COLLABORATE - The good, the bad and the ugly related to Oracle's Financial Imaging Processing Solution for AP

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Abstract

Organizations are always searching to reduce cost and improve efficiency within their companies and one good candidate for such improvement is the paper-based accounts payable (AP) invoice process. Paper-based invoice processing by its very nature is manually intensive because so many individuals have to "touch" the document before it can be paid.   For example, the AP Department needs to extract any paper-based invoices from the mail envelope and then coordinate the end-to-end process for each invoice. The coordination includes: reviewing and routing the invoice for approval, validating the approval(s), entering the invoices for payment. Throughout the life cycle of the invoice, the AP Department also needs to know the real time status of the invoice.

In order to improve the efficiency, organizations have automated portions of the AP process by receiving invoices electronically and/or most storing invoices digitally; however, the most inefficient process such as entering the invoice, coordinating the approval(s) and knowing the real time status of the invoice still needs to be improved.

The purpose of this white paper is to explain how organizations can improve their AP invoice process. This paper is based on a global implementation of Oracle's AP imaging solution for an organization that has several AP shared service centers that support multiple decentralized companies throughout the world. This white paper will provide the following: the reasons why to automate the AP process with document automation, the guiding principles when selecting a software solution for AP image processing, the components of Oracle's AP imaging solution, provide transactional process flow of Oracle's AP imaging solution, what skill sets are required for Oracle's AP imaging solution, and finally, what is the good, the bad and the ugly related to Oracle AP Imaging.
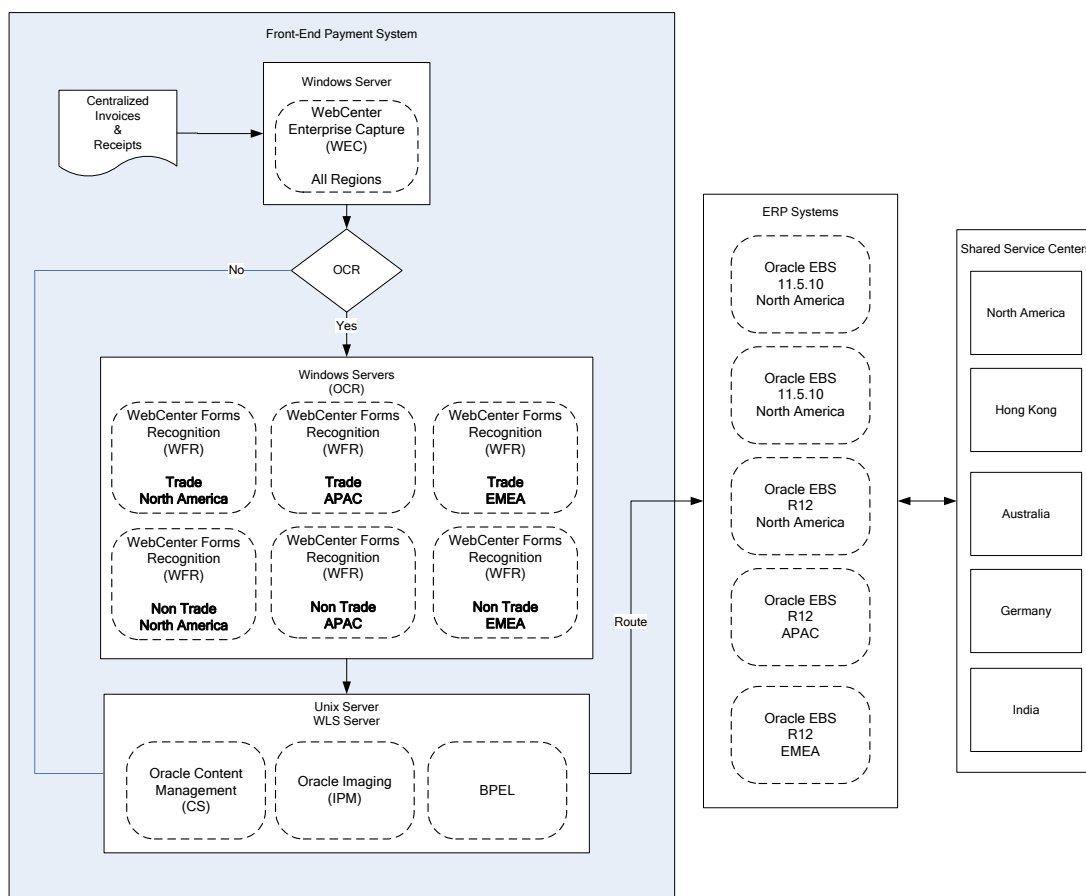
There are several reasons why organizations should automate the AP process with document automation. One reason is to minimize the time and effort to process an invoice. There are several research reports related to invoice process, but a general guideline is that organizations who moved to a centralized automated AP process have reduced the cost to processing an invoice from over $50 to less than $5 per invoice. The cost savings is the result of reducing the time spent on manual data entry, gathering approvals, tracking down invoices, answering fewer requests related to payment status, and by storing invoices into a centralized repository.

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Another reason organizations implement a document automation system is to reduce their overall invoice cycle times. By reducing invoice cycle times, organizations have the ability to negotiate with non-discounted suppliers for discount terms because organizations have more control over their cash flow.

In addition, organizations can reduce their risk of fraudulent and duplicate invoices because invoices are processed into a single front-end payment system before the invoice is routed for payment to a distributed payment system.

Below is an example of Oracle's AP imaging solution architecture which shows an example of a single front-end payment system with distributed payment systems (Oracle EBS systems).

Lastly, here are other reasons why organizations choose document automation for their AP process. Below is a list of common reasons which can be found while researching document automation systems for AP invoices.

- Centralized location for suppliers to submit invoices
- Electronic storage of documents
- Eliminate manual data entry and associated errors

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- Increase visibility throughout the A/P process
- Avoid rework from having to rekey or reprocess invoices
- Simplify exception processing

Organizations that decide to implement a document automation system should consider following a few guiding principles when selecting any software package. In this case, guiding principles can be used as a benchmark when evaluating vendor's software solutions packages.

One of the most important guiding principles is the belief that an organization is joining the vendor's support network when it purchases the software package. The support network around the software package should be considered as part of the investment decision because an organization will have to reach out to the network at some point in time. In addition, the support network shares a common interest in protecting their investment by encouraging the vendor to continually improve the software package. Furthermore, most support networks have a vested interest in sharing ideas and solutions with other members of the network.

The next guiding principle is for organizations to take a long-term perspective when purchasing a software package because of the sunken cost to purchase and implement the software package. Some studies have indicated that a software package exist for more than a decade. Since software packages may last more than a decade, organizations need to consider future challenges like mobile computing and cloud-based solutions when making a decision.

A third guiding principle is to select a software package that follows the standards defined within your organization's industry. Industry standards allow for backward and forward compatibility which in turn leads to greater acceptance inside and outside your organization.

A full list of the guiding principles can be referenced at this link:

Seven Principles for Selecting Software Packages	http://cacm.acm.org/magazines/2010/8/96615-seven-principles-for-selecting-software-packages/fulltext

The next section of this paper will focus on Oracle's financial imaging processing solution for accounts payable (AP). There are multiple ways to describe Oracle financial imaging solution and the below definition is from Oracle website:

Oracle's A/P automation solutions tie content and business processes together to create automated workflows that move invoices through a well-defined series of tasks and approvals—and integrate the results with your enterprise systems of record. For example,

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- *Oracle WebCenter Imaging enables users to scan, index, view, print, highlight, fax, annotate, and add redactions to invoices*

- *Oracle WebCenter Forms Recognition (OFR) provides the OCR/ICR recognition engine that enables the system to automatically recognize, categorize, and extract information from paper documents, forms, faxes, and electronic documents*

- *Oracle Business Process Management Suite (Oracle BPM Suite) creates cross-application business processes that combine automated and human workflows*

- *Oracle Business Activity Monitoring (BAM) provides a customizable dashboard to improve visibility into invoice and other financial business processes*

- *Oracle WebCenter Content enables authorized users to easily retrieve documents and images within the context of familiar information systems—such as Oracle E-Business Suite, PeopleSoft, and other enterprise applications*

Oracle Document Capture
Oracle Distributed Document Capture
- Scan or Scan and Index Invoices

Oracle Imaging and Process Management
- Store, Index, Retrieve and Manage Invoices

(1)   (2)

(3)   (4)

Oracle Business Process Management Suite
- Route, Delegate and Monitor Invoices

Oracle E-Business Suite Financials
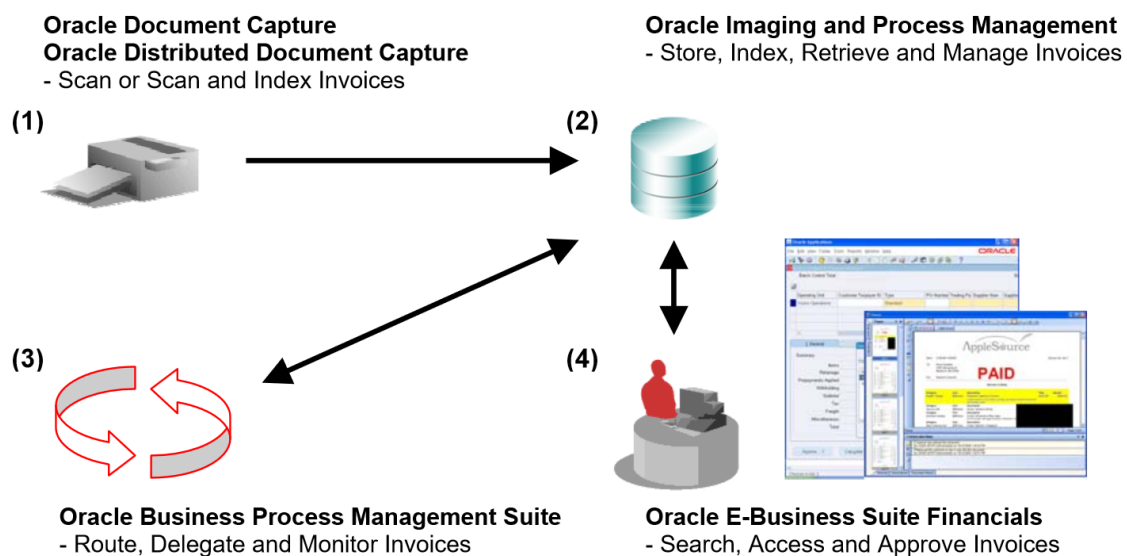- Search, Access and Approve Invoices

Figure 2: The components of Oracle's integrated invoice processing system. Process begins by scanning invoices (1) and committing them to Oracle Imaging and Process Management (2). Invoices are then routed for work and the process flow is monitored (3). Invoices can then be accessed directly from Oracle E-Business Suite and approved (4).

Based on Oracle's definition, there are multiple components which comprise the end-to-end solution. A good article that is not written by Oracle can be referenced at this link:

WebCenter Imaging in a Nutshell	http://techblog.aurionpro.com/2013/11/webcenter-imaging-in-nutshell.html

Oracle has taken all these software components and built an application that supports four separate process flows: key from image (KFI), optical character recognition (OCR) of

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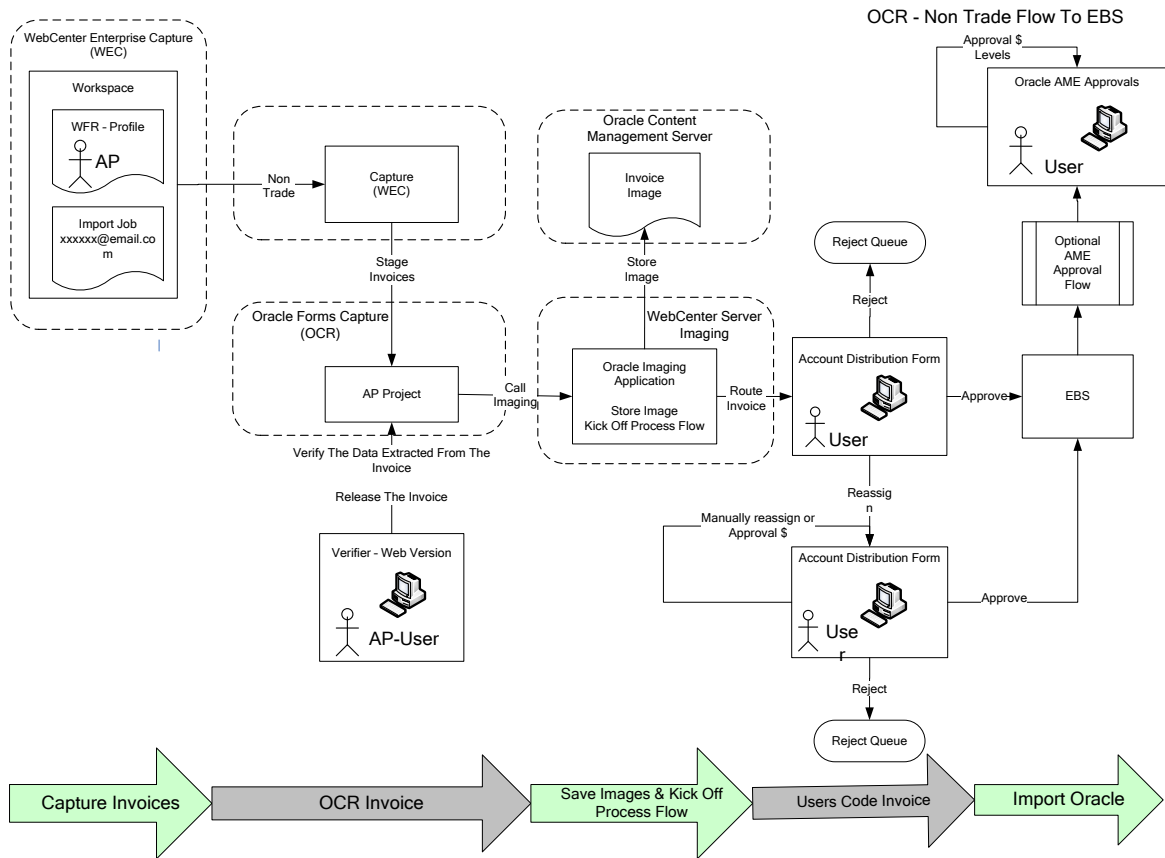
non-purchase order invoices and OCR for purchase order invoices and expense receipt processing.

