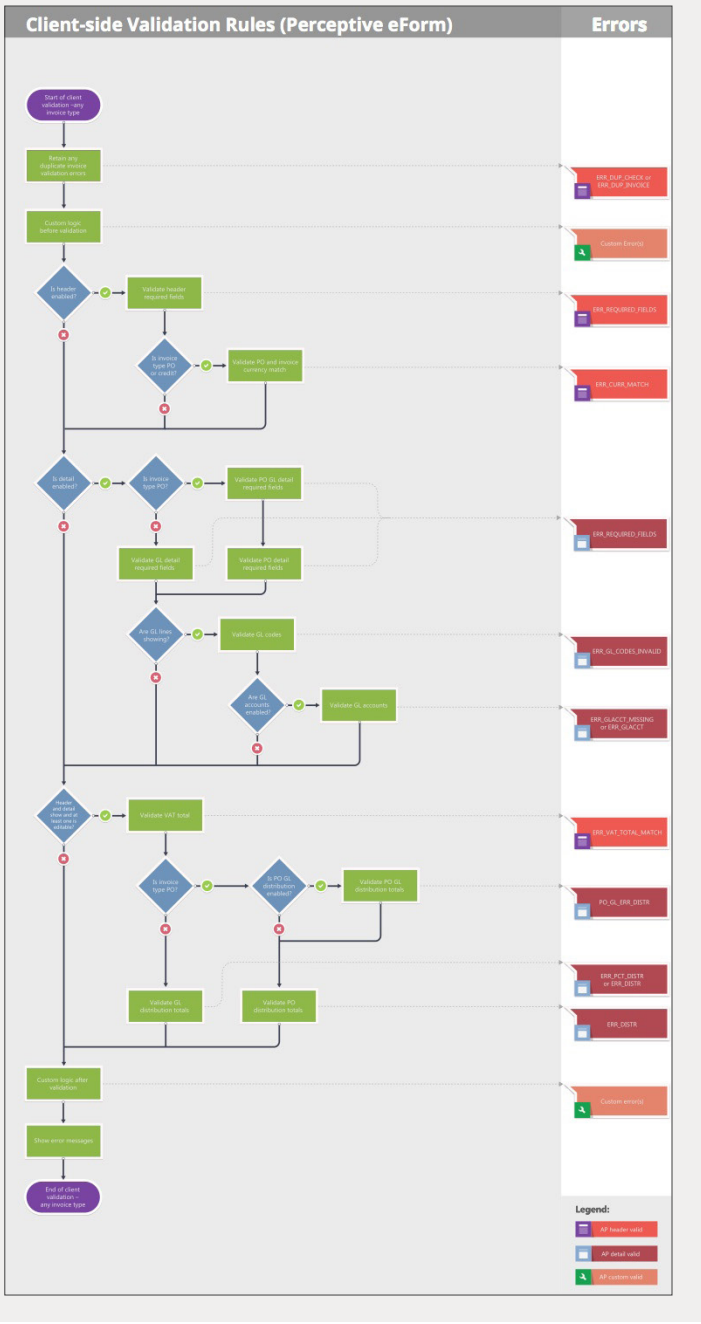
Header and GL Coding Validation

Capturing and storing invoice and GL coding data doesn't provide value if it isn't correct. That's why most invoice processing workflows will include multiple validation steps against outside data sources, such as ERPs, accounting systems, vendor databases, etc.

Validation usually follows immediately after any queue or step where users are allowed to make edits to the invoice indexing or eForm data. This ensures that any mistakes in data entry or data capture are not passed on to the next step in the process or to the ERP for payment processing. When mistakes are identified, the invoice is routed back to exceptions queues or views.

There are two primary validation types: client and server. A client validation is triggered in your ECM or ERP during data entry or on demand. For example, if a user is coding into an eForm there may be built in validations on each field or a validate button that triggers validation logic. The server validation is tied to workflow queues or invoice processing steps and run whenever an invoice is routed forward.

Sample Validation Logic for Perceptive AP eForm



There are infinite possibilities for validating invoice data, although there are some common validations that most organizations will include. In addition to required fields, data validations can be performed for vendor information; PO Number, Line Pairing, and Distributions; GL Coding, Accounts and Distributions; and currency, tax code, and VAT total.

