Published on *University of Colorado* (https://www.cu.edu)

CU I&E Submission: E-Storage for Research Administration [1]

Description

As the University's research engine, Research Administration manages the lifecycle of a project. Staff members work in close collaboration with principal investigators and department administrators to develop and submit proposals, accept awards, provide fiscal oversight, manage billings and collections, submit timely reports to sponsors, and ensure awards are properly closed out.

Annually, Research Administration submits over $1.5B in research proposals, yielding an average of $350M in new awards. In FY2013, new awards along with ongoing projects totaled annual expenditures of $366M.

Until recently, operations within Research Administration have been managed much the same way since anyone can remember. Proposal development and awards were processed via paper with a top sheet that routed the file. The manual movement of files wasted time and effort.

In June 2013, Research Administration began a new path. Campus leadership issued a challenge to make Research Administration paperless. Rising to the challenge, staff members within Research Administration came together to form the E-Storage Committee to address the issue and to develop a strategy to become paperless.

At CU Boulder, the Office of Contracts and Grants (OCG) and Sponsored Project Accounting (SPA) are collectively known as Research Administration. Externally funded research is handled by three distinct teams within OCG and SPA: pre-award (proposal preparation and submission), post-award (award receiving), and fiscal administration (Sponsored Project Accounting). The pre-award team handles the initial proposal, budget and sponsor requirements. The post-award team accepts and negotiates awards and programmatic requirements, and prepares budgets for entry in the accounting system. The sponsored project accounting team reviews the award package, enters budgets into the People Soft financial system, audits and track costs, prepares and submits financial reports to sponsors, and closes out awards. Before the paperless initiative, these three teams performed their respective functions independently, creating their own systems and processes, resulting in duplication of effort and overall inefficiencies.

Prior to September 2013, the pre-award team printed all proposal documents and stored the documents in the file room for a minimum of three years. This could include as many as 200 pages per proposal. Historically, less than 30% of all proposals became awards. Thus, many

documents were printed and simply recycled three years later.

If a proposal successfully received an award, the post-award team would print the required award documents. This could range from tens to hundreds of pages per award. On projects that required multiple accounts, paperwork was often duplicated in order to provide clarification for the other research administration departments.

When the award reached Sponsored Projects Accounting, the accountants and billing techs would print portions of the award that pertained to their work processes, further duplicating effort. A proposal that began with 200 pages could easily result in a 1,000 page file.

The paper file was passed back and forth between post-award and SPA many times before being permanently stored in OCG's file room. This process was slow, labor intensive and linear. A permanent file could easily be misplaced leading to major delays.

Along with the time and paper the processes required, there was no central way to track an award's progress. Progress of the award was tracked on a paper routing sheet, signed off by post-award and SPA at each step. Yellow sticky notes attached to the routing sheet were the common practice for communicating issues and problems. While the staff member with the paper file knew the status of the award, the status was not available to anyone else in OCG, SPA, or the departments.

The E-Storage Committee quickly realized that the printing of paper was not the issue. The real issue was the antiquated process that had organically grown from years of processing proposals and awards. The team began mapping out the process, evaluating the steps where paper was printed, and identifying how those documents could be stored electronically.

Proposals were the first files to go paperless. The E-Storage Committee developed operating principles and procedures for storage of proposal files in a shared drive, creating new communication channels between pre-award and post-award. Now that the two teams could save and access documents from the same electronic repository, advantages of the new system were quickly realized. When an award arrived, the post-award team no longer needed track down a physical file to process an award. If someone was out of the office all of his or her documents were available on a campus server available to authorized staff members. Staff could access all electronic documents while in the office or remotely if working off site. In September 2013, Boulder County and CU experienced the worst flood in recent history. Many of our staff members experienced significant personal damage to their homes. Many staff members could not get to work because of unpassable roads. The campus was closed for several days. Because of the E-Storage Committee's work, staff members within Research Administration were able to continue working from home, accessing the electronic files as needed, and ensuring that proposals submissions were electronically submitted by the sponsor's deadline.

The E-Storage Committee realized that this process could extend from the pre-award stage all the way through billing resolution (cradle to grave), but a communication method was needed to facilitate the process flow from post-award to accounting. While the E-Storage committee was considering their options, the post-award team independently created an enhancement within Research Administration's database, Filemaker. Referred to as the "Blue Box,", the enhancement served as a communication tool to track issues affecting an award. In October

2013, the E-Storage Committee adopted this new communication tool replacing the paper routing form used by post-award and accounting.

