

An End-to-End Invoice Automation Framework Benefits & Best Practices

A White Paper by



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Introduction

A detailed investigation will turn up a large number of costs that can be significantly reduced with end-to-end invoice automation, as well as a number of pain points that can be essentially cured.

Invoice Automation is, simply put, the automation of the invoice cycle, or at least as much of the invoice cycle that can be automated. Approvals, exception management, and supplier inquiries will still require human intervention, but a good End-to-End Invoice Automation solution will automate error catching and correction, automate approvals for exception-free invoices under the threshold, facilitate online collaboration with suppliers to rectify discrepancies, and provide a supplier a self-service portal to answer common questions. As such, an end-to-end invoice automation solution will provide many benefits.

What are the benefits that end-to-end invoice automation will provide?

Before we can answer this question, we first have to dive into the invoice cycle, identify the major costs, and expose the major pain points. Once we have done this, we will see that invoice processing costs, which can approach an average of \$38.77 in laggard organizations according to a 2011 Aberdeen study, are high primarily due to data entry and error correction costs; that processing times can reach as much as 30 days if the process is mostly manual; and that supplier inquiries and lost invoices can be even more costly.

A detailed investigation will turn up a large number of costs that can be significantly reduced with end-to-end invoice automation, as well as a number of pain points that can be essentially cured.

Lost invoices become a thing of the past when each invoice is automatically processed and associated with the supplier, retrieval times drop from an average of 2 to 10 days to 2 to 10 seconds, and the number of supplier inquiries decreases substantially when they are able to view the current status of their invoices in a self-service supplier portal. And these benefits are just the tip of the iceberg.

In this paper— after we review the invoice cycle, major costs, and pain points; and after we review the state of Invoice Automation today, which will include a discussion of the major technologies and fatal flaws —we will put forward the required framework for end-to-end invoice automation, outline the benefits it will bring, and provide 10 best practices for success.

The Invoice Cycle, Major Costs, and Pain Points

This section covers the typical invoice cycle, the major cost components, and the big pain points. While invoice management sounds like a relatively simple process, it's more involved than one might think, especially in a large organization with a lot of process overhead.

The typical (paper) invoice cycle consists of at least the following 6 steps:

- 1. Receipt**
The invoice is received, either by mail or fax, and routed to Accounts Payable.
- 2. Manual Data Entry**
An Accounts Payable (AP) clerk manually enters the invoice data.
- 3. PO / Goods Receipt Validation**
The AP clerk attempts to match the invoice to a purchase order (PO) or goods receipt to verify validity, and if a PO or goods receipt is found, the clerk attaches the PO or goods receipt to the invoice (and fills in any missing data).
- 4. Approval Routing**
The invoice is routed to an individual who has signing authority, usually through intra-company mail.
- 5. Review and Filing of Approved Invoices**
When the invoice is returned with an approval, a payment authorization is created and the original is filed somewhere in the stacks.
- 6. Payment**
When the controller gives final authorization for payment, the invoice is paid.

Major Costs

There are a large number of costs associated with paper invoices, which can reach, on average, as much as \$40 to process in the U.S. and €30 in Europe. These costs include, but are not limited to:

- 1. Data Entry Costs**
Data entry can account for 75% of overhead in an Accounts Payable department.
- 2. Error Correction Costs**
One in five invoices has errors or missing data. Trying to identify the errors or missing data using a manual process on paper invoices is very costly. A 2010 Forrester study found that each paper invoice error (and a paper invoice scanned and delivered as a PDF is still a paper invoice) costs a company an average of \$53.50 to rectify.
- 3. Costs Associated with Answering (Supplier) Inquiries**
AP departments that use manual methods that revolve around paper invoices spend 22% more time responding to invoice inquiries than AP departments that use automated processes on e-Invoices.
- 4. Lost Document Replacement Costs**
The cost to locate a lost invoice can reach \$120. The cost to replace a lost invoice (in human capital) can reach \$220.
- 5. Opportunity Costs from Lost Discounts**
The typical invoice cycle in a company that uses manual methods based on paper invoices can reach 33 days, on average. Considering that many early payment discounts expire within 30 days, the opportunity costs add up.

Pain Points

Trying to identify particular pain points in a manual e-Invoicing process is, in some ways, an exercise in futility as every step of the process is painful. However, some steps are much more painful than others. Specifically:

1. **Data Entry**

Not only can this take up to 75% of an AP's department time, but manual data entry is ripe with errors, which increases the chance of misplacement of invoices, overpayment, duplicate payment, and even fraudulent payments.