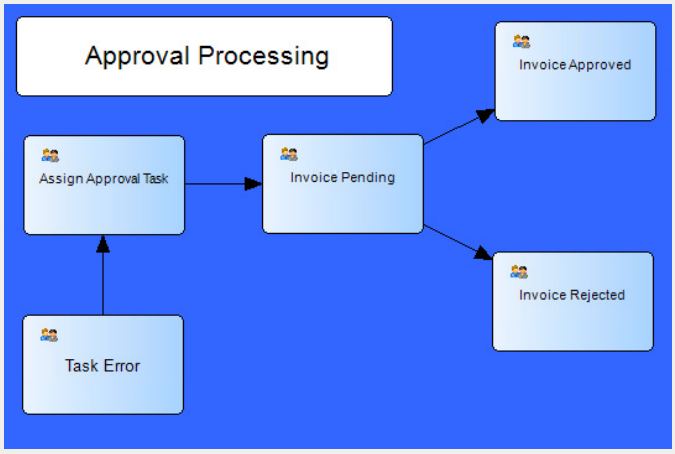
Separate from client and server data validations, there should also be checks for duplicate invoices. Typically, this step will combine Vendor ID, Invoice Number, and Invoice Amount to perform a search against active invoices. If a duplicate is discovered, the invoice will route out to an exception queue or view for additional user review.

Approval Routing

Approval Routing is another time intensive step in invoice processing that requires complex logic and consistent follow up. Based on your individual environment and system architecture, Approval Routing can be completed in either your ERP or ECM system.

For example, validated invoices and eForm data can be passed to an ERP immediately following validation, and the ERP could manage all approval routing, notifications, and follow up. Alternatively, your approval routing logic and matrix could be created in your ECM system. Consider your product capabilities, notifications, and licensing to make the best decision for your organization.

Sample Approval Workflow in Perceptive Content (ImageNow)

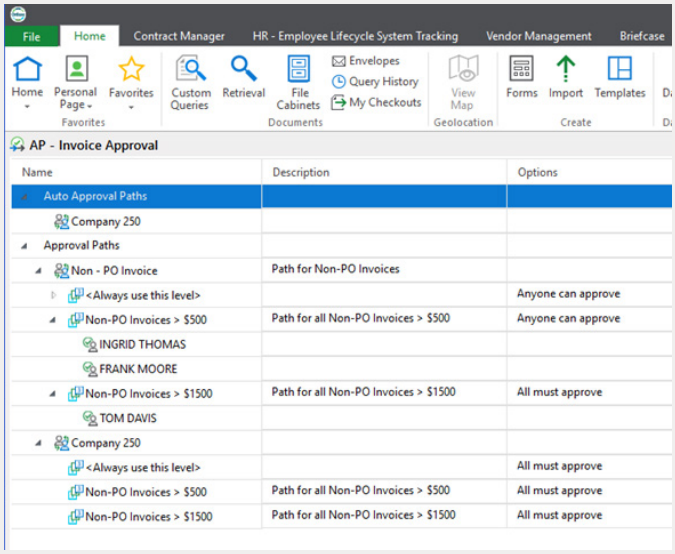


Approval Matrix

The approval process starts with the Approval Matrix. An Approval Matrix is a complex set of conditions that match approvers, invoice types, dollar thresholds, approval levels, and departments within an organization.

For most ECM implementations, the Approval Matrix is stored as a flat file and regularly updated. However, the Approval Matrix may also be stored in a separate database or within the ERP platform itself. When Approval Matrices are stored outside of an ECM solution, database connections or direct integration is required for automated Approval Routing.