After a successful soft roll out of the paperless proposal system, the pre-award team went entirely paperless for all new proposals on September 11, 2013, for the first time ever! However, for all of Research Administration to become paperless, all three teams needed to be paperless.

The E-Storage Committee developed new systems and processes in which all proposal and award documents are stored electronically in a shared drive that is accessible to all members of research administration simultaneously. When an award is received, the post-award team can access proposal documents from the shared drive and start processing them in the FileMaker database.

By further developing the Blue Box to enhance its capacity, a new electronic routing process was created within the internal database, Filemaker. We created a standard business process flow that was electronically tracked within FileMaker. Employees are assigned to specific business processes, and tasks are associated with those business processes. Employees are then notified electronically when a task is ready to be completed. As each task is completed, new tasks are assigned based on the next step in the business process. Each staff member's task list is electronically communicated to the staff member, and is also available for supervisor in order to track workloads, identify critical issues, and take a proactive approach to managing their area of responsibility. Rather than having stacks of files on a staff member's desk, the staff member now refers to her electronic task list allowing her to better organize and prioritize her day. This provides not only a robust internal communication system, but also provides a mechanism to track the progress of a proposal or award, understand where there may be bottlenecks, and reassign tasks if needed. External parties, department administrators and PIs can also view the electronic work flow tool to check the status or note any issues affecting an award.

Along with the impacts outline below, the paperless initiative led to our three teams working more closely together, understanding how each team's process affects another, and better understanding each team's work. Communication among staff members and with the campus personnel has also improved. What began as a project to reduce paper turned into a winning team effort that increased communication and trust across three teams in ways not expected, thus improving the overall workflow for all staff members.

Team Leaders: Steve Sheldon, Garrett Steed, Melissa Englund, Roger McCormick

Team Members: James Uhes, Stefanie Furman, Beth Kingsley, Sharon DeCarlo, Justin Mack, Andy Wang and Bev Baran

HOW DOES THIS IMPACT THE UNIVERSITY?

The implementation of the electronic routing process decreased the expenses associated with the paper process (paper, toner, tabs, etc.) by 50% immediately. Moving forward, it is reasonable to predict overall supply costs to be a third of what they were previously. Research Administration is more environmentally friendly than it ever has been before. The team is conserving resources on a daily basis.

In addition to converting all new proposals and awards to an electronic format, we undertook a separate project to scan all previous paper proposals. Completed in March 2014, the scanning and archiving of paper documents allowed us to remove a dozen file cabinets creating much needed space for workstations.

A greater impact has been felt in the area of workplace efficiency. The time it takes to deliver information has been greatly reduced. Files are no longer hand delivered to each person. Once information is saved, it is immediately available to all other team members. The workflow is no longer linear, and awards can now be routed to multiple team members at the same time. The time it takes to fully process an award has been reduced by weeks. Additionally, the new system allows us to measure effort, collect metrics and develop management reports so that Research Administration can redirect focus to align with our strategic priorities.

For SPA's billing, earlier access to new contracts, grants and modifications will speed up the issuance of the first bill to the sponsor, leading to earlier receipt of sponsor payments and reimbursement of expenses incurred by the university. This improves the university's cash flow and reduces accounts receivable.

The new e-routing process has allowed Research Administration to do away with thousands of paper files. This has created much needed space for our newly hired team members. It has also allowed the team to move electronic storage to campus servers, thus providing a higher level of security and making it possible for team members to work remotely. Creating a paperless/electronic system paved the way for establishing a telecommuting policy to allow for work-at-home arrangements or to work at other locations on campus, thus supporting the strategic initiative to create satellite support offices across campus.

From the perspective of department administrators and principle investigators, because they can view the routing process in FileMaker online, the new system allows them to see who is handling their award as well as where the award is in the routing process. It has made research administration transparent to the rest of the university. It also allows department administrators and principal investigators to receive access to their funding more rapidly than in the past.

In December 2014, Research Administration will transition to a new electronic research administration (eRA) system, called InfoEd. The paperless/electronic routing process now in place within Research Administration will make the transition to the new eRA system much easier. Award documents will be transferred automatically from the shared drive on the campus servers into the InfoEd system. The ease of transferring thousands of awards into InfoEