

University Hospitals Leverages Self-Service Invoices to Automate Finance in 150-Location Network

Overview:

University Hospitals, located in Northeast Ohio, offers the region's largest network of primary care physicians, outpatient centers and hospitals and faced the challenge of successfully managing tens of thousands of invoices from its many locations. University Hospitals implemented 170 MarkView for Accounts Payable and Self-Service Invoice integrated with the Oracle E-Business Suite to address the situation, with excellent results. This paper will cover project drivers, scope, and timelines, as well as lessons learned from the front lines.

Institutional Overview:

University Hospitals is northern Ohio's premier healthcare delivery system, serving patients at more than 150 locations throughout the area. Nearly 25,000 physicians and employees comprise University Hospitals and its partner hospitals, ranking it northern Ohio's second-largest employer. The System provides more than 4.5 million outpatient visits, more than 53,000 surgical procedures and 60,000 inpatient discharges (excluding newborns) annually.

Committed to advanced care and advanced caring, University Hospitals offers the region's largest network of primary care physicians, outpatient centers and hospitals. The System also includes a network of specialty care physicians, skilled nursing, elder health, rehabilitation and home care services, managed care and insurance programs, occupational health & wellness, and the most comprehensive behavioral health services in the region.

The System's 1,300 staffed beds, tertiary medical center, Case Medical Center, is an affiliate of Case Western Reserve University Medical School. Together, they form the largest center for biomedical research in the State of Ohio.

Included in UH are Rainbow Babies & Children's Hospital, ranked by *U.S. News and World Report* as the #1 children's hospital in the Midwest and Central United States; Ireland Cancer Center, northern Ohio's only National Cancer Institute-designated Comprehensive Cancer Center (the nation's highest designation); and MacDonald Women's Hospital, Ohio's only hospital for women.

University Hospitals' goal is to provide comprehensive primary and community-based care as well as access to the highest quality specialty care when necessary.

University Hospitals' Purchase-to-Pay Transformation

Prior to embarking on this endeavor, University Hospitals' had numerous legacy systems in place that resulted in the same information being entered redundantly into each system. The system was rife with manual processes that were too time consuming and expensive to perpetuate. The organization decided to embrace a purchase-to-pay improvement initiative designed to:

- Take the administrative costs out of the highly transactional processes, so that savings could be reinvested in direct patient care activities
- Create a single, integrated supply chain organization
- Reengineer business process to empower end-users and suppliers to help themselves and free up Supply Chain and AP staff (to reduce manual processes, FTEs and costs)
- Improve data integrity and internal controls (by shifting control to the front end rather than the back of the process), and
- Establish a framework to accommodate future organizational change and growth.

University Hospitals was ultimately able to double their purchase-to-pay productivity by following a number of key steps over the last four years. In order, University Hospitals' team:

- Created a strong foundation by implementing the Oracle ERP system,
- Leveraged the ERP system by automating activities,
- Extended the automation by implementing selective technology in addition to the ERP, and
- Drove accountability and performance enhancements through the use of measurements.

A Strong ERP Foundation

As a first step in the transformation and the project foundation, University Hospitals implemented the Oracle ERP, driven by the software's functionality and architecture, cost of ownership, anticipated return on investment, the contract terms and conditions, and the knowledge that data would be entered only once and would be accessible to all modules.

Jeff Lubbe, Corporate Finance Director, whose team led this effort, outlines his approach to this fundamental first step:

1) In preparation, consolidate by creating shared services centers in the AP, Supply Chain and IT&S organizations. This helps ensure simplification, standardization, and ongoing coordination. Don't allow areas of the business to "opt out" of the ERP implementation.

2) Standardize system infrastructure by utilizing one schema. Early decisions to maintain a master HR record, a single chart of accounts, supplier master, and items master will make integration simpler and minimize complexity paying dividends for many years.

3) Use the ERP as the central repository to create a "single source of truth" for business information and feed other systems. For example, maintain an employee's name, title, email address, and phone number in their HR record and create an automated interface to your email systems address book.

4) Leverage the strategic ERP supplier relationship wherever possible and avoid a "best-of-breed" approach. This minimizes ongoing support costs, and will maximize the end user's usability of the system with a common look and feel in the modules. Work with the software supplier to make the enhancements you liked in niche software by getting involved in advisory councils and user groups.

5) Limit customizations by fitting your processes to the system. Customizations are evidence of the lack of reengineering of the current processes. Fighting the urge to customize will make ongoing support, upgrades and enhancements easier.

6) Leverage ERP vendors' strong relationships with key third-party software suppliers to fill gaps in the ERP's offerings. Integration is much easier with the right partner.