Sample Approval Matrix in OnBase Approval Manager



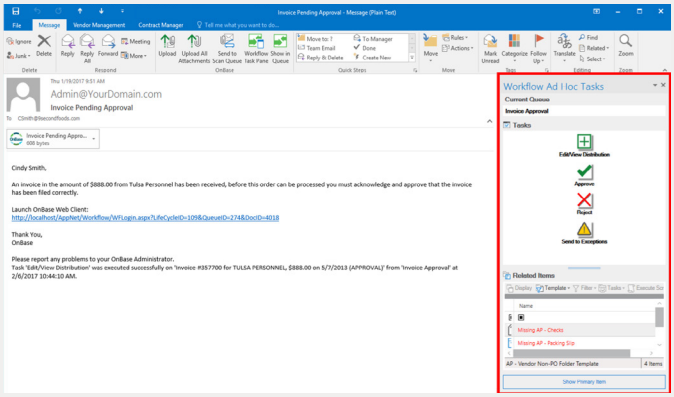
Based on the GL Account Code, Invoice Amount, and Department, the invoice will be routed to the first appropriate approver. Following the first and every subsequent approval, the invoice will again be evaluated against the Approval Matrix to determine if there are any further approvals required. Once the invoice has received all of its approvals, the invoice completes the approval process and moves forward for payment processing.

Approval Notifications

To encourage timely approvals, your Approval Routing solution should include Approval Notifications. Notifications are important, especially for approvers who do not approve invoices regularly or are not in the habit of checking a queue or list.

Depending on your ECM or ERP system, notifications can be sent via email, SMS, or integrated into other business applications. For example, Hyland's OnBase offers integration for Microsoft Outlook which allows users to approve or reject invoices within Outlook.

Sample Integration for MS Outlook with OnBase by Hyland

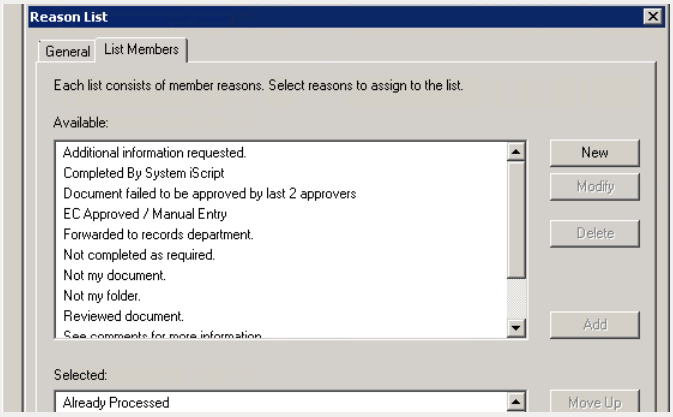


Rejection Reasons

Occasionally, an invoice needs to be rejected when there are cost discrepancies, issues with the vendor account, or other problems that require resolution prior to payment processing. The Approval Routing solution should be configured or provide the approver with Rejection Reasons and the option to add additional comments.

Rejection Reasons provide information for the users processing rejected invoices and reduces the time spent tracking down or resolving the issue.

Sample Rejection Reasons in Perceptive Content (ImageNow)



Approval Escalation & Backup Approvers

One of the least dependable aspects of Approval Routing are often the Approvers themselves. Across an organization, any number of people responsible for approving invoices may be traveling for business, on vacation, or just unavailable for days at a time. This creates a bottleneck for Approval Routing and Payment Processing which could cost an organization early pay discounts or even late payment penalties.

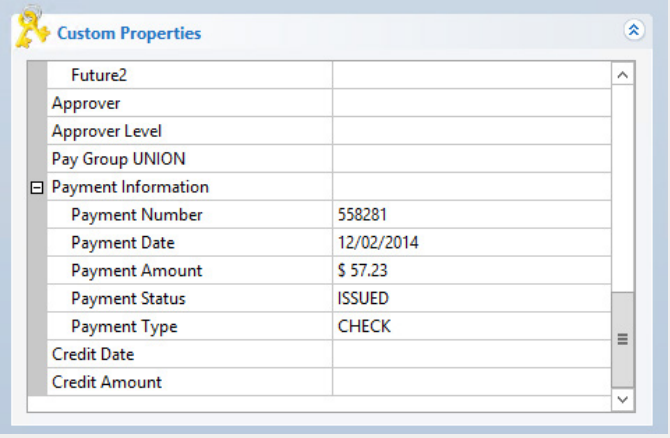
To ensure invoices are always approved and paid on time, ECM and ERP solutions offer the ability to set up Escalations and Backup Approvers. The Escalation threshold is set in the Approval Matrix and defines the number of days or business days an invoice can go without receiving an approval or rejection from the assigned approver. If that threshold is met, the invoice is escalated to the next level approver.