2. **PO / Goods Receipt Validation and m-way match**

It can be hard to locate the associated goods receipt and PO and even harder to do good, detailed, matching against all invoices. The situation is complicated by the fact that one in five invoices has missing or bad data, making data validation even harder. As a result, less than 10% of invoices are thoroughly checked and (up to) 90% of errors slip through. This is why audit recovery is still a thriving business.

3. **Approval Routing**

Who should get the invoice? Always sending the invoice to the Director of Procurement or to a Department Head sounds good in theory, but they are typically the busiest personnel and slowest to respond. Invoices should be routed to the lowest person on the food chain with the approval authority, and then routed up the chain if that person is unavailable, but the amount of time to figure that out for every invoice typically means that only a few people get a lot of invoices, which causes processing delays.

4. **Long-Term Storage**

If the organization gets tens of thousands of invoices a year, which have to be stored for at least seven years for audit purposes, where does it put them all? What if the organization gets hundreds of thousands, or millions, of invoices a year? A single 4-drawer filing cabinet is going to hold at most ten thousand, and that's assuming they are only one page invoices. In reality, a large company is going to fill six or more filing cabinets a year with invoices alone! It's not long before the organization has filled a room just with invoices, and not much longer before boxes filled with invoices are taking up significant space in the warehouse. Need an invoice from two years ago? Good luck!

The State of Invoice Automation

Invoice Automation is, simply put, the automation of the invoice cycle, or at least as much of the invoice cycle that can be automated. Approvals, exception management, and supplier inquiries will still require human intervention, but a good End-to-End Invoice Automation solution will automate error catching and correction, automate approvals for exception-free invoices under the threshold. It will also facilitate online collaboration with suppliers and provide a supplier a self-service portal where they can get answers to common questions and rectify discrepancies on the fly.

A Promise Unfilled

The state of Invoice and AP Automation today is pretty dismal.

Despite the recent appearance on the market of some modern solutions that can revolutionize invoice management and automation at even the largest Fortune 500 and Global 3000 companies, the state of Invoice and AP Automation today is pretty dismal. The 2012 AP Automation Survey Report found that nine in ten organizations still deal with paper invoices and that 90% of invoices are paper-based in half of the organizations that responded. Why is this? To begin with, the market is highly fragmented and the technologies used by suppliers are diverse. Then, there is a lack of commonly agreed-upon technological standards and a complex array of global tax legislation to deal with. Above all, there is the fact that historically, the majority of e-Invoicing solutions did not deliver.

Just how bad is the situation? Aberdeen's 2012 study of 180 organizations, reported in *AP Invoice Management in a Networked Economy*, found that laggard organizations, which represent the bottom 30% of organizations, require an average of 16.3 days to process an invoice from receipt to approval. The good news: this is a significant improvement over their 2009 study on *E-Payables: Invoice Receipt and Workflow* that found laggard organizations required an average of 32.9 days to process an invoice. The bad news: it's still a very large amount of time, especially if an organization wants the opportunity to take advantage of early payment or dynamic discounting.

These lengthy processing times are extremely costly. A 2010 Forrester study found that the average cost of processing a paper invoice was \$30, compared to \$3.50 for an electronic one;

a 2011 Quocirca study estimated the cost of processing an invoice at £18, which is roughly \$30, compared to the £2 (\$3.00) it cost for an electronic one; the 2011 Aberdeen report on Invoicing and Workflow found that it cost laggard organizations as much as \$38.77 to process a single invoice. In comparison, best-in-class organizations, which heavily used Invoice Automation, had an average processing cost of \$3.09.

And the situation in much of Europe is even worse. Quocirca's 2011 study reported that more than 90% of the 30 billion invoices sent every year in Europe are paper. The costs associated with so much paper are considerable. A 2010 Deutsche Bank Research publication suggested that e-Invoicing in Europe could yield savings of up to €250 billion per year. In addition, it takes 12 million trees to supply all of the paper required for the paper invoices generated in Europe alone!