University Hospitals' technology foundation was enhanced to include:

Oracle Financials (Family Pack G)

- General Ledger (4/2003)
- Accounts Payable (4/2003)
- Accounts Receivable (4/2003)
- Fixed Assets (4/2003)
- Property Management (4/2005)
- iExpenses (09/2006)
- Cash Management (09/2006)

Grants

- Grants Proposal (08/2006)

- Labor Distribution (4/2003)
- Grants Accounting (4/2003)

Other

- Discoverer (4/2003)
- KBACE (01/2005)
- 170 Systems' 170 Markview for AP, SSI & Expense Mgmt (10/2006)

Supply Chain (Family Pack J)

- Purchasing (4/2003)
- Inventory (4/2003)
- iProcurement (4/2003)
- iP Punch Out (8/2006)
- Order Management (4/2003)

Next Step: Strategically Leverage and Extend ERP Foundation

Once the ERP was in place, University Hospitals looked to leverage the ERP implementation with quick, easy big wins, concentrating on areas with high transaction counts, regardless of the dollar volume of transactions. These areas included EDI or other electronic PO and invoicing options with medical products and pharmacy suppliers. University Hospitals also looked at automation of internally initiated payments for patient refund and patient study processes.

In looking at non-PO invoices (used for “direct buy” items), PO invoices (supply chain procurement) and expense reports, all of these processes were very manual in nature and processing-intensive.

For non-PO invoices, the home-grown system needed to change. University Hospitals' AP group processed 6,000 – 7,000 non-PO invoices per month, with manual workflows for approvals and the process took 30+ days to complete the approval process. The system required electronic upload of invoice data to Oracle, but because the system was paper-based documents were lost, minimal status information was provided to the requestor, filing and storage were local and off-site, and invoice-copy requests were numerous and time-consuming to fulfill.

For PO-based invoices, the challenges were similar. University Hospitals handled 14,000 – 16,000 paper invoices per month and used EDI, ERS and PO spreadsheets with key suppliers. Problems in the process involved lost invoices (buried in the depths of the paper pile), filing and storage, lost discounts and expensive and time-consuming invoice-copy requests.

Expense reports, too, had their challenges. The AP department processed 1,000+ expense reports per month, presented as a spreadsheet template with paper receipts. Approval workflows were all manual, there was frequently redundant keying of data, lack of supporting documents at approval, lost documents, lack of status for requestor, checks issued for payment and mailed to the employee, as well as the costs and issues associated with storage and filing.

Selected Complements to the ERP for PO and non-PO invoices and Expense Reports

To augment the ERP and handle specific PO, non-PO and expense processes, University Hospitals selected the 170 MarkView for AP, SSI and Expense Management applications from 170 Systems to replace their home-grown systems and manual processes.

In the case of **non-PO invoices**, University Hospitals carefully considered the best solution to this, especially considering that they have a large number of high-volume/low-dollar invoices. Other organizations might have handled some of this volume via pCard, but University Hospitals chose a path that is a better fit for them and their distributed organization. They added 170 MarkView for Accounts Payable and Self-Service Invoice to Oracle Payables, enabling the various remote locations to leverage a consistent and automated approach to invoice processing.

170 MarkView for AP and SSI automatically routes invoices for approval, using University Hospitals' tier approval hierarchy. It also provides for non-standard approval hierarchy. Because all transactional information and status is stored in the ERP, requestors and AP staff have easy access to transaction status, there is no data duplication, and paper and storage costs are eliminated. These invoices are limited to "Direct Buy" suppliers and, with the new approach, are approved more quickly, uses 170 MarkView's mark-ups for effective communications throughout the approval process, provides the requestor with up to date status of their requests, and there are no longer any lost documents.

For **PO-based invoices**, University Hospitals are leveraging 170 MarkView for Accounts Payable in concert with Oracle Payables. This new approach taps the 170 MarkView workflows (which also use the ERP's approval hierarchy), and uses 170 MarkView's mark-ups for effective communications throughout the invoice matching process. If an invoice comes into the system electronically, it creates rendered invoices for EDI, ERS, and spreadsheets, as well as providing access to the invoice image. This approach, too, eliminates the filing and storage issues and costs. In the case of a three-way match, the invoices are automatically routed for payment. And, if there are any exceptions to be addressed (quantity, etc.), 170 MarkView manages that process.

Expense Reports are another critical area that University Hospitals has managed successfully with its new system. After implementing Oracle iExpense, University Hospitals fully automated the end-to-end expense management process by integrating 170 MarkView Expense Management. Employees now enter their expense reports into iExpense and 170 MarkView for Expense Management generates a confirmation page with a barcode that the employee uses to associate receipts with the expense report that's stored in the ERP. When the manager is asked to review expense reports online for approval, the receipts are provided. Additionally, the requestor has easy access to status, no expense reports are approved without proper supporting documentation, paper is eliminated from the process and employees are now reimbursed via EFT.

Reflect & Assess

In looking at a project of this magnitude and scope, it's important to look at both the technology choices involved and the people in the organization.

Technology... Implementing the 170 MarkView products was a rapid-fire process for University Hospitals. The initial kick-off meeting happened across two days in April of 2006 and the system 'go live' started on October 1st of that same year. Reflecting on that approach, there were certain things that worked better than others.