To address approvers on paid time off, most ECM and ERP solutions will also provide the ability to configure Backup Approvers. Assigning a backup will allow a different user to perform invoice approvals for that department while the approver is out of the office.

Payment Processing

When invoice images and data have been handed off or integrated to an ERP from an ECM solution, invoices are typically held in a pending queue for Payment Processing. The hand-off could occur prior or immediately following Approval Routing, depending on which system is being used (for Approval Routing). Either way, the ECM solution will hold invoice images until they can be matched and linked to the payment record or check number.

Payment Details in Perceptive Content (ImageNow)

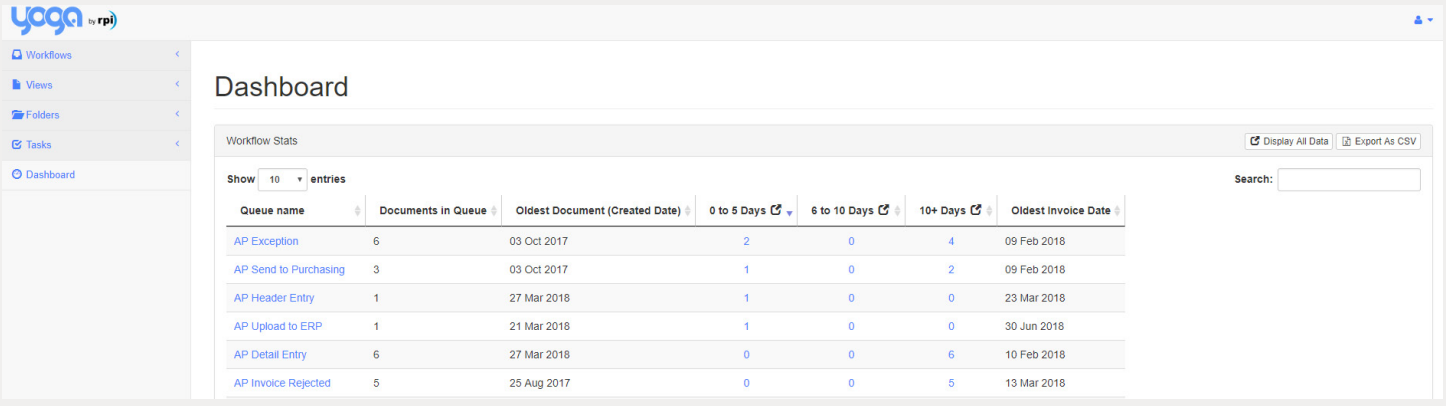


The ECM solution will run a scheduled task to connect directly to the ERP or check a secure directory for check images and payment information. When those records are found, check images may be imported and indexed, and invoices are updated with check number and payment information. This entire process can be customized to import and index as much or as little information needed, based on business requirements and ERP capabilities. When payment information is applied to an invoice, it can be routed out of workflow and archived.

Reporting & Analytics

One of the biggest benefits to AP Automation is the immediate and easy access to all invoices and invoice data at every point in the invoice processing workflow. This data availability creates the opportunity for powerful Reporting & Analytics, available to help AP leaders identify bottlenecks in the process, measure user performance and proficiency, and drive down invoice aging for vendor discounts and benefits. Reports can be created for almost any type or request, but the most common reports for AP Departments are Accrual Reports, User Statistics, and Workflow Statistics.

RPI's Proprietary Yoga Dashboard for AP Workflows



Accrual Reporting

Accrual Reporting demonstrates which invoices and invoice totals are currently being processed or awaiting final approvals. These are invoices that have not yet posted to your ERP for payment processing. This report can be scheduled to run and delivered to a group of users and can retrieve any index value or eForm value associated with the invoice.