Then there are the issues that most organizations are experiencing with rebates, variable discounting, and supply chain finance. Many p-Card programs and suppliers offer rebates when certain dollar or volume thresholds are met, which most organizations fail to capture because p-Card statements don't provide the item level detail necessary to detect when a rebate threshold has been reached. Many suppliers offer (variable) early payment discounts if an invoice is paid early, but by the time a paper invoice gets in the system and reconciled, it's often too late. Suppliers can often only take advantage of supply chain financing once the invoice has been accepted and approved. As a result, these suppliers take a financial hit every day they wait for this approval, which eventually gets passed back to the buyer in cost increases. As discussed in Appendix B, each of these issues could be resolved with a good End-to-End Invoice Automation solution.

End-to-End Invoice Automation, supporting a number of processes, consists of and is supported by multiple technologies. This remainder of this section will overview these technologies, explain some of the related processes, and explore some of the weaknesses in traditional e-Invoicing technologies. It's important to understand where traditional e-Invoicing solutions fall short in order to make a good decision when selecting a modern Invoice Automation solution.

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A Melting Pot of Technologies

A large number of technologies can be used in the implementation of Invoice Automation. This section summarizes the most common ones, which are detailed in Appendix A.

The majority of existing technology solutions tend to focus on catalog management and supplier integration. There are traditional catalog and punch-out solutions that allow a buyer to select products (and even services) using consumer-style shopping carts (on supplier sites); supplier networks that allow a buyer to find a supplier and products (and services) of interest; EDI/XML technologies for automated delivery of purchase orders, invoices, and receipts; supplier portals that allow the supplier to input invoices and catalog information directly into the buyer's e-Procurement platform; (I-)OCR technology that allows a buyer to scan supplier invoices in paper/PDF format and extract the relevant data directly into their e-Procurement system; and print-to-platform technologies that allow a supplier to *print* an invoice into a buyer's e-Procurement system if they are using SaaS.

In addition to these core technologies there are also p-Cards that allow a buyer to procure goods and services on the company charge card and which provide the organization's AP department with an accurate list of payments made to suppliers; e-payment technologies (including ACH, Wire, and secure AP integrations to online payment services); and spend analysis solutions that allow a Procurement department to dive into spend. Finally, in the support of these technologies, there sophisticated data stores, automated data matching products, and dashboard solutions may also be required.

The Fatal Flaws

The primary weaknesses with most Invoice Automation solutions today fall into the following three categories:

Connectivity

In the world of e-Invoicing, there aren't many standards. The *big ones*, and we say this almost sarcastically due to the low rates of adoption, are EDI (Electronic Data Interchange) and CXML (Commerce eXtensible Markup Language). However, very few procurement platforms and e-Invoicing solutions support either of these formats (or standards). In addition, many e-Invoicing solutions use proprietary formats that are only available to buying organizations that use instances of those particular e-Invoicing solutions and to the suppliers that (pay to) take part in their supplier networks. As a result, there are buying organizations waiting for the flood of e-Invoices that never arrive, as only a few suppliers have solutions that can deliver e-Invoices in the supported format.

As many e-Invoicing efforts in the past required them to acquire YAT (yet-another-tool), there is serious pushback from many suppliers at the mere mention of e-Invoicing.

Supplier Resistance

If the e-Invoicing solution requires a supplier to join another network, acquire (and pay for) another piece of technology, or add one more exception to their invoicing process, the supplier is going to resist. It's not efficient to follow a different invoicing process for every customer, and as many e-Invoicing efforts in the past required them to acquire YAT (yet-another-tool), there is serious pushback from many suppliers at the mere mention of e-Invoicing.

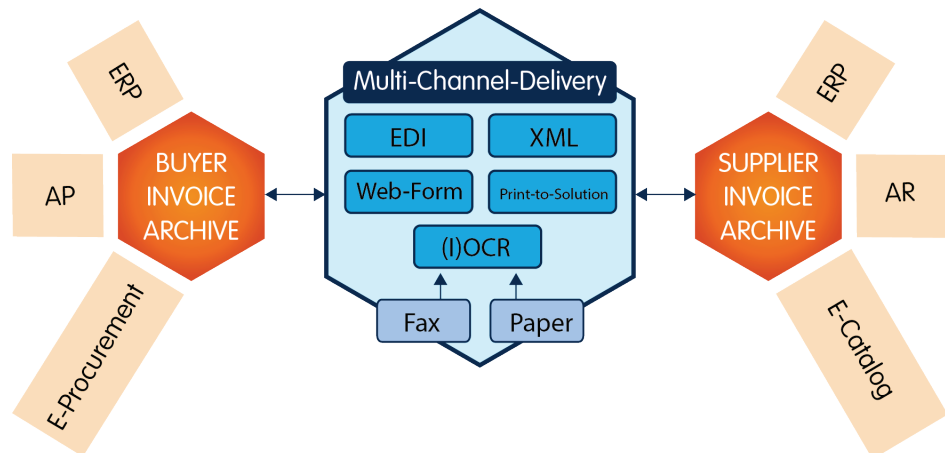
ROI

Historically, Invoice Automation projects have promised significant returns, but delivered few. This is primarily due to the fact that most of the promised savings depend on tactical workforce reduction, which doesn't happen unless the average manpower effort required per invoice can be reduced. In order for the average manpower effort to decrease significantly, e-Invoices have to reach the point where the manual process is removed from 80-90% of the invoices received. Since most e-Invoicing platforms were restricted in the format of invoices they could accept, which resulted in supplier resistance, most organizations didn't reach the threshold required to see the promised ROI.

A Framework for End-to-End Invoice Automation

The framework for end-to-end invoice automation is surprisingly simple, especially considering that most of the technology for invoice processing, approval, and archival already exists in organizational ERP and AP systems. The primary elements that are missing are support for multi-channel invoice delivery and receipt and support for the capture, tracking, processing, and integration of all of the related data elements from purchase order (PO), to the invoice, and through the goods receipt and (e-)payment.

End-to-End Invoice Automation Framework



Key Capabilities

In order to be effective, an End-to-End Invoice Automation framework requires a few key elements; namely, multi-channel invoice delivery and receipt, a central invoice archive, data integration and validation, and AP and ERP integration. In addition, it must also support supply chain finance efforts, either by enabling the organization to offer and take advantage of early payment discounts or by integrating with supply chain finance solutions that support factoring and/or other forms of supplier financing.

Multi-Channel Invoice Receipt and Delivery

Depending on the technical sophistication of the supplier, invoices could be paper, e-paper, open EDI or CXML, or in a

proprietary platform format. These invoices could come in by mail, fax, e-mail attachment, FTP, web portal, or direct transmission to the e-Invoicing platform. A proper framework needs to be able to deal with all formats and all delivery methods. Paper invoices need to be scanned, and scans, whether done manually, received through e-Fax, or extracted from e-mail attachments, need to be put through (I) OCR. Web portal submissions need to populate the e-Invoice system in a native format, and direct transmissions need to be converted to the native e-Invoice system format.

Central Archive

All invoices need to be stored in a central archive, in the native format and the original format in which they were received. If the central archive does not permit storing the invoice in the native format, exceptions, errors, and disputes cannot be dealt with properly as the individual tasked with resolution will not be able to refer to the original documents.

Data Integration and Validation

One of the biggest costs in invoice processing is error correction and one of the biggest pain points is purchase order and goods receipt validation and m-way matching. In order for an Invoice Automation solution to be truly effective, it has to integrate data from all documents related to the invoice, including purchase orders, goods receipts, contracts, and e-Payments and validate that the invoice matches the appropriate documents. Without this data integration, it is next to impossible to do m-way matching, identify missing or bad data, fill in the missing data elements, and identify the line items or amounts that need to be reconciled with the supplier.

In order for an Invoice Automation solution to be truly effective, it has to integrate data from all documents related to the invoice.

AP & ERP Integration

Efficiency and cost savings come from automating as much of the invoicing process as possible. For this to occur, data entry needs to be minimized. In an average organization, the bulk of data entry occurs at two choke points in the process. The first choke point is when a paper invoice is received and the invoice has to be entered into the invoice management system. The second choke point is when the invoice needs to be entered into the ERP system for long-term archiving and into the AP system for payment. An effective Invoice Automation solution therefore

must be integrated with the AP and ERP systems of the enterprise.

Supply Chain Finance Support

A good e-Invoicing solution not only lowers costs, but provides value to the organization beyond the operational cost savings it delivers. One of the values a good e-Invoicing solution can deliver is the ability to tap into Supply Chain Finance (SCF) solutions due to the ready availability of invoice, supplier, and buyer data that can be used in early payment / dynamic discounting programs and factoring.

Benefits

The benefits of End-to-End Invoice Automation fall into two categories: cost savings and value generation.

Cost Savings

The primary, immediate benefit that will materialize when an organization achieves 80% to 90% invoice automation is an 80% to 90% decrease in the average cost to process an invoice, and thus an 80% to 90% savings overall on invoice processing costs. In addition, it will allow the organization to increase processing volumes without adding staff.

75% of the resources in most AP departments are spent on manual data entry, validation, and reconciliation.

One of the big reasons for the level of savings that will be achieved is the fact that 75% of the resources in most AP departments are spent on manual data entry, validation, and reconciliation. Take out the manual processes, take out the biggest cost.

However, the benefits don't end with direct cost savings.

Value Generation

End-to-End Invoice Automation will also deliver the following benefits:

Significantly Reduced Overpayments

Given that most recovery audit service providers claim that they can recover approximately 1 million for every 1 billion spent by an organization, it's a safe bet that an average organization is overspending by at least 0.1% every year as a result of invoice errors, duplicate invoices, and duplicate payments. Given that most recovery audit providers limit themselves to the 20% of suppliers that constitute 80% of spend, this estimate is probably on the low side. This doesn't count the fraudulent invoices that get paid and are never caught because the organization doesn't have the processes in place to validate all invoices.

Significantly Higher Capture Rates on Early Payment / Dynamic Discounts

If an invoice gets in the system the day it is sent, the organization will be able to take advantage of any and all early payment / dynamic discounts associated with the invoice. If the invoice, which has a sliding, dynamic, discount over the first 30 days, does not get into the system for 16 days, as is the case in many organizations that still rely primarily on manual methods, over half of the discount opportunity is lost.

More Spend Under Management

Many organizations struggle to increase their spend under management, primarily because they have poor spend visibility. With End-to-End Invoice Automation, organizations can capture almost every single invoice and gain close to 100% spend visibility.

12% Savings on Organizational Spend

Multiple studies have concluded that an organization that can employ advanced sourcing strategies – such as detailed cost modeling, spend analysis, and decision optimization – will save an average of 12% across its (e-) Sourcing projects. What these studies don't always make clear is that this is only possible if an organization has deep and full visibility into its spend. This visibility requires 90% or better spend under management, and

With End-to-End Invoice Automation, organizations can gain close to 100% spend visibility.

this in turn requires an organization to have a modern Invoice Automation solution that provides visibility to complete invoice details, not just the totals stored in the AP system.

Best Practices

This section presents the top ten best practices that go a long way towards making an End-to-End Invoice Automation project a success.

Executive Support

An Invoice Automation project will require process and technological change in the organization, which, like all change, is likely to meet with some resistance. Therefore, public (and vocal) executive support is a key element of success and should be secured before the project is announced.

Augment the Existing Infrastructure

While many-a-vendor may spin a good yarn about how successful your organization will be if it implements the vendor's end-to-end Procure-to-Pay framework (which includes RFX, Purchase Order Management, e-Invoicing, e-Payment, and Supply Network / Finance Network Integration), the reality is that big-bang projects like this, which require replacing a number of existing technology solutions and revamping all of your Procurement processes, typically end in big bangs. Some of the costliest supply chain disasters in history, which have resulted in the bankruptcy of billion dollar companies, were a result of overambitious technology infrastructure projects.

Most organizations have a decent (if not great) ERP system that can serve as an archive, have one or more Business Intelligence (BI) tools, have a good AP system as part of their accounting system, and have some form of Procurement / Sourcing solution that meets most of their basic needs. All they are typically missing is an End-to-End Invoicing Automation solution that can accept invoices in whatever format the (majority of the) supply base uses and push them into existing organizational systems for processing and payment using an intelligent workflow. Augmenting the existing infrastructure allows an organization to achieve end-to-end invoice automation faster and at a lower-cost than replacing the infrastructure.

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Allow Sufficient Time for Process Re-engineering

Nothing happens overnight, especially when success requires buy-in from not only a number of organizational stakeholders (in AP and Procurement) but a large supply base that typically does not like *solutions* being pushed on them, even if such a solution is one that actually makes the supplier's life easier. Time will be needed to refine the process, get buy-in, implement the new technology, work the kinks out of the new project, and, most importantly, onboard the suppliers that account for 80% to 90% of the organization's invoices.

Think from the Users' Perspective

Some Procurement systems will only be used by a few Senior Buyers or Analysts. If the systems work for these users, then there isn't much to worry about from a usability perspective. Invoice Automation is not one of those systems. It has to work for Procurement, for Accounts Payable, and for the Suppliers' Accounts Receivable departments. With respect to the functions that each of these users have to perform on a regular basis, the workflow should be obvious. If it's not easy to use by the people who have to use the system everyday, there will be pushback.