The key from image (KFI) process flow is for invoices that cannot follow the OCR process flows. About 10-20% of all paper-based invoices might require this process. KFI is manually intensive so the goal is to reduce the amount of invoices that fall into this process flow. The image below shows the KFI process flow.
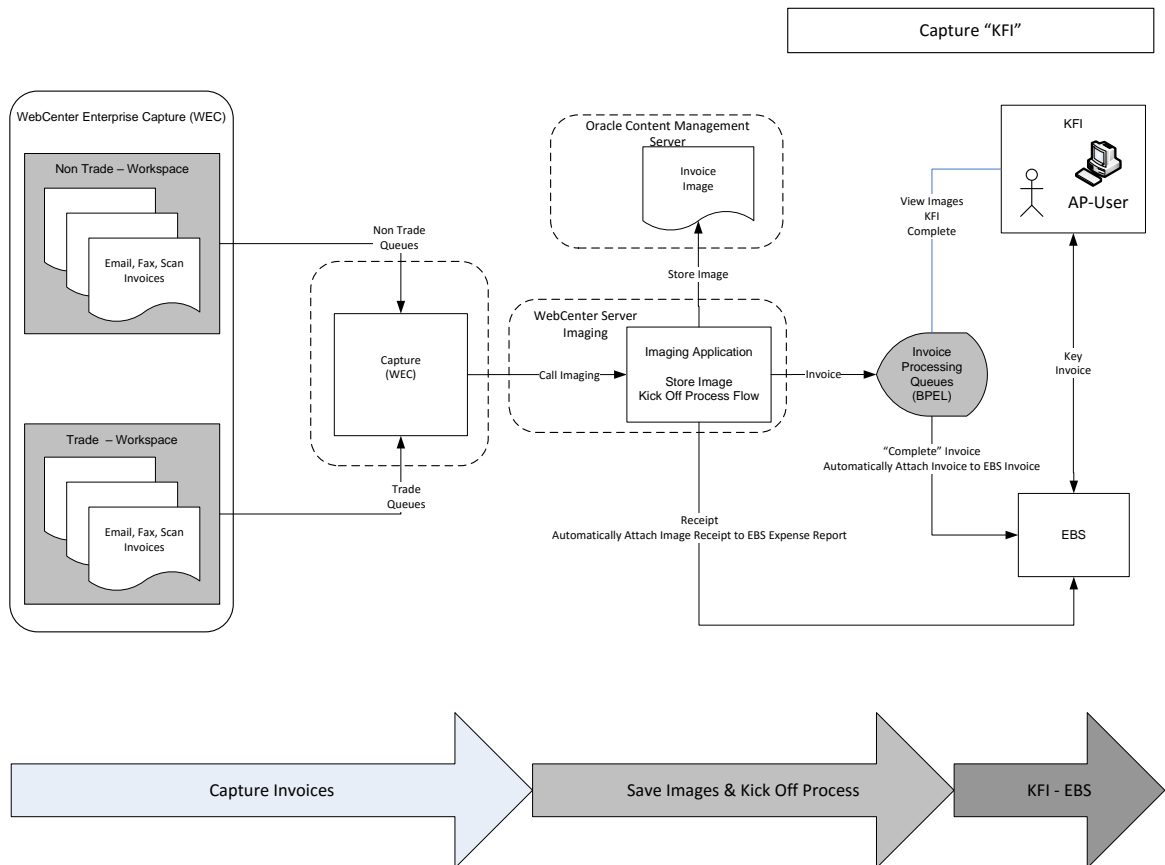