Sample Accrual Report from Perceptive Content Business Insights

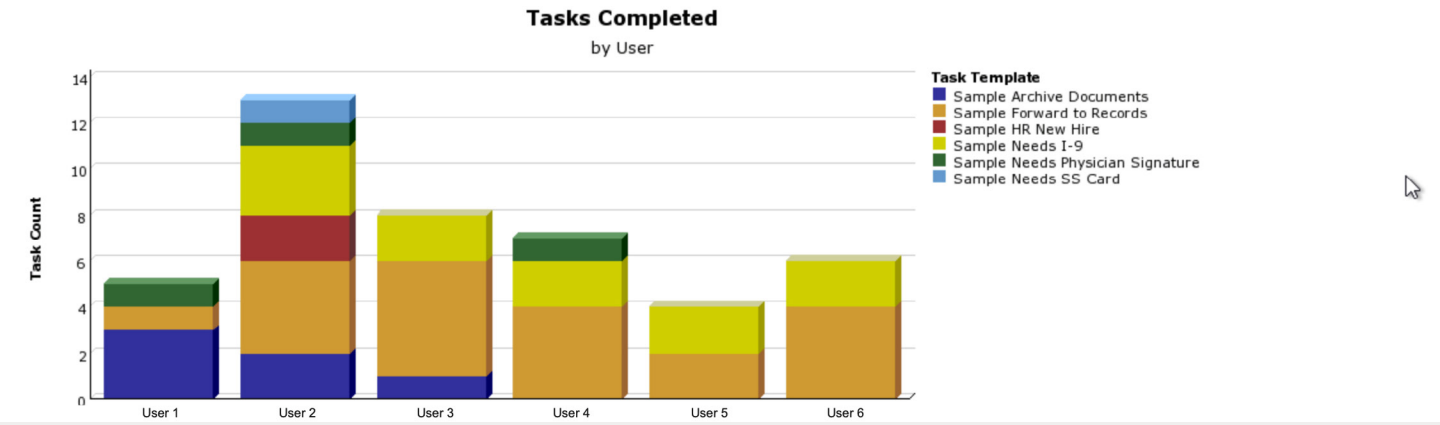
Total Numeric Custom Property

Drawer Name	Vendor ID	Invoice Number	Invoice Date	Vendor Name	Unique ID	Invoice Amount
Accounts Payable	BOCA123	BC335	07/04/2005	Boise Cascade		2,376.89
	BOCA123	BC335	07/04/05		301YT4G_0000JS11Y000	2,376.89
	BOCA123	BC336	07/04/05	Boise Cascade		98.08
	BOCA123	BC337	06/06/05	Boise Cascade		64.97
	COEX456	CE129	07/08/09	Corporate Express		23.89
	COEX456	CE130	07/17/2003	Corporate Express		897.98
	COEX456	CE167	03/03/2004	Corporate Express		897.98
	COEX456	CE176	03/02/2005	Corporate Express		1,897.98
	COEX456	CE176	09/30/03		301YT4G_0000K111Y000	1,897.98
	COEX456	INV101A	09/30/03	General Supplies		86.9
					Total for Accounts Payable drawer	**10,619.54**
					Total item count for Accounts Payable drawer	**10**
					Total for report	**10,619.54**
					Total item count for report	**10**

User Statistics

User Statistics reporting visualizes statistics for specific user accounts in your ECM. This report can show how many documents a particular user or group of users have processed and will help identify areas that may need assistance with load balancing. For example, if users in one department are processing significantly more invoices than another department, it could be an indication that the users in the second department need additional training or support. Regardless, user statistics help supervisors and leaders identify bottlenecks, pain points, and inefficiencies.

Sample User Statistics Report from Perceptive Content Business Insights



Workflow / Process Statistics

Workflow, or Process Statistics reports, identify how quickly invoices move through the invoice coding and approval process. This report uses status changes or workflow queue aging data to give a high-level view of how long it actually takes for invoices to be coded, approved, and paid. With this information, you can set benchmarks to forecast payments and identify and get ahead of bottlenecks. This report can also help identify where you may need process or workflow redesign to improve efficiency.

