



Uncovering The 7 Costs To
Process An Invoice
& What To Do About Them!



...a brief note on the
author



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“ That which
costs little
is less valued. ”
-Miguel de Cervantes

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Dear Reader:

Having consulted with hundreds of organizations and implemented solutions for some of the largest companies in the world we've seen a breadth of challenges to processing payables efficiently. Over the course of time, we've helped these companies transform these burdened processes through solutions we architected and deployed.

With the advent of cloud computing and a networked economy, we're changing the game and paving a way for businesses of any size to realize the benefits of AP automation. Payables automation delivers significant reduction to an organization's cost to process an invoice. Surprisingly, the cost to process an invoice (CPI) is not a one dimensional structure that revolves around burdened labor costs for those associated with the physical processing of invoices. Rather, there are a slew of costs throughout the process that we'll address piece by piece to provide a much more comprehensive picture of what CPI amounts to and what to do about it in your business.

We'll examine the following cost components in the ensuing pages to arrive at a holistic view of what comprises true CPI in its totality:

- CPI – Staff – AP & Non-AP
- Distribution
- Filing & Storage
- Retrieval
- Accruals
- Opportunity Costs
- Intangible Costs

So, before we dive right into the meat and potatoes of these costs, we have a couple quick questions for you.

If you're the manager of an Accounts Payable or Shared Services Department within a company and the CFO asks you what your cost per invoice is... how will you answer the question?

In this eBook, we are going to give you some information to help you answer that question.

And here is the second question to ponder...if you had a Non-PO expense come across your desk for only \$5 what should you do with it?

Before you think it through we will share with you what we've seen in our travels as a classic example for traditional AP in the initial chapters and we'll then move into the more detailed items we laid out earlier.

We appreciate you taking the time to better educate yourself about this subject and we invite your feedback on our blog [here](#).

Please enjoy!

- The CloudX Team





Here is a classic example of a typical AP process in a non-automated environment.

Routing:

The invoice would first get routed to a department that would determine what the appropriate cost center is to book the expense in. Hopefully that department is across the hall, but it is possible that it could be on another floor in the building, or even another location down the road, or maybe across the country. In a worst case scenario that invoice would need to get routed to a distant location – so what are your options?

Scan and email the document?...Who scans it and where is the scanner?

Inter-Office Mail?...Toss it in the mail cart!

US Postal Service?...At \$.45 a pop, we're getting up there...

Fedex/UPS?...Now we're talking big bucks.

Carrier Pigeon?...Their limited range poses challenges to organizations with a broad geography.

Booking:

Once the invoice gets to that location someone is going to figure out what cost center to book the invoice to. In most cases that person will know the cost center, but often will need to do some research or pass it along to another person to code it. Along the way they might make a copy of the invoice for their records. Finally the GL Code is written on the invoice.



Approval:

The next step in the process for most organizations is getting the invoice approved. In this case the invoice is most likely approved by the same person doing the coding based upon its dollar limit, but for a higher dollar invoice it might need to get delivered to one or more person(s) for final approval. The same distribution options apply as above, the invoice may get mailed around a few times before it's approved in a worse case scenario.

Back to AP for Processing:

Finally the invoice needs to go to Accounts Payable for processing. Accounts Payable will route the invoice to the appropriate Clerk for processing. This could be by vendor name, department, ERP system, location, or on a first come / first serve basis.

New Vendor Setup:

Lets hope that the vendor exists in the AP system, because if not someone else may need to get the invoice to get the vendor added into the system.

Closing Out & Posting:

Finally the AP Clerk enters the data into the Accounts Payable system for processing.

Filing:

Just when you thought the fun was over.. one more step; they need to file the invoice, and maybe make a new file for it to sit in. They might even stop to talk with a friend on their way to the file cabinet.





So back to our question...

If you had a Non-PO expense come across your desk for \$5 what should you do with it?

If the scenario above is similar to what happens in your organization, my strong recommendation would be to pay it. Even if it's not valid pay it because that would be your most cost effective option.

The point is that the process in most organizations is very costly, time consuming, and filled with all sorts of risks. We hope that this document helps you in understanding all of the costs that are in your process today.

So how do we answer the CFO's question, what is the cost of an Accounts Payable invoice?

There are a few categories of invoices within an organization and the process cost could vary significantly for each type of category, which we'll get into in the next segment.



Common Invoice Categories

PO – Purchase Order based – approved via 2/3 way matching process

Non-PO – Non Purchase Order based – relies on manual approval process

Trade – Invoices that relate to the purchase of goods/services that are core to the purchaser's salable goods

Non-Trade – Invoices that relate to the purchase of goods/services that are non-core to the purchaser's salable goods

Disputed – Invoices that are disputed due to discrepancies between purchaser and vendor

The type of expense and underlying detail can also factor into the equation, i.e.. a corporate telecom bill with many line items is a lot more complex than an invoice for a single stapler, necessitating more interaction and subsequently, higher processing costs.

And finally the amount of an invoice can add some complexity to the process as well by necessitating multiple approvers before final processing.



Cost per Invoice (CPI)

There are many components to the cost of an invoice, (CPI – Cost per invoice), and most organizations will have varying factors to the cost of an invoice. Many AP solution providers, outsourcers, and software providers will also have varying methods to calculating the cost of an invoice.

Here are the baseline criteria that need to be measured to arrive at an accurate CPI for your organization.

CPI AP Staff:

Most companies calculate the cost of an invoice as a function of the cost of their AP staff / the amount of invoices processed per period. So if you process 5,000 invoices per month with 4 AP clerks at an hourly rate of \$20 / Hr. Here is the math.

$$4 * \$20 * 172 \text{ (average hours in a month)} / 5,000 = \$2.75$$

Wow! That seems pretty low compared to some of the numbers you may have heard out there.

Well, even from an AP departmental perspective you have left a few items out. You need to factor in any costs of the management of that department, the infrastructure costs i.e. telephones, computers, real estate, furniture and other related items. You also should factor in any software, and other administrative functions that support A/P. A big component that many organizations miss is the payroll burden of the staff.

Here are some of the components of payroll burden:

- Social Security Tax
- Medicare Tax
- Federal Unemployment Tax
- State Unemployment Tax
- Workers Compensation Insurance
- Health Insurance
- 401K / Retirement Contributions
- Vacation
- Training
- Bonuses
- Expense Re-imbursements

Many of these items vary based upon the state you are in as well as the type of organization, and the experience or tenure of the employee.

A 30% - 40% back of the napkin calculation is very conservative and will serve its purpose in the calculation of your CPI.

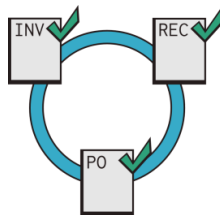
If you're interested in seeing how your labor rates compare to other organizations this information can be found at the US Bureau of Labor Statistics <http://www.bls.gov/>. The job category for an AP Clerk is 43-3031.



PO versus NON-PO

PO based invoices for most organizations are much easier to manage, promote better controls adherence, and are less costly to process. As the GL coding and approvals are done at the beginning of the process, the workflow challenges that you will find with Non-PO invoices do not typically exist.

The primary challenge with PO based invoices is the matching process. Most companies conduct a 3-way match for goods that go through a receiving process such as inventory and a 2 way matching process for purchases such as services that don't have a receiving document as part of the process.



The transaction itself may be more complex than a Non-PO invoice due to this matching process and especially when line item matching of the invoice, PO, and receiver are in play. Most major ERP systems can perform a 3-way match requiring the data off of the receiving document to be entered or checked off as well as that on the invoice.

The Receiving Process:

If you have full time receivers you can perform a quick calculation based upon the labor rate * the labor hours for the period divided by the invoices processed for the period.



GL Coding: In addition to the employees in Accounts Payable that are primarily doing data entry, you should calculate the costs for the GL Coding process. Any invoices that come into an organization without a purchase order number need to be booked to an appropriate cost center within your accounting system. PO based invoices are much simpler from an approval and coding perspective as the process is performed ahead of time. Some companies may still route invoices for approval even when they have a PO system in place.

In most cases the coding process is a part time job and an ad hoc process. Someone isn't sitting down coding invoices in a production mode full time all day. In large companies this may be the case, so be conservative if it is a part time effort. In your business case to the CFO it is also important to know that this will not equate to hard cost savings – but everyone these days is interested in any productivity gains that they can get. It will also be more difficult to calculate the exact cost of the staff as it will vary by department.

A good rule of thumb estimate would be a medium administrative wage with 1 minute per invoice for a part time person doing the coding.

Essentially then, you can determine the CPI for GL Coding by this formula:

CPI: GL Coding = Hourly Wage (Example -\$20/hr) / # of invoices per hour (60) = \$.33



Approvers: Like staff doing the GL Coding of invoices, approvers typically aren't doing this function full time. Approvers could be departmental managers, executive leaders, or project specific people that are familiar with the expense and correlating invoices. With that in mind the cost scenarios could vary quite a bit. Your CEO or CFO may be at a higher pay grade than a Project Manager on a project but you should still factor in a minimum estimate for this part of the process. Also keep in mind that in some cases multiple approvers may be involved in the process and in many cases conversations and due diligence may take place as part of the process.

A good rule of thumb estimate would be an estimate of 1 minutes per invoice at an above average wage.

You can quantify this using the same formula as the GL Coding exercise, though with a higher hourly wage rate.

CPI: Approvers = Hourly Wage / # of Invoices Per Hour

Approvals are typically a requisite for processing non-PO invoices, though in some cases certain organizations will require approvals for high dollar amount payables. This is more an extension of an controls designed to establish security within spend management.



Invoices come into an organization in many ways and to different locations. Below is a list of the most common ways that invoices can come into an organization.

Paper via Mail
PDF via E-mail
Fax

EDI
EID or EIPP (E-Invoice)
Electronic Flat File

With all of the electronic avenues available Paper via mail is still the most common practice at 60%+ according to data from Paystream Advisors.

Once the invoices are received they need to be routed for coding and approval. For most organizations this is a two step process. This could mean that if the person doing the coding is in a different location than the person or people doing the approval, the invoice may undergo several trips. This distribution can take place via mail or delivery service, it might be hand delivered or couriered, scanned and e-mailed, or in the best case scenario via a workflow solution.

As you may imagine these costs can vary quite a bit, but other than the workflow scenario are all costly and tedious. In the case of scanning and e-mailing you are really only looking at the time of staff – but keep in mind that you have 2 parties involved. In the case of courier or hand delivery there is some level of cost of the staff and equipment involved, i.e. vehicles & fuel. In the case of US Mail or delivery service there is obviously the delivery fee and the number of times the invoice is circulated.

A good rule of thumb would be 1-3 minutes worth of staff time per transaction and \$.40 - \$1 per transaction mailed or couriered.



As an invoice is distributed throughout the organization there may be several copies made, and even filed. Departments may keep a copy of their own records, approvers might as well, and ultimately there will be a central file located in the accounts payable department.

During the process an invoice may get misfiled or even lost. **On average 3% of documents are lost and almost 5% are misfiled. The cost to reproduce a lost document averages \$120 according to industry data.**

The cost to store an invoice may vary in most organizations as well. On site physical storage will be more expensive than an outside provider, however may be a requirement for access to the documents.

Electronic storage is the most cost effective approach from a storage perspective but keep in mind the cost to get the document to an electronic state isn't. Many organizations will run an invoice through a manual process and then go through the scanning process to archive the document at the end of the process. From an efficiency perspective this is the worse case scenario. Please see our [eBook, 7 Best Practices To AP Automation](#) for more on this topic.

The cost to scan and index an invoice will typically average in the \$.50 range. Note this doesn't include the cost of the scanning software or hardware. If invoices are scanned and OCR'd this cost will go down considerably to under \$.25 per invoice. The cost to store an invoice electronically will be under \$.01. Many of these costs may be difficult to calculate to the penny as you will have IT resources and infrastructure involved.



Retrieval

Throughout the lifecycle of an invoice it may need to be retrieved for several reasons. There may be a discrepancy on the invoice that is realized after the fact, the payment may have been missed, and you may need the invoice for a return of the product or for warranty reasons. There is also the audit process which necessitates invoices and supporting documentation retrieval. In this case you will be retrieving many invoices in more of a production mode but it is still a manual process.

The average cost to retrieve an invoice is subjective based on how you go about retrieving it. Manual vs. electronic retrieval will be inherently costlier and more painstaking. To arrive at this metric, you'll need to quantify how long it takes to locate and present the invoice document (print/copy – these add costs as well – paper/toner) for one of your AP staff members. Determine how many they can retrieve per hour against their hourly burdened payroll rate, and you'll have your number. The other element here is how many instances of retrieval are necessary.