Have Readily Available Quick Reference and Training Materials

Given the complexity of today's systems, it's almost impossible to make every function easy and obvious to use for every user. Accessing the customization option on the monthly report, for example. That might be an option off of the bottom sub-menu that a user hardly ever accesses. For every regular task there should be quick reference materials for experienced users and detailed training for new users. This goes a long way towards quelling pushback and concerns from users who see that the Procurement team thought about their needs before selecting a system.

System Integration Comes First

While it might be tempting to acquire a web-based SaaS e-invoice solution and get started right away, it's important to remember that the ROI comes from automation of the full cycle, which includes receipt, approval, payment (through the AP), and

permanent storage (in the ERP). If Procurement doesn't integrate with the AP and ERP systems before the e-Invoicing solution comes on-line, there will still be manual data entry into the AP and ERP systems, which will keep in place the laborious process and the errors that come with it.

Don't Forget the Financing

e-Invoicing saves manpower and reduces errors that lead to duplicate payments, over-payments, and fraudulent payments, but the direct, measurable, immediate savings are limited to the operational efficiencies that e-Invoicing produces. If the organization can achieve 80%+ straight-through processing, the ROI is good, but if not, the ROI is limited. The ROI multiplies once financing is added into the mix, using the efficiencies created by e-Invoicing to take advantage of early payment discounts, dynamic discounting, and factoring.

The success of e-Invoicing depends on supplier buy-in.

Make sure the platform provides the supplier with a plethora of options to submit e-Invoices.

Definitely Don't Forget the Supplier

The success of e-Invoicing depends on supplier buy-in. Make sure the platform provides the supplier with a plethora of options to submit e-Invoices, that the portal the suppliers use to make inquiries is extremely easy to use, and that time is allocated to help the supplier onboard.

Use Workflow Prioritization and Reminders

Even if the bulk of e-Invoice processing is automated, there may still be a workflow that needs to be followed for exceptions. Any invoice over a certain threshold, even if it matches 100% against a contract, may need to be approved by someone. Someone is going to have to make an early payment / dynamic discounting decision. A system that prioritizes a user's workflow to ensure that invoices with discount opportunities get processed first and that orders tasks by priorities will maximize success. Also, studies have found that systems that sending out automated e-mail reminders have 19% faster processing times.

Measure and Improve

We all know that what gets measured gets managed; more importantly, what gets managed gets improved. Organizations that are best-in-class in Invoice Automation are 156% more likely to measure AP performance at least monthly.

Furthermore, companies that measure monthly or more are far more successful in achieving Days Payable Outstanding (DPO) targets, with a variance of only 0.9% vs. the average of 17.5%.

Case Study

If an organization as large as Clalit can go fully automated, any organization can do it.

Clalit Healthcare Services, the world's second largest HMO operating 1,400 clinics, 14 hospitals, 400-plus pharmacies, and over 800 other medical facilities, transformed its heavily-manual, time-consuming, and error-prone invoice management process into one that is fast and virtually error-free using Nipendo's Supplier Cloud platform.

Considering that Clalit, with an annual purchasing volume of over \$2.5 Billion US, receives over 2 Million invoices a year (which required over 30 Million sheets of paper) and required 1,500 employees in the Procurement and A/P functions to process these invoices, this was a huge success for Clalit.

In addition, the invoice validation rules found that as a result of recent changes in tax rates, many suppliers were entering incorrect rates. The system identified errors in over 1,000 invoices totaling more than \$12 Million. These errors were captured by Nipendo's validation rules and resolved by the suppliers, saving Clalit hundreds of thousands of dollars in overcharges as well as many hundreds of working hours of reviewing the invoices and fixing these errors manually.

If an organization as large as Clalit can go fully automated (and free up hundreds of employees for more strategic tasks), any organization can do it.

More details can be found by [downloading the complete Clalit case study](#) from the Nipendo website.

Conclusion

After reviewing the invoice cycle and its associated costs and pain points, we moved on to a discussion of Invoice Automation and found that, despite the recent appearance on the market of some modern solutions that can revolutionize invoice management and automation at even the largest Fortune 500 and Global 3000 companies, the state of Invoice and AP Automation today is pretty dismal, with 90% of invoices being paper-based in half of the organizations that responded to the 2012 AP Automation Survey Report.

