

2008 SACUBO Best Practices

Automated Workflow for Employee Fund Changes

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Abstract

The Medical University of South Carolina (MUSC) faced a problem that has challenged many universities across the country. What is the best way to automate the large number of paper personnel transactions that flow through Human Resources, Payroll, and Grants and Contracts Accounting on a daily basis? Further complicating the situation was the fact that almost 85% of MUSC's academic administrators were already utilizing a financial shadow system to create and account for these type transactions. While the shadow system was not integrated into the financial and payroll systems of record, it was still considered important to the academic administrative community. Senior administration had been reluctant to require users to re-enter data into a separate application since the shadow system already offered the ability to obtain electronic approval from multiple departments.

MUSC's answer to this problem was to purchase and implement a workflow tool to integrate information from the shadow system into the financial system of record. The first process chosen to automate was changes to payroll (labor) distribution, called "Fund Changes" at MUSC, and the project was dubbed the "TeamWorks for Fund Changes Project." The cross-functional team included Grants and Contracts Accounting, Payroll, Human Resources, Information Services, departmental administrators and vendors from the financial system of record as well as the shadow system. The team's ability to work together toward the common goal of making the request for employee fund changes more efficient for the University drove the success of the project.

The TeamWorks workflow product accepts the transaction from the shadow system, moves it through to the financial system of record and/or to the inboxes of the appropriate administrators, and sends status messages back to the originating (shadow) system along the way. A valid transaction, which is effective for the current pay period, is complete within seconds. Retroactive transactions still require human intervention, but the ability of TeamWorks to facilitate the business rules and move the transactions from person to person via electronic inboxes has streamlined the process dramatically.

During the planning stage of the TeamWorks for Fund Change project, the team collected data to determine a baseline turnaround time for fund change requests. The data from approximately 300 forms included current as well as retroactive requests, and the average turnaround time was 13.83 days. One month into the implementation of the TeamWorks system, the average turnaround time for a fund change transaction was a mere 2.24 days. Also, each departmental administrator that submits a transaction receives status messages each time the transaction moves along through the process and no longer needs to make phone calls to find out when the change will be complete. MUSC is currently finalizing the details of this implementation and preparing to automate other types of transactions.

Introduction of the Organization

Located in Charleston, South Carolina, the Medical University of South Carolina (MUSC) was established in 1824 and is recognized as the first medical college in the South. The University's purpose is to preserve and optimize human life for the citizens of South Carolina and the nation through education of health care professionals and biomedical scientists, research in the health sciences, and provision of comprehensive health care. The Medical University of South Carolina consists of six colleges - the College of Medicine, College of Dental Medicine, College of Pharmacy, College of Nursing, College of Graduate Studies, College of Health Professions - and seven separate legal entities, which are considered component units of the University. The two major components are Medical University Hospital Authority and University Medical Associates. The University has approximately 2700 students and 4900 employees.

Statement (restatement) of the Problem/Initiative

For as many as 15 years, MUSC has been exploring alternative ways to automate the Position/Employee Action Request (PEAR) form. Success finally blessed the institution in 2007. In its original state, the PEAR was a pure paper form. Departments ordered the form from a central place at MUSC. Business managers typed the appropriate data into the form, obtained approvals from various departments for split-funded positions, and submitted the form via campus mail or by walking the form over to the separate building which houses Human Resources (HR). Over time, the colleges began using a financial management system called Universal Management System (UMS) to manage their finances independently from the system of record. UMS eventually expanded to include the ability for business managers to print a PEAR form from within UMS. This saved

them from having to order the forms and to retype employee information which the UMS system already had in its databases. The department would print the form, obtain signatures from other departments for split-funded positions, and submit the paper form to Human Resources. The next step was for UMS to develop routing which allowed the originating department to obtain approval from split-funded departments electronically. Finally, after this was successful, Human Resources installed the UMS product in its office, which allowed the UMS users to route the document to HR electronically. At that point, however, the PEAR was back to a paper process. HR printed the form and routed it to various staff members in Human Resources, Payroll, and Grants and Contracts Accounting for processing. Although this routing did improve the turnaround time significantly, it did not eliminate the problems inherent with a paper form. Forms got lost. Forms got sent to the wrong place. Forms sat on people's desks, only to be discovered weeks later. If a department called asking for the status of a certain request, one phone call was usually not enough to locate the form.

MUSC chose to tackle the request for changing an employee's fund sources (fund change) as the first process to improve since the highest volume of PEARs were fund change transactions. A survey of approximately 300 forms revealed that the average turnaround time for these forms was 13.83 days. The need for automation was obvious, but the solution was not so apparent. By 2007, business managers all over campus were managing almost 85% of MUSC's employees using the UMS tool. If Human Resources had developed a web-based tool to submit HR transactions, departmental business managers would not have been happy about having to retype employee data into this web

tool when they were already maintaining this same information in UMS. The problem that baffled MUSC was how to completely automate the PEAR processes without forcing the UMS users to re-enter data into a separate system.