We find that in a manual environment, retrieval costs range in the \$.50-\$1/invoice vicinity.

Most organizations have a sense for what their internal costs are for audits and we typically treat this as a separate cost when we do our analysis.



Accruals

Access to the Accounts Payable pipeline for most organizations is a major challenge. This is especially the case for Non-PO invoices. Until the invoice is entered into the ERP system there is no visibility to where the invoice is in the process. In most organization AR is very timely and the balance sheet is up to date, but the liability side is a mystery. This creates problems in managing cash flow, missed discount opportunities, and a myriad of process challenges. In terms of the overall impact of this problem, for most organizations, it will dwarf everything that we've talked to up to this point.

Let's start with the month end closing process. In most companies there is an accrual process where someone in accounting will estimate what's out there and make a GL entry based upon the estimated payables in the pipeline. This process can involve research, calls to departments within the organization, looking at the existing AP aging, and many other tasks. This process in itself is costly, and in most organizations a guessing game. In calculating this out we typically do a high level estimate based upon the accounting staff involved in the accrual process as well as anyone outside of accounting that is relied upon for supplying month end spend information.



Lack of visibility can cause some very strategic disadvantages as well, including opportunity costs, disruption to the organization, and poor spend management. For example, let's say your organization is about to close on an acquisition requiring \$3M in cash and along comes a Non-PO invoice for a couple million \$'s that wasn't forecasted. This may be a rare scenario, but you get the idea. If you don't know what's out there it is impossible to manage.

Early payment discounts, especially in these times, can be a great return for most businesses. The cost of capital is at an all time low and volatility within business is at an all time high. Many companies will jump at the opportunity to give you a 2% or 3% discount on an invoice that is paid 10 to 20 days prior to the due date. This could add up to significant dollars in many companies. **For example a company with Revenues of \$500M in most industries would be doing well if it was producing \$50M in earnings on an annual basis. That same company might have in the range of \$300M in payables on an annual basis. If they were able to achieve discounts on only 30% of their payables at a 3% discount rate that would equate to \$2.7M per year which is more than 5% of their annual earnings target.**

Also, another key item to note, is that the difference between the sustained profitability generated from a successful increase in discount capture dwarfs headcount and operational cost reduction for most businesses. Consider how many FTE's would need to be displaced to offset the \$2.7 M number we arrived at above. In most AP departments, the huge opportunity to create organizational profit stems from the opportunity to increase captured discounts.



The time to process an invoice in a manual fashion makes this an impossibility for many organizations, but those adopting automation systems and implementing best practices will have an opportunity to achieve significant results. (If you are interested in learning 7 Best Practices to AP Automation [click here](#) and you can download our free eBook on that.)

Recent data from Aberdeen Group shows a strong correlation between high percentages of discounts captured and AP organizations where invoice processing automation systems have been deployed effectively.

	Time To Process in Days	Cost To Process in Dollars	% of Discounts Captured
Top 20%	4.1	\$3.34	90%
Middle 50%	6.1	\$6.29	47%
Bottom 30%	16.3	\$16.67	18%

The AP Maturity Class Framework – AP Invoice Management in a Networked Economy, Aberdeen Group, May 2012

The question that warrants answering is simply this, where does your organization stand with respect to this benchmark, and what are you doing to improve that standing?



Other costs factors that aren't as easily measurable, but nonetheless real, include the costs levied by inefficient, manual systems upon those who are stakeholders in the process.

Items like organizational/departmental morale and job satisfaction are influential factors on the productivity of staff. In the case of AP, burdened processes can drain and weary staff, increasing error rates, and oftentimes cause departmental turnover. Conversely, organizations that deploy automation solutions well, elevate the performance of their teams creating opportunities to focus on data management as opposed to data entry and create systems and processes that generate success instead of hindering it.

As a personal recollection, I once witnessed a situation where a major Fortune 1000 organization made a strategic error in migrating from the company's primary communications platform MS-Outlook to an entirely different and less costly application. The duress this organization endured through this migration and to this day as a result of using the new (and theoretically improved) platform, was unprecedented and severely affected the morale and productivity of the entire workforce (25,000+ FTEs). In some cases the political friction and gravitas associated with change management and systems implementation must be carefully considered when preparing to re-engineer processes and deploy new systems and procedures.