Digging deeper, we discovered that laggard organizations had to spend as much as \$38.77 to process a single invoice, took up to 33 days to process that invoice, had to spend an average of \$53.50 to rectify any errors that were discovered on the invoice, and, if the invoice was lost, had to spend up to \$220 to replace the invoice. We also discovered that most Accounts Payable organizations were buried under mountains of paper, were able to thoroughly validate at most 10% of invoices that passed through the organization, and spent three quarters of their time on data entry.

Why is the situation so dire? A number of reasons. The market is highly fragmented, the technology used by suppliers is diverse, there is a lack of commonly agreed upon technological standards, there is a complex array of global tax legislation to deal with, and most of the technologies don't deliver on the promises they make.

However, despite the confusion, there is a framework for end-to-end invoice automation based on multi-channel invoice delivery and support for the capture, tracking, processing, and integration of all of the related data elements from the purchase order (PO), to the invoice, and through the goods receipt and (e-)Payment. If this framework is properly implemented, a number of benefits will materialize. In particular, once the organization achieves 80% to 90% invoice automation, the organization will see significant savings on overall invoice processing costs. This benefit alone makes it all worthwhile. The decreased storage costs, the automatic identification of taxation errors, and the ability to refocus a large number of AP staff on more strategic tasks is just icing on the cake.

Appendix A: e-Invoice Technologies

p-Card

p-Card, short for purchasing card, is a form of company charge card that allows goods and services to be procured without following the typical purchasing process of the company. The advantages of a p-Card are that purchases can be quick and easy and the organization gets a summary of who was paid what, but the disadvantages are that controls are limited (in that a buyer can purchase anything up to her limit) and documentation on what was bought is even more limited still – as all the AP department sees is a payment to a supplier.

EDI/XML

EDI, short for Electronic Document Interchange, and XML, short for eXtensible Markup Language, are two methods of data encoding that can be used to deliver invoices electronically to an organization that is setup to accept invoices in those formats, provided that both parties agree on a proper invoice structure as both technologies are capable of supporting many invoice formats. The advantage of these technologies is that if both parties employ solutions that support the same invoice format and delivery over one of these technologies, the organization has a true invoicing solution, but the reality is that many formats are proprietary or adopted by only a few solutions.

(I) OCR

OCR, which is short for Optical Character Recognition, and I-OCR, short for Intelligent Optical Character Recognition, are technologies that are employed to scan invoices and convert them to electronic invoice equivalents. In the case of I-OCR, the technology also tries to validate header data elements of the invoice so that it can be matched to a supplier or account, and, if possible, a purchase order, goods receipt, or even a contract. The advantage of OCR is that paper invoices can be scanned and processed electronically. The disadvantage is that while a good solution can properly convert up to 99% of invoices, some invoices, which use unusual formats or which are missing data, will not be properly parsed and if the solution believes enough data is extracted, the AP clerk will not be alerted to any exceptions that need to be manually processed.

Catalogs

On-line catalogs allow a buyer to select products or services they need from a corporate catalog solution that is populated with approved products at approved prices. The primary advantage of such a solution is that it can automatically generate a purchase order for the seller and an invoice for the buyer that contains all of the relevant data and correct, approved values. The primary disadvantage is that the catalog needs to be maintained, or the data will not be up to date and invoices and POs will be generated with wrong amounts, discontinued products, and so on.

Supplier Portals

A supplier portal is generally implemented as a supplier self-service solution where they can submit, or create, electronic invoices for the buyer, inquire about the status of existing invoices and payments, communicate with the buyer, and initiate disputes over the web. The advantage of such a platform is that a web-savvy supplier has a free platform that they can use to create e-Invoices, check the status, and communicate with the buyer. The disadvantage is that every supplier portal is different and a supplier that supplies hundreds of buyers needs to learn hundreds of systems in order to achieve the advantages of e-Invoicing.

Print-to-Platform

A print-to-platform solution, which is one of the newer solution offerings in the e-Invoicing space and only offered by a handful of vendors, is a plug-in that runs natively on an end user's machine and allows the end user to print invoices direct to a SaaS-based (Software as a Service) platform that will direct them to the appropriate buyer instance. Just like an end user can download an open source print-to-PDF solution, such as PDFCreator on Sourceforge, install it, and print to PDF from any Word Processor on her machine, this solution will let the end user print from any invoice generation tool to the SaaS-based platform. If the Print-to-Platform solution prints to a platform used by a large number of buyer organizations, it saves the supplier organization a lot of time and headaches.