Design

MUSC decided to use a workflow tool which would serve as the intermediary between UMS and the Infor SmartStream system of record for HR/Payroll. MUSC's HR/Payroll vendor, Infor, offered the TeamWorks business process management product bundled with some functions which were slightly tailored to work specifically with the Infor applications. TeamWorks is a tool which facilitates workflow and business rule automation. MUSC began planning the best way for TeamWorks to accept transactions from UMS, perform validation, pass the transactions to the appropriate people or systems, and provide feedback of the status back to UMS. The project team, TeamWorks for Fund Changes, consisted of a cross-section of employees from Grants and Contracts Accounting, Human Resources, Office of the CIO – Information Services (OCIO-IS), Payroll, and several business managers from the departments who submit fund changes. The team also included representatives from Universal Data Solutions (UDS), which is the vendor for UMS, and a full-time consultant from Infor who had experience implementing TeamWorks solutions. The Infor consultant led the design process and accomplished much of the programming effort himself in an effort to speed up the implementation process. The MUSC team provided him with details about how the process worked on paper and how it should work electronically. The consultant engaged the users throughout the process by demonstrating how their screens would look and work to make sure he was on the right track. The team worked together well to make

sure the end product would be beneficial for the requesting business managers as well as the administrative departments processing the requests. When possible, TeamWorks writes data directly into the HR/Payroll system of record, eliminating the risk of data entry errors by Payroll staff. When human intervention is necessary, TeamWorks streamlines the process by delivering tasks to a user's inbox and delivering status updates to the UMS user along the way so the business manager always knows where the request stands.

Implementation

Once the design and programming were substantially complete, the team engaged the business managers on the implementation team in extensive system testing. The users submitted real transactions electronically in parallel to the paper submissions.

TeamWorks applied the electronic submissions to the HR/Payroll test server. The Infor consultant, along with MUSC programmers, resolved the issues that arose during testing and gradually improved the system along the way. Because this project involved technology which was so new to MUSC and allowed the organization to open a door of communication between UMS and SmartStream, the testing phase took longer than the group expected. The extra time was well worth it; the thorough system test that the team conducted was key to the success of the project. Approaching the go live date, the team conducted training for the automated fund change process. The training was also a team effort involving presentations from UDS, Human Resources, Payroll, OCIO-IS, Grants and Contracts Accounting, and business managers from user departments to explain the entire fund change process. After Go Live, business managers directed most of their

questions to their colleagues who participated on the implementation team. As a result, the business managers are now maintaining a Frequently Asked Questions document on the HR web site to guide users in the automated fund change process. Heavy involvement from the business managers in the planning and implementation was instrumental to this project. They feel ownership in the process and helped to shape a tool which will be useful for their colleagues across the campus for years to come.

Although MUSC held one planning meeting in November, 2006, for the TeamWorks for Fund Changes project, significant work did not begin until late January, 2007. The Go Live date for automated fund changes was August 1, 2007. Although this date was 3 months beyond the original estimated finish date, there were no complaints about the schedule change since the end result was a welcome change for the business manager community.

Benefits

The overwhelming benefit of the TeamWorks for Fund Changes project was that average turnaround time decreased from 13.83 days to 2.24 days. This improvement is nothing less than astonishing. Also, the business manager who submits the request gets status updates as TeamWorks accepts the transaction and moves it through the process. No longer is there a need to make phone calls to several departments asking about the status of a transaction. Upon completion, the submitting user gets a status message accompanied by a green flag to let them know that the transaction was successful. A request effective on the first day of the current pay period is complete within seconds if it

passes validation. If there are any invalid data items, the business manager receives instant feedback and an opportunity to change the data as appropriate and resubmit. Finally, the tool that MUSC chose allowed the business managers to submit and receive status messages using their already-familiar UMS tool. The fund change process is the first of many processes that MUSC will automate using the TeamWorks tool.

Overall, the business manager community has been very excited about this process. The College of Medicine Dean's Office even went so far as to provide refreshments during the training sessions and to provide a celebration luncheon for the team.

Retrospect

The biggest complaints that business managers have today about the process is the mechanism by which they view the status messages. Only the business manager who actually submitted the transaction can currently see the status history. In larger departments, the person who creates the transaction is often not the same person who submits it. Also, UMS users can only see status history by retrieving each transaction individually. The business managers are currently working with UDS to incorporate a more robust way to view status history both individually and for multiple records at once. The team was so focused on and excited about the input portion of the process, that we did not pay enough attention to the output. For the next process, we will spend more time planning for how the users will view the progress of the transaction.

MUSC engaged a full-time consultant to build the product since no one on staff had experience with the TeamWorks tool. The goal was to quickly build and implement a successful process to instigate some excitement for future processes. MUSC planned to learn from the consultant's work in order to be able to work more independently on future projects. In order to build the product quickly, the consultant did not include MUSC programmers as he developed the code which make the tool function. This did not end up saving any time; the team paid for this shortcut later during system testing and pilot. By that time, the consultant was gone, and the MUSC programmers struggled to understand what he did and why in order to resolve problems as they arose. In retrospect, it would have been more efficient to more closely involve the MUSC programmers from the beginning.

The challenge that MUSC has yet to solve is how to accommodate those departments that are not currently using UMS. TeamWorks would allow MUSC to develop a separate input form for those users, but is this the best solution?