The second process flow uses optical character recognition to extract invoice information from non purchase order based invoices. This process flow attempts to remove as much human interaction as possible by electronically creating the invoice from the extracted data. Since non purchase order invoices are not officially authorized for payment by an organization, Oracle has provided an additional approval process before the invoice can be paid.

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OCR - Non Trade Flow To EBS

WebCenter Enterprise Capture (WEC)

Workspace

WFR - Profile

AP

Import Job xxxxxx@email.com

Non Trade

Capture (WEC)

Oracle Content Management Server

Invoice Image

Oracle AME Approvals

Approval $ Levels

User

Stage Invoices

Store Image

Reject Queue

Optional AME Approval Flow

Oracle Forms Capture (OCR)

AP Project

Call Imaging

WebCenter Server Imaging

Oracle Imaging Application

Store Image Kick Off Process Flow

Route Invoice

Account Distribution Form

User

Reject

Approve

EBS

Verify The Data Extracted From The Invoice

Reassign

Release The Invoice

Manually reassign or Approval $

Verifier - Web Version

AP-User

Account Distribution Form

Use r

Approve

Reject

Reject Queue

| Capture Invoices | OCR Invoice | Save Images & Kick Off Process Flow | Users Code Invoice | Import Oracle |

The third process flow uses optical character recognition to extract invoice information from purchase order based invoices. This process flow attempts to remove all human interaction by extracting purchase order based information and automatically matching the invoice lines with purchase order lines and automatically creating the invoice.

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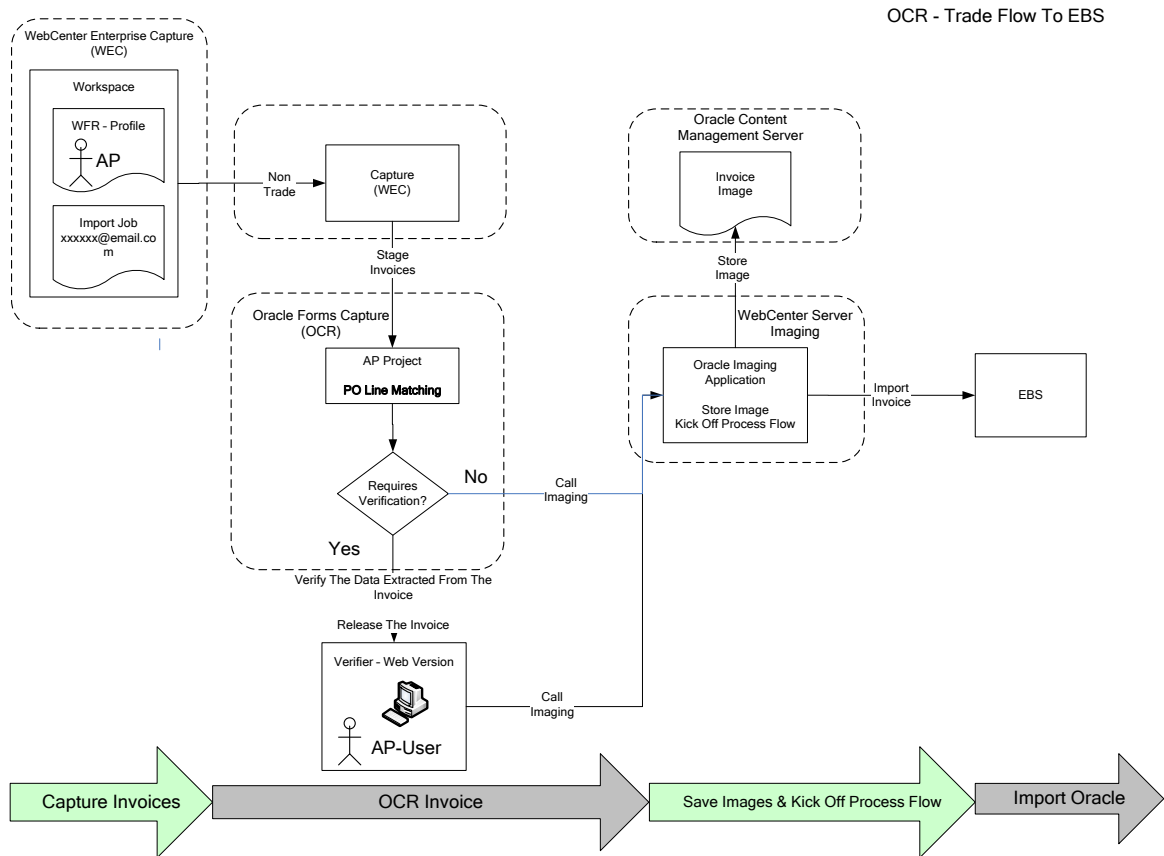
The last process flow collects and organizes receipts related to expense reports generated in a third party EBS system.

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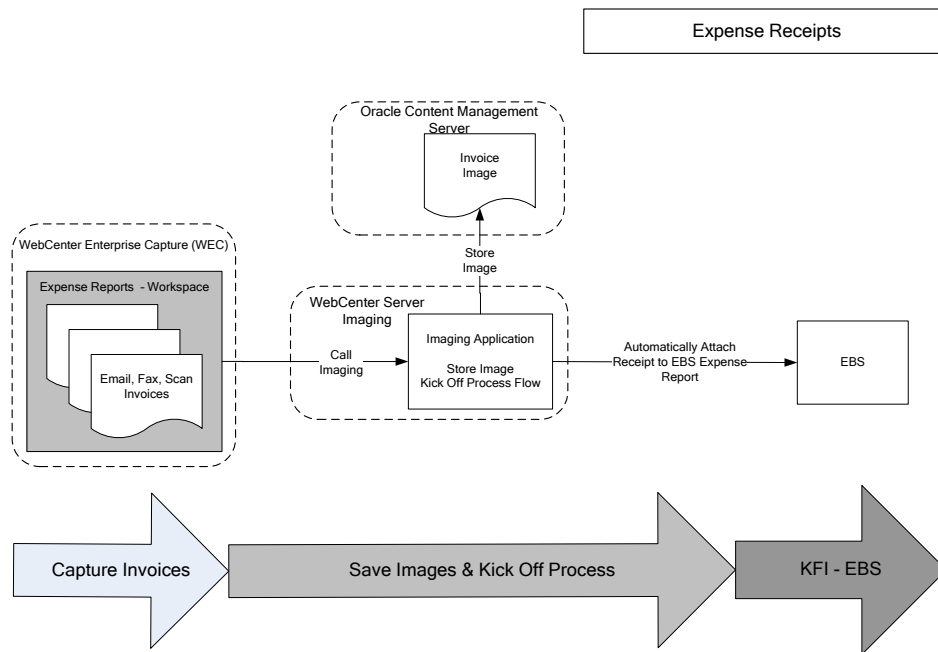
Oracle's four process flows support the standard process flows expected from any accounts payable document automation software package. In some cases, a standard process flow needs to be customized to support an industry specific business requirement or an organization's policy or procedure. The ability to customize the standard process flow is one of the key advantages of using Oracle's financial image processing solution for accounts payable; however, one key disadvantage to Oracle's financial image processing solution for accounts payable is what they support. Oracle supports all the software components but not the process flows.

Since your organization is responsible for supporting and maintaining all four process flows, what skill sets are required by your organization or a consulting firm? There are two distinct types of skill sets required to support the process flows. One skill set is technical while the other is functional. The functional skill sets are very similar to what is required by an Oracle EBS accounts payable functional analyst; whereas, the technical skill sets are not complementary to an Oracle EBS developer because the document automation software components are not widely used within Oracle EBS.

The technical skill sets are comprised into four categories: WebCenter architect, application administrator, application developer and daily technical support. The WebCenter architect is a resource that understands the capabilities of Oracle's financial imaging processing solution for accounts payable. In most cases, your organization will

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have to hire a consultant due to the vast knowledge required for each software component. In addition, this resource should also have a good understanding of all the other functional and technical skill sets mentioned in this entire section.