Indexed Searchable Archive

What's preferable? One thousand filing cabinets or one hard drive? If an invoice, which is mostly text data, takes 100K, then 1G is enough to store 10,000 invoices – which would take one filing cabinet to store. Today's consumer hard drives can hold 3 TB, and can easily store one thousand filing cabinets worth of invoices with lots of room to spare for indexing for fast retrieval. This is the advantage of a good archival solution – an organization eliminates the warehouse and replaces it with a hard drive, and three backups at three different locations. Plus, retrieval times are reduced from two to ten days to two to ten seconds.

Supplier Network

A supplier network is an online network that allows an organization to discover, connect, collaborate, and do business with existing and new suppliers that can meet its needs. The advantages usually relate to supplier discovery and quick exchange of electronic documents. The disadvantages typically relate to the fees to use the network and send payments.

e-Payments

e-Payments is short for electronic payments and generally refers to ACH (Automated Clearing-House), wire, or other forms of electronic payment. An advanced e-Payment solution will integrate with a banking solution to automatically send e-Payments upon approval. The primary advantage is that, provided the e-Payment solution also integrates with the AP solution, payments are automatically scheduled and delivered upon approval, and payment confirmations automatically downloaded from the bank. The disadvantages are typically the high cost of such a solution and the limited number of banking systems and AP systems supported.

Automated Data Matching

Automated data matching tools, commonly used in conjunction with (I) OCR solutions, try to match invoices to purchase orders to goods receipts to contracts automatically to properly classify and validate invoices before they are routed for approval, or, depending on organizational workflow rules, automatically paid if they are below a threshold and not detected to have any errors or exceptions that need to be manually dealt with. The advantages of such a solution is that they increase automation and throughput and decrease the number of overpayments, duplicate payments, and fraudulent payments while decreasing the amount of invoices that need to be manually reviewed and corrected.

Dashboards

Dashboards summarize the current status of organizational processes. They are customized to display one or more metrics on the current state of the process(es) they are designed to monitor, display the current status of active projects, and summarize current action items for the current user. The primary advantage is that the dashboard gives a quick snapshot into the current status of an e-Invoicing initiative. The primary disadvantage is that the dashboard gives a quick snapshot into the current status of an e-Invoicing initiative. If the dashboard indicates that all of the metrics are within the green, the user might be lulled into a false sense of security and not realize that a 20% improvement would yield 40% more opportunities for early payment discounts, that everything is green because a misconfiguration resulted in the import of bad benchmark data and the organization is actually doing worse than its peers, or that performance has been decreasing for the last three months.

Appendix B: A Trio of Torments

Invoice Automation supports more than just the delivery, receipt, processing and payment of invoices – it also supports a number of value-add processes that include those described in this section. However, these value-added processes cannot be taken advantage of unless the solution is a true Invoice Automation solution that is properly integrated with the organization’s e-Procurement process. So while there are significant savings to be had, most organizations agonize about how they are going to capture them.

Rebates

Many p-Card programs and suppliers offer rebates on certain purchases when certain dollar or volume thresholds are met. An e-Invoicing solution that captures all of the historical transactions with a supplier can automatically detect when a rebate condition has been satisfied and apply a rebate to the invoice or submit a refund request to a supplier, depending on the rebate conditions.

Variable Discounting

Not only do some suppliers offer early payment discounts, some suppliers offer early payment discounts on a sliding scale depending on how early a buying organization wants to pay. With e-Invoicing, buying organizations can not only take full advantage of variable discounting as the invoice is in the system day one, but the organization can optimize the best time to pay – which is a function of discount, cash on hand, other obligations, and other cost-saving opportunities.

Supply Chain Finance

e-Invoicing puts suppliers in a better position to take advantage of Supply Chain Finance offerings. The second a supplier’s e-Invoicing solution is notified that an invoice has been received and accepted by the buying organization, it can push the invoice to a factoring platform to get offers for immediate cash for operations. If the invoice is with a buying organization with a good credit rating, chances are the supplier can get better financing than it can from the local bank that might charge 20% or more for short-term financing. This is also a win for a buying organization that can’t pay early as lower supplier costs translate into lower buyer costs.

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