However, with that said, for the leader that is willing to foster a culture of continuous improvement, changing the structure of AP processing for the better can significantly impact the intangible costs for AP staff as well as the hard dollar components.



They say ignorance is bliss...but our response to that would be that in the case of Accounts Payable costs ignorance is not bliss...it's ignorance.

Our recommendation would be two fold regarding 'What to Do About 7 Costs to an Invoice':

1. If you don't know where you stand with respect to the benchmarks on page 19 in your organization, then it's high time you begin the process of conducting an assessment of your AP systems and processes. Without having this insight you'll be powerless to do anything about it for the better. You can conduct a cursory level assessment with the guidance we've provided you in this document or you have the option of contracting a management consulting or audit firm to conduct an extensive end to end process audit that will probably cost you handsomely.

Or, there's our option to participate in a complimentary, CloudX Rapid Accounts Payable Efficiency Assessment, whereby we can deliver back to you an accurate portrayal of your CPI along with risks and opportunities in your process as well as an environmental impact report.

2. Begin the process of investigating which options might make sense for your Accounts Payable organization to embrace from an automation perspective. What's the right approach for you...direct EDI with your suppliers, e-Invoicing, AP Automation...? There's a lot to consider there and we've done a head to head comparison of the major approaches in our eBook AP Automation vs. e-Invoicing that you can [download here](#), so you can determine what's optimal for you!



We hope that this e-book has provided some insight into the true cost of an invoice. Through the years we have looked at many organizations and have seen many methodologies to calculate the costs. Most AP projects gain wings with a compelling business case so be sure to capture as much as you can through your discovery process.

Every organization has its unique scenarios but this should give you a guideline into most of the areas of cost.

If you'd like to get a free analysis and a detailed review of your organizations current state costs, the risks you are facing, along with an idea of what the future state looks like, please click the button below and we'll be happy to provide you with a rapid AP assessment. We'll include an environmental report as well as industry benchmark comparisons and an analysis of successes and risks within your process.

**Get a Complimentary CloudX Rapid
AP Efficiency Assessment**



= RESULTS MADE SIMPLE

We provide you with all the speed, functionality, reporting, and process improvement tools of both AP Automation and e-Invoicing (and a lot more) but without the burden to you, your IT staff, your IT infrastructure, your vendors, and we process invoices faster than any of our competitors with a lower CPI (cost-per-invoice) than anyone else.

We think our model is both straight-forward and effective and we call it [document process outsourcing](#).

We manage the entire process of scanning, OCR, QC, exception processing, workflow, and data release to your ERP system. If you want to scan that is fine with us – we'll just lower our price. We are flexible and want to do what makes the most sense for your organization. We'll take on the mundane, repetitive, frustrating manual processes for you, empowering you to improve business outcomes.

We improve your AP Organization with visibility, through excellent tools and dashboards. Your IT and technology maintenance involvement from day 1 of Go Live is almost zero. We are live in 3-6 weeks. Our technology platform is in the cloud so you never manage the invoice processing technology, any of it, at all – ever. Our startup costs are minimal, enabling us to deliver hard savings without the big capital outlay and our pricing model is transactional. Our transaction charge to you will be a fraction of what your current costs are, enabling you to see immediate returns in addition to all of the other strategic benefits our service offers.





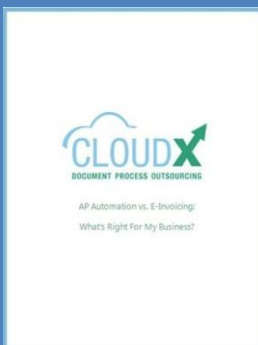
= **SMART
SOLUTIONS**

We think giving us a chance to prove the CloudX advantage is a no brainer. We have the best technology in the cloud and we can get your organization live in 3-6 weeks. You will never manage or pay for any of the technology you use, instead accessing the system via the Web.

That's our business model and we're sticking to it.

We have been working with big and small companies and doing basically one thing for them, every time: **we help them get better by improving their process not making them conform to our own.**

For more information about CloudX, please visit us at www.cloudxdpo.com or call us at (860) 787-5323.



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What's Right For My Business?

