

# EVOLUTION OF THE PAPERLESS AP DEPARTMENT

A Guide to Green Transaction Processing

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In the past decade, leading organizations have optimized business processes and driven costs out of the order-to-cash cycle. These advances have helped companies achieve and/or maintain profitability in a down market. Less time has been spent on automating the purchase-to-pay process, even though numerous technologies could be leveraged to do so. This paper will explore the business value and the expected problems associated with implementing a paperless invoice-processing hub.

## INTRODUCTION

In 1993 Dr. Michael Hammer, one of the founders of the management theory of Business Process Reengineering, wrote a forward-thinking book, "Reengineering the Corporation: A Manifesto for Business Revolution." Dr Hammer used General Motor's Saturn Plant as an example of how a paperless purchase-to-pay (P2P) process could help every corporation apply technology to achieve business opportunity.

Fast forward nearly twenty years and the relevant question is "Has your company harnessed all available technology to enable it to reduce cost and improve performance, especially in the purchase-to-pay process?"

Despite much attention focused on the benefits of utilizing new technology to improve P2P today, just as in 1993, this process is still largely paper based in most organizations. Many companies have embraced Electronic Data Interchange (EDI) for larger vendors as a way to streamline a certain percentage of business transactions. In addition, imaging and workflow technology, which electronify documents, has been used with some success.

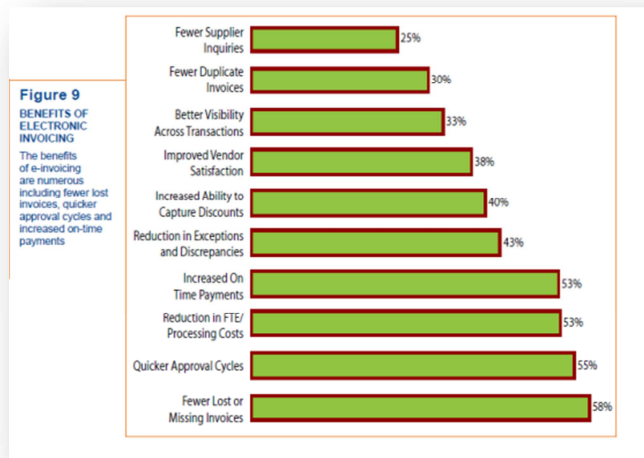
Still, most organizations can improve processing performance further by applying a mixture of technologies to achieve a much higher degree of automation.

TO ACHIEVE A TOTAL PAPERLESS PROCESSING  
HUB, CORPORATIONS NEED TO EMBRACE  
MULTIPLE TECHNOLOGIES TO STREAMLINE THE  
PURCHASE TO PAY PROCESS.

## CONSIDER A PAPERLESS HUB

The concept of a hub and spoke approach to automation is very relevant when used in context with the purchase-to-pay or accounts payable (AP) functions. The hub of this process should be a shared services center. The concept and payback of shared services supporting financial operations is well developed and proven.

Consolidating operations at corporate or regional operations centers provides organizations the ability to leverage skills and labor to maximize processing performance while decreasing costs.



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Once the hub is established, a concerted effort is needed to define and deploy multiple technologies that can each provide incremental benefit to your goal of getting cost out of the process. These technologies, such as e-invoicing, scanning and data capture are the spokes radiating from the hub.

## HOW DO YOU GET STARTED?

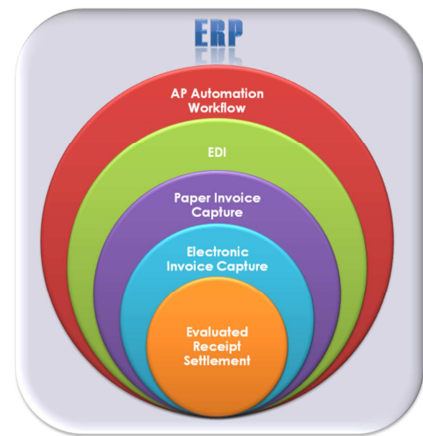
If your organization is considering a paperless hub, the first step is to analyze your total process flow. If typical, your organization will have a number of buyers delivering numerous purchase orders (POs) to a large group of suppliers. The suppliers then send a corresponding number of invoices to one or more processing centers or individuals in your organization. Between the PO and invoice, there is probably a number of other transaction components such as confirmations and advance ship notices that will contain critical business information.