The second technical category is related to the administrator knowledge of maintaining several software components. Administering the Weblogic server might require one full-time resource due to its purpose of being the connection point to all the end point applications. In most articles, the Weblogic server is referred to as middleware. Middleware is a general term for software that serves to "glue together" separate, often complex and already existing programs. Some software components that are frequently connected with middleware include enterprise applications and Web services.

The other end point applications do require some weekly administration which can be automated, but when something fails the administrator needs to evaluate log files to understand why the application is failing and how to fix it.

- WebCenter Enterprise Capture
- WebCenter Imaging
- WebCenter Forms Recognition
- Content Management
- BPM Workspace
- DBA
- LDAP

The third technical category is related to an application developer's knowledge of maintaining several different software components. Each software component requires a slightly different technical language so several developers might be required. If your organization has a limited number of developers, then anticipate it will take one developer ten hours per week for six to eight months to maintain and/or enhance the following application:

- WebCenter Enterprise Capture
- WebCenter Imaging
- WebCenter Forms Recognition
- Supervised Learning
- BPEL /BPM
- AXF
- EBS Integrations

The fourth technical category is related to typical technical help desk knowledge. In this case, the help desk staff need to have a general understanding for each of the software components so someone in the help desk staff can troubleshoot issues related to:

- User maintenance
- Desktop Support

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- System Monitoring

Oracle's financial imaging processing solution requires more technical versus functional skill sets because the document automation solution's purpose is to replace human tasks with automated software. Since human tasks are being replaced, the amount of functional skill sets are reduced with this solution; however, your organization still requires an Oracle EBS analyst and accounts payable team member with knowledge of your organization's supplier invoices.

The typical Oracle EBS analyst will support both configuration and process flow issues for your organization's accounts payable application. In addition, the Oracle EBS analyst will have to acquire an understanding of the process flow and configuration options available for each of the WebCenter specific software components:

- WebCenter Enterprise Capture
- WebCenter Imaging
- WebCenter BPM Process Flows

<Insert image of the invoice process flow and capture flows>

The other functional skill set is related to the understanding of your organization's supplier invoices formats. This is an acquire skill that can take months or years for someone in your organization's accounts payable department to possess. It's the responsibility of this resource to bridge the gap or what is possible to extract from a given supplier's invoice by using the optical character recognition software.

- Supplier invoice formats
- Internal purchase order business rules
- WebCenter Form Recognition Configurations (OCR)
- WebCenter Form Recognition – Supervised Learning

This next section will focus on the good, the bad and the ugly related to Oracle's financial imaging processing solution for accounts payable. Oracle's solution was developed by integrating several individual software components into a single software offering. Since this software offering is a combination of various components, the perspective of what is good versus what is bad is based on someone's opinion.

In my opinion, the perspective of what is good versus what is bad depends on each organization's commitment to the Oracle's ecosystem. If your organization embraces the various software components that comprise Oracle's accounts payable solution, then your organization will probably see the solution as a positive or good thing. In my opinion, embracing the Oracle ecosystem means implementing solutions which might always be the best of breed for any given software packaged application. In this case, as of Collaborate 16, Oracle's document automation for accounts payable is not the best of breed; however, it would only take Oracle a short period of time if Oracle is willing to enhance the application to complete with other vendor products.

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With that fact, if your organization is looking for a turn-key solution with no intention of using the software component in other parts of your business, then the complexity of integrating several software components can be seen as a negative or bad thing.

One good quality related to Oracle's accounts payable document automation solution is its ability to use existing software components that might already exist in your organization's Oracle ecosystem. If your organization is already using some or all of the software components, then your organization should have a very high adoption rate for the accounts payable imaging solution.

Another good feature of Oracle's solution is its flexibility to customize the four process flows to fix your organization's business requirements. In my opinion, the process flows delivered by Oracle are more similar to open source code. The definition of open source code refers to any program whose source code is made available for use or modification as users or other developers see fit. Open source software is usually developed as a public collaboration and made freely available. In this case, the code was developed by Oracle but your organization can collaborate with other organizations and modify the code as your organization sees fit.