Things that didn't work as planned for University Hospitals involved underestimating the proper hardware configuration in production to support concurrent user demand, identifying adequate hardware for their test environments, and requiring more IT support than we anticipated. Also, the "big-bang" implementation presented some challenges and was changed to a rolling implementation starting from the outlying areas into the central campus. What was also made clear is that this type of dramatic overhaul exposes an organization's process deficiencies and University Hospitals was no exception.

In looking at the other side of the equation, there were many aspects of the project that went well. For starters, University Hospitals has significantly improved processes and visibility, lost documents have been eliminated, and document accountability and accessibility have been dramatically increased. We've reduced processing costs, increased the use of discounts and have eliminated paper shuffling, filing and storage altogether. What this means for the team is that AP staff have been redirected to more value-added activities and the number of AP staff has reduced. Also worth noting, 170 Systems' train-the-trainer methodology worked well in helping us bring the team along and enabled us to create a framework to get buy-in from the systems' users.

People... In adopting new processes and technology, the people involved are make-or-break parts of the equation. In assessing the technology readiness of the personnel, don't assume personnel from different functional areas have the same aptitude for technology and change. We recommend using a focus group from a cross section of your organization to pilot the implementation. Relying on Finance, Supply Chain, and IT&S personnel to pilot will cause you to overestimate the readiness of your overall organization. These groups are likely to have a higher technology aptitude in comparison to clinical areas like nursing and operational areas like Food Service, Maintenance, and Housekeeping. Creating an intuitive system will improve system acceptance and reduce ongoing training costs.

In the short-term, focus on creating super users and converting typical "Nay Sayers" to provide support of the implementation. You need well-placed advocates throughout your organization.

Secondly, recognize the need to train large numbers of people with varying levels of aptitude. A combination of classroom and online training and testing was used. University Hospitals employees with a higher technology aptitude simply needed online training, and this limited the time spent away from their typical job functions. Other employees needed a much more hand-holding, and they participated in classroom sessions.

Over the long-term post implementation, rely more heavily on online tutorials and testing due to its repeatability and efficiency. In addition, actively work with software suppliers to encourage product enhancements for simplification and ease of use to limit the need for training. While at a software supplier's user's conference, their goal was to make their software as easy as the consumer sites on the internet. The quote was "EBay does not have a training manual".

Some employees will not survive the change in technology initially, and some are still struggling 4 years later. There are pockets of personnel trying to hold onto paper approval processes. They found it easier to carry a stack of documents to a meeting to approve rather than a notebook PC. Approvers complain they spend too much time in front of the PC approving via automated workflow and that takes time away from "their responsibilities". Some users had not embraced basic tools like email, upon which electronic workflow is based. Additionally, not all employees had email addresses. Management employees didn't have sufficient home computing power to allow approval via VPN. Over time, these objections are going by the wayside.

Re: Suppliers. This is an area that received quite a great deal of consideration from the project team. We worked on our processes for PO-based, non-PO-based and expense reports, eliminating unnecessary steps and complexity where possible. But, we also knew that if we could reduce the number of transactions with a supplier, that we would reduce our costs. So University Hospitals worked with utility and telecommunication suppliers to consolidate 200-300 invoices per month into manageable pools of 5-10 multi-line invoices. We also knew that it is administratively easier for our Supply Chain and Accounts Payable organizations to work with 100 suppliers than it is with 1,000 suppliers. So, part of our process was to identify the suppliers who were "technology ready." There were suppliers who said they hoped to implement EDI in the next 2 years. University Hospitals moved on quickly knowing any supplier who had yet to implement a 30-year-old technology was not the right supplier to form a partnership. And, wherever possible, any new suppliers were asked to meet University Hospitals' technology requirements as a condition for doing business.

Measure

At the foundation of any business process improvement strategy is tracking performance metrics, establishing accountability, and setting performance goals. This is essential in order to establish a starting position and to understand whether your actions result in the desired improvements.

Metrics tracked at University Hospital include "Invoices per FTE," which is improving each year with greater front-end automation. Initially, the goal was to achieve industry benchmark of 11,000

invoices per AP FTE. Currently, University Hospitals is operating at a level of 2 times the industry benchmark.

The Finance Director, Financial Services was also responsible to track and improve the percentage of invoices processed by the AP Department electronically. In 2003, all invoices were manually keypunched into Payables. Currently, approximately 74% of all invoice transactions are being processed electronically. Other metrics tracked include the level of PO's and PO lines being transmitted via EDI. Suppliers to target in this area were coordinated with Finance, as improvements in the PO process were dependent upon the electronic invoice initiative.

Conclusion

Regardless of which industry you're in, embarking on a Finance transformation project designed to move your organization toward best practices is well worth the investments required. It's been a long and multi-stepped process for University Hospitals, requiring us to address issues at all levels – from the most strategic to the most mundane – but we have made great strides, reduced our costs, and are able to better support University Hospitals' overall mission around patient care.