This bi-directional transaction flow creates a complex web of communication that can be a nightmare to control.

Thus, to begin forming a proper solution, you should look at the problem architecturally. Whether building a home, a data center or a business solution, a properly structured foundation is the single most important component of the design. A strong foundation will weather change and can support a number of future additions as required by your business.

In the case of P2P solutions, many people initially think of their Enterprise Resource Planning (ERP) system as the center of the universe, and therefore, the foundation. On the order-to-cash side of the organization, this may be true, because cash is king.

Remember, ERP systems were designed primarily out of the Manufacturing Resource Planning world. Therefore, ERPs have become very feature rich, from sales to order fulfillment. Corresponding back office modules, however, have not enjoyed the same attention to detail.



## WORKFLOW IS KEY

Let's assume you have consolidated operations into one or more shared services centers (SSC). The next step should be to automate the delivery of transactions to knowledge workers both in and outside the SSC.

Approvals will be needed for non-PO invoices, and exceptions will happen to PO-based invoices during a match process. In general, improved process times result when workflow is used as a foundational element in the hub. The combination of a good workflow product in conjunction with a shared services concept reaps particularly high benefits in cost reduction.

A good workflow engine will accept multiple inputs, as well as paper or electronic invoices from numerous sources. The system should have the capability to perform a pre-ERP purchase order match, and/or to validate invoice approval against a table of authorization. These pre-match capabilities provide automated error trapping and handling, which is much easier to manage and use than similar functionality embedded in most ERP systems. Such ease-of-use and advanced functionality aids communication, speeds resolution of problems, and increases user acceptance.

Once submitted to workflow, invoices can be sorted automatically as necessary. They are then routed to the various matching functions, approval flows, or reject/repair queues for exception handling. Once an invoice gets to a state that will allow payment without further handling, it is transferred to the ERP for downstream processing, aging and settlement.

One fly in the ointment is exception handling of transactions, which is by far the most significant cost of processing for corporations. Invoices that do not match purchase orders, or expense invoices in need of approval, require automated routing and tracking with appropriate escalation rules. The ultimate goal is to reduce manual handling and cycle time as much as possible which will allow you to be in a position to pay supplier invoices as fast as you want and increase discount achievement. Paper-based processes cannot achieve the same reductions in time as a solid workflow system, thus limiting the ability to achieve discounted payment terms.

“ Workflow alone can increase productivity of current processes by as much as 60%. ”

## WHY NOT USE THE ERP?

As discussed earlier, internal IT resources with the skills required to properly deploy a complex P2P process are not always available to the back office because the order-to-cash cycle usually takes priority. Even when available, they aren't necessarily the most appropriate for the project. For example, workflow is a dynamic process where changes are frequent and inevitable. Typical ERP tools are designed for programmers and static business processes, and cannot easily be modified by business people in a dynamic environment like accounts payable. Additionally, IT resources deployed on such projects have to be augmented by significant business unit personnel with subject matter expertise, or else a suboptimal process may be delivered. Such a result can easily double or triple the timeline and cost of the project.

We are fortunate today because a number of third party solutions that have been introduced are more easily deployed outside of the ERP. These products are tailored to enhance the P2P process, and more importantly, they are configurable by business users. These tools greatly reduce IT resource requirements and increase the business unit's ability to change system behavior as needed. Additionally, non-ERP workflows can benefit from shared resources at a much lower cost.

Another reason why ERP isn't the best option is that many organizations have grown via acquisition, and therefore, they have a number of ERPs with which to contend. However, layering a non-ERP workflow in front of multiple systems allows you to share information like commodity or vendor-based spend analysis. Shared information like this can be used to negotiate volume discounts and reduce cost.

As a result of all these factors, the case for workflow is compelling. Studies have shown that workflow alone can increase productivity of current processes by as much as 60%. Even with workflow already in place, there are many other technologies that can be employed to achieve additional increases in automation.

## GETTING TO THE PAPERLESS HUB

Now that the foundation is in place, it is time to evaluate the current status of your processes through a series of questions:

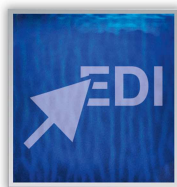
- Where has technology already been applied?
- What aspects of the process in question cost you the most, and thus, take the most time?
- What process steps will benefit most from automation?

Fortunately, establishing the solid foundation has provided a configurable hub that can interact with a number of other products and services designed to streamline the AP process.

Assuming you have selected a workflow foundation that is open and scalable, your building blocks should fundamentally be interchangeable spokes in a hub.

The next step should be the electronification of as many transactions as possible for inclusion into your foundation workflow.

## EDI AS A FIRST STEP



Electronic Data Interchange has been in use by corporations around the world for several decades. Most likely, if your corporation could benefit from EDI, it has been in place and functional for a number of years.

As a result of this long-term experience, you may have hit the ceiling on the number of vendors willing and able to interconnect with you in this fashion. Because of the barriers of cost and complexity of such systems, other forms of electronic transactions have begun to take hold and prosper.

To help increase automation within your EDI spoke, you can look at the number of exceptions hitting the ERP system. Remember, EDI is not Nirvana -- errors will result and the sheer number and type of these errors will determine whether it makes sense to connect the EDI spoke to your workflow foundation for automated routing and exception handling, or whether to leave it as a stand-alone process.

If your EDI is mature and there are infrequent pricing or delivery issues to manage, leave it alone. However, if you are bringing on new vendors and/or have a significant exception rate due to the nature of your business, having your EDI connected to the workflow hub will pay dividends by reducing process time, capturing exceptions and providing superior error handling and resolution.

### STILL HAVE A LOT OF PAPER?

Whatever happens in the future is irrelevant today if you still have a significant amount of paper in your current process. Paper transactions cost more than electronic ones by a factor of two or three to one.

As a result, you should assess the volume of paper that is still being processed manually. Do not count invoices scanned at the back end of your process in this analytic. These types of archives actually increase cost in some ways, primarily due to the additional data entry and handling involved.

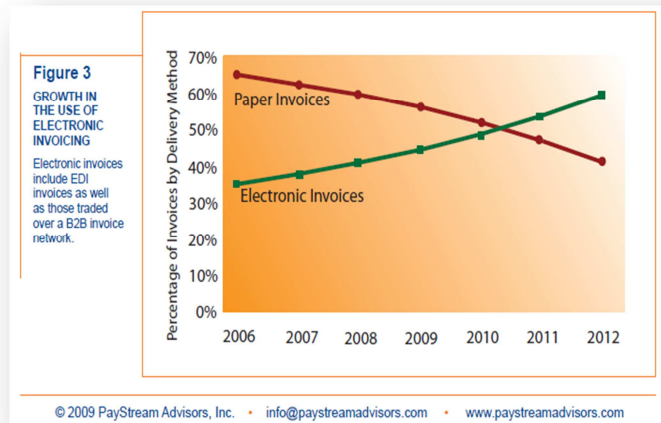
Also, analyze just how many invoices your current staff can process. Doing this in conjunction with an inventory of paper volume allows you to quickly assess the benefit of either buying scanners and data capture software, or co-sourcing this function to an outside professional. In either case, by turning paper into electronic images at the front end of the process, you achieve a great deal of progress in going paperless. As a result, your staff will be freed to do more strategic thinking and analysis focused on further process improvements.

Unless it is an extreme case, your organization should benefit greatly from adding an imaging and data capture spoke to the processing hub. Remember, however, the goal is to eliminate paper. Financial investments for in-house software and scanners strictly for the AP process should be scrutinized. Given that paper will be on the decline, such investments can be costly and complex to manage. The return on these investments may be questionable, thus you may look to outside vendors to handle this part of the process.

Outside data capture specialists offer other value added services that can further reduce paper handling in your organization. These may include managing tedious and time-consuming mailroom activities. Not only will such an arrangement free up additional internal resources, it may also provide a best practice approach for accepting vendor invoices. No longer will invoices go directly to end users with the risk of increased process times, reduced visibility to liabilities, and impacted vendor relationships and discount achievement.

## E-INVOICING SEEMS SIMPLE, WHY CAN'T I GO DIRECTLY THERE?

Electronic invoicing has come a long way since the inception of EDI. Today we have a myriad of ways in which suppliers can submit invoices in a paperless fashion. This can be as easy as the ERP sending an email with a PDF (although without additional technology to strip and read the PDF, receivers of the invoice will have to print and scan it). Other methods can also be used, such as placing invoice submission features on a supplier portal or having your IT staff translate files and push them into the ERP.



All e-invoicing solutions can be thought of as easier-to-deploy EDI. As stated earlier, pricing and complexity of deployment has been the major barrier to full adoption of EDI technology. Your largest suppliers typically have the infrastructure and resources to make EDI a viable alternative to paper invoices. However, for lower volume suppliers, EDI may not make financial sense -- most companies feel the threshold is typically the top 10-15% of their vendor base.

So, what do you do about the remaining 80-90%? This is where e-invoicing solutions come into play and represents the main reason you need to embrace multiple technologies to achieve a high degree of electronification.

## CAN ELECTRONIC NETWORKS SAVE THE DAY?

Electronic networks, such as OB10 and others can play an important role in your overall strategy and be instrumental in reducing the sheer number of paper transactions, especially if you have a workflow hub installed that is operating efficiently. Typically, electronic networks have concentrated on recruiting suppliers and enabling e-transactions. Their customers gain value by being able to procure products more efficiently and at less cost.

Many network providers also offer recruitment services. This is by far the single most important benefit they offer. Recruitment can be a difficult and resource intensive process. Your selection of a provider should include an analysis of your supplier base and how many have already mapped to the electronic network you are considering.

Another benefit is that electronic networks frequently offer several methods for transaction integration (email, fax, XML), thus easing integration and allowing flexibility in the way transactions are communicated.

The not-so-good news is that interoperability between the networks is non-existent today, and because of competitive issues, probably will never exist. This means that you may have to work with more than one network to integrate your current vendor base. This is also why it is recommended that companies establish a workflow hub as a first step, and then select a network provider with a large supplier base and with the capability to accept inbound transactions of all types.

### Is ERS THE FINAL FRONTIER?

Though it may not be the final frontier, a highly underutilized technology named ***Evaluated Receipt Settlement*** (ERS) can be a major contributor to your paperless hub. Pioneered in the 90's by General Motors, ERS is an "EDI-like" process between trading partners that allows them to conduct commerce without invoices.

A standard ERS process starts with a PO that is generated and delivered to the supplier. Within this process, catalogs are often used to minimize errors in pricing, unit or measure, and other key elements that may create exceptions.

Once the supplier has received an order, two transactions will be communicated back to the buyer. First, an order confirmation is issued, and then an Advanced Shipping Notice (ASN). The ASN allows the buyer to properly schedule the loading/receiving location and accurately create a materials receipt. Once generated, the materials receipt identifies the quality and quantity of the goods and authorizes the ERP to pay the supplier based on the PO prices -- all without an invoice.

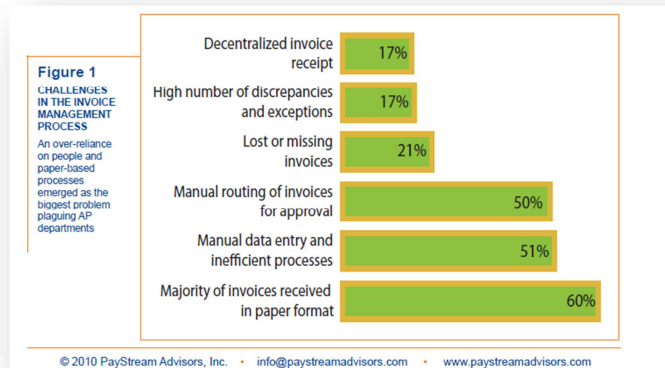
Adoption of ERS has been quite high in certain industries. Discrete manufacturers like GM have used it for a very long time because of the sheer number of components that have to be ordered to manufacture their products. Companies like GM also typically have a high ratio of direct spend (PO-based transactions) to indirect spend (expense items).



Traditionally, ERS was supported as another EDI transaction by the ERP which, as stated previously, can be costly and time consuming to implement and manage.

## RECENTLY, ERS FUNCTIONALITY HAS BEEN INTRODUCED TO AP WORKFLOW PRODUCTS

Once the domain of only a select number of ERP providers, many workflow suppliers who are expert in the purchase-to-pay process have now also added ERS functionality to their solutions. It should also be noted that some vendors have the ability to process non-PO invoices in an ERS-like manner. If your workflow vendor offers this option, often called self-billing, you should highly consider using it.



## COMMUNICATION IS VITAL TO REDUCING PAPER IN THE PROCESS

Now that you have workflow in place, EDI tuned, your network vendor and e-invoice software in place, and ERS working perfectly, you may think you are finished. Not quite.

Your overall goal has been to reduce paper and increase accuracy. Achieving this combination will save your company a great deal of time and resource. It will also shorten cycle times so you can achieve better discount realization and make monthly accruals more accurate and less time consuming. Finally, you will have a streamlined process funnel and electronic archive that can withstand any level of compliance audit.

The technologies described in this paper will provide these benefits and automate your process to an extent, yet there is one factor that they can't overcome—a certain percentage of transactions will still have errors.

So, the final step is figuring out how to reconcile these errors electronically.

## SUPPLIER PORTALS ARE VITAL COMPONENTS TO YOUR STRATEGY

Most likely, your ERP and workflow hub will each have supplier portal capabilities. Whichever path you choose, make sure it has visibility to work-in-process as well as to what has been archived and paid.

If you have followed the path detailed in this paper, you will have injected all unpaid invoices (unrecorded liabilities) into the workflow hub at the front end of the process. One immediate benefit of doing so is improving process times and accruals.

More importantly, now that your hub is complete, utilizing a supplier portal will reduce the number of supplier calls into your AP customer service group. Suppliers are concerned with whether an organization has received its invoice and if it has been placed in process with no exceptions. A good supplier portal should provide a self-service mechanism for vendor inquiries so they can check whether this is in fact the case. Additional features should also allow bi-directional electronic communications for problem resolution. Advanced portals also allow vendors to add backup documents, create and submit electronic invoices and credit notes, all in support of the invoicing process.

### TO SUM IT ALL UP

No single technology can provide your company with the means to become entirely paperless. You need to put together a strategy that best fits immediate needs but provides flexibility to meet future goals. Prioritizing components of the solution and their induction into your hub is critical to success.



The good news is that now, more than ever, we have numerous products and services that can be interconnected to methodically reduce the sheer number of paper documents coming into your organization.

With improved processes, timelines and the addition of the self-service portal, supplier calls will be reduced, and satisfaction increased.

### ABOUT MICHAEL CICHY

Michael Cichy is a Business Consultant with CDIA, CAPP and Six Sigma credentials. He has over 25 years of experience applying technology to improve business processes in Purchasing, Finance and transportation/Logistics. Michael has held senior operations positions at the Army and Airforce Exchange Service, Digital Equipment Corporation and Bank Boston TDS. In addition, Michael has managed complex automation projects at companies like Fidelity Investments, American Express TSSG, BE Aerospace and Worthington Steel.

### FOR MORE INFORMATION