Sample Workflow Statistics in Perceptive Content (ImageNow)

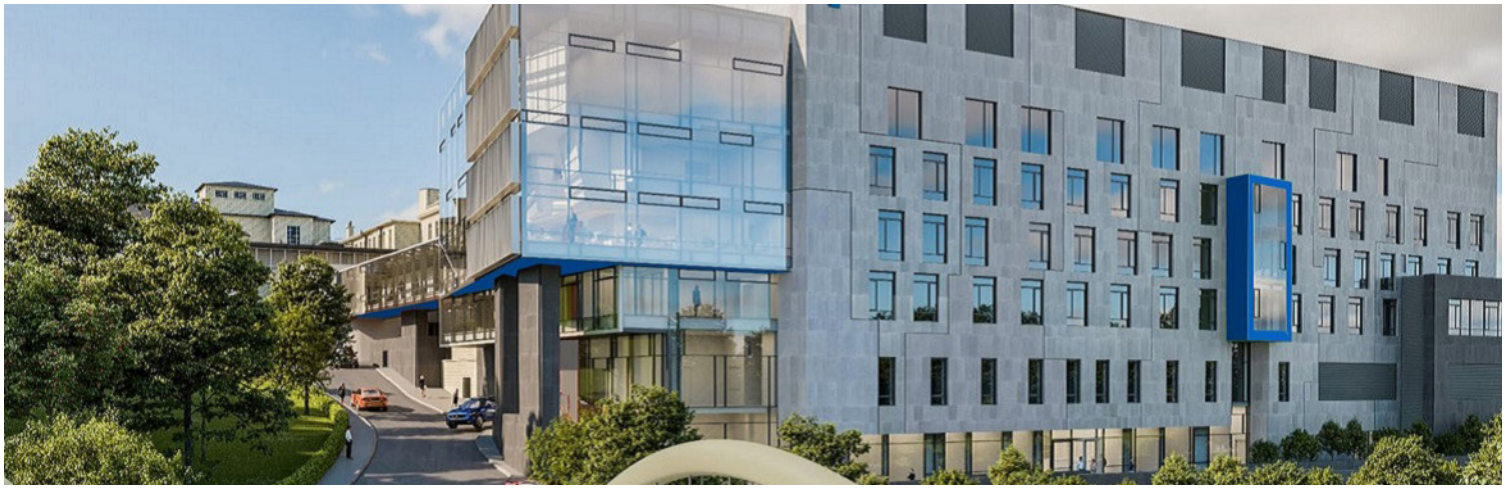
Workflow Queue Snapshot

teport Parameters
splay queues with no items: No
elected processes: Admissions, Financial Aid, Queue Setup, Round robin
elected queues: Greater than 15 selected

Workflow Process	Queue Name	Items In Queue	Idle Items	Working Items	On Hold Items	Pending Items	Completed Items
dmissions	ADM - Application Inbox	2	2	0	0	0	
	ADM - Rejected	1	1	0	0	0	
	ADM - Have Reqd Documents?	2	2	0	0	0	
	ADM - File Away	4	4	0	0	0	
	ADM - DC Applications	1	1	0	0	0	
	ADM - Complete	5	0	0	0	0	
dmissions		**15**	**10**	**0**	**0**	**0**	
nancial Aid	FA - File Away	1	1	0	0	0	

AP Automation by Industry

Accounts Payable and invoice processing is a critical business function for any business, organization, or non-profit. Across business types and industries, there are many commonalities and functional requirements that are the same, but there are also many that are unique and different. These differences create unique requirements that should be accounted for when evaluating AP Automation software.



AP Automation for Healthcare

Healthcare organizations and hospitals are in the business of treating and caring for the well-being, health, and actual life of their customers. As a result, many of the traditional back-office and administrative functions, including Accounts Payable, have a direct impact on patient care and therefore must be connected to the organizations Electronic Medical Record and Patient Financial Services or billing systems. Combined with strict local, state, and federal oversight and regulation, the healthcare supply chain is incredibly complicated, expensive, and effectively responsible for the life of the organization's patients.

These conditions create enormous pressure on Accounts Payable departments. Unfortunately, most AP managers are forced to staff up for low-skill and high volume tasks like manual data entry. However, rising costs of salaries and benefits often make this approach unsustainable financially and fails to improve the efficiency of processing invoices. Accounts Payable Automation is therefore a necessary evolution to reduce costs and delays while improving efficiency, accuracy, and transparency for invoice processing.