In addition to flexibility, what makes Oracle's solution so good is your organization's ability to implement the accounts payable document automation within 3-6 months. The solution can be implemented in a fairly short period of time because Oracle preconfigures all the software components to support the four delivered process flows.

In addition to reduced cost and time to implement, Oracle reached out to a best of breed optical character recognition (OCR) vendor, Lexmark, to integrate their OCR software application into Oracle's solution. Oracle has also including a preconfigured OCR accounts payable project so data extraction works out of the box. The OCR tool is very powerful and it provides several customized access point to increase the data extraction rate. Furthermore, the OCR tool has the ability to learn invoices as well as the ability for your organization to teach the application on how to learn your organization's supplier invoices. The more your organization understands the OCR tool, the greater the return-on-investment because the tool reduces repetitive manual tasks performed by your accounts payable team. Note: With any proprietary software application such as Lexmark, there are pros and cons. I have explained some of the pros and in this next section I will identify some of the cons.

Now the bad related to Oracle solution. The WebCenter forms recognition tool and web based verifier tool provided by Lexmark are tied together. The forms recognition tool is the brains of the OCR application and it offers a client based "fat client" verification tool used by the accounts payable team to verify data extraction for any given invoice.   Since it's not practical to install the "fat client" verification tool on each accounts payable team member's computer, the OCR tool also has a web based verification tool. The web based verification tool is compatible with most common web browsers, but the downside is its capability to switch between OCR projects. The web based verification tool uses a single URL link to access the application and there is no option for the average AP user to

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switch between OCR projects; therefore, your organization might be required to set up additional OCR servers requireing additional licenses, servers, configurations and additional maintenance. Note: The licensing fees are expensive so take this into consideration.   From my past implementations, organizations find creative ways to maximize their output of the OCR because of the licensing costs.

In order to reduce the user access complexity of adding another set of software components within your organization, I recommend that your organization implement single sign on (SSO) prior to deploying Oracle's document automated solution for accounts payable. From past experience, without implementing SSO, educating your organization's entire user community about what username and password is required to view their expense receipts and/or accounts payable invoices is painful; therefore, having to implement SSO is a negative or bad thing.

Another bad thing about Oracle's solution is the long learning curve for your organization's internal technical and functional resources to understand the various software components and process flows.

From a technical support perspective, one negative aspect with Oracle's solution is how the four process flows store the in-process accounts payable invoice or receipt information. Since the invoice information is stored within each individual process flow, the process flow is considered a payload heavy and data is not easily accessible when trying to solve real-time production issues.

Oracle chose to manage the data within the business process flow (payload heavy) versus outside the business process flow (payload light). A payload heavy application is an application that retains all or nearly all the data within the process itself. A payload light application stores nearly all the data in database tables and fields.

As a general rule, I would recommend a payload light application when a business process is complicated or when a business process contains a human task or even when a business process is data entry intensive because a payload light application is easier to support. A payload light application is easier to support because the process flow data can be corrected in the database.

In general, there are both good and bad aspects related to Oracle's financial imaging solution for accounts payable; however, there are a few ugly aspects that need to corrected by Oracle.

The ugly about Oracle's financial imaging solution for accounts payable processing is the fact that it's not a product. The individual software components are supported by Oracle but the end-to-end process flow is only partially supported. It's only partially supported because Oracle support has the option to help or not help your organization. Remember that Oracle supports the software components, but your organization owns the four process flows. Based on past experience, Oracle support is willing and able to assist with resolving 100% of any software component issues and they only helped about 25% of

time for process flow issues. For example, during an implementation, the organization needed to contact the Oracle product manager to resolve an issue. As you can expect, the process was time consuming and frustrating.

The other ugly issue is related to the user screens that the accounts payable team access to process the invoices. The user screens are not standardized across all the software component;, therefore, the user screens have a different look and feel. This is partly due to different technology architecture of each software components. Note: This impacts only the accounts payable team and not the entire user community.

In summary, selecting the correct document automation software for your organization is very challenging and will impact the organization for up to a decade. Applying the guiding principles when selecting a packaged software package can assist your organization in narrowing down possible candidates. Implementing any document automation software package will come with a large sunken cost so take a long-term perspective and evaluate the virtual support network.

As a recommendation, if your organization embraces the Oracle ecosystem and your organization is currently or intends on using some or all the software components that comprise Oracle's financial imaging processing solution for accounts payable, then I would consider implementing the solution. Otherwise, I would select another product that meets your organization's needs.