Through AP Automation, manual data entry and validation is eliminated by programmatic data extraction with Intelligent Data Capture. ERP or ECM workflows allow invoices to be automatically assigned and routed for approval. Throughout the entire process, AP managers have full transparency into invoice status and aging and AP processors are free to focus on higher value tasks and activities like finding discounts, competitive pricing, and resolving exceptions.

AP Automation for Manufacturing

Manufacturing organizations in the United States face enormous pressure to reduce costs and operate more efficiently in order to compete with international manufacturing operations that have significantly lower salary, benefits, and regulatory compliance costs. With the price of raw materials and goods fairly static, and most assembly lines already automated, manufacturers have to focus on back-office and administrative departments with time and resource intensive processes, such as Accounts Payable.

Automating Accounts Payable is similar in almost every way to assembly line automation. Intelligent Data Capture completely replaces the otherwise manual task of reading invoices, extracting invoice data, and validating that data against your accounting or ERP systems. This gets more invoices processed and routed to approvers faster, and with fewer errors. Additionally, approvers on the line or in decentralized locations have quick and easy access to invoices through web, mobile, or other application interfaces.

AP Automation for Public Services & Government

Serving the public is important and rewarding, but strict regulations and compliance requirements create unique challenges for local and state governments, agencies, and public utilities. Providing effective public services while navigating these challenges only makes back-office and administrative processes like Accounts Payable that much more difficult - and it can test the patience of vendors.

Accounts Payable Automation for Public Services & Government is an important and relatively easy way to reduce costs while also improving overall services. Getting invoices paid faster keeps local vendors happy and enables the organization to provide the public service better. The costs savings can be used to expand services and make additional investments in the community or constituency.

AP Automation for Higher Education

American colleges and universities are constantly looking to improve educational experiences for students, provide more innovative programs and extracurriculars, and recruit, retain, and develop high quality professors and educators. Competition for top students only exacerbates these priorities, requiring more funding and has resulted in rising tuition costs. However, the rate of increase is unsustainable, leaving institutions looking for innovative ways to cut costs and reallocate funds.

Accounts Payable departments often require a significant portion of college and university budgets, making the department a great opportunity for cost savings through automation. Similar to Transcripts Automation, intelligent data capture is a value driven software investment that reduces or eliminates manual data transcription from invoices into accounting, ERP, or ECM system. Because of the high volume of physical records, most institutions will also already have an enterprise content management (ECM) system which can be reused in Accounts Payable to support workflow and invoice archive.

About RPI Consultants

RPI Consultants is an industry leader in Enterprise Resource Planning, Enterprise Content Management, and Business Process Automation technical and functional consulting services. Specifically, RPI has extensive experience designing, implementing, and supporting **Infor Lawson**, **Perceptive Content** (ImageNow), **Kofax**, **OnBase by Hyland**, and **Brainware by Hyland** products and solutions.

RPI provides professional and technical services for new installations and upgrades, solution and technical health checks, new solution designs and implementations, custom development and system integrations, custom training, and environment and product migrations. RPI is also an authorized license reseller. For more information about RPI Consultants, including license and service quotes, product demonstrations, or general inquiries, visit **www.rpic.com**.

For more information about Accounts Payable Automation, you can also contact our Practice Manager directly.

Geoff Lilienfeld

RPI Consultants Partner, Content & Process Automation Practice

glilienfeld@rpic.com

(816) 806-2289

Contact RPI Consultants

(410) 276-6090

rpi@rpic.com

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Visit RPI Consultants

Baltimore, Maryland
101 N Haven Street Suite 201
Baltimore, MD 21224

Tampa, Florida
1413 Tech Blvd Suite 211
Tampa, Florida 33619

Kansas City, Missouri
111 W 20th Street
Kansas City, Missouri 64108

RPI Consultants partners with the industry's leading enterprise data, content and business process automation vendors to provide deeply integrated and value driven technology solutions.

KOFAX Platinum Partner

Hyland Authorised Solution Provider

infor Alliance Partner CloudSuite™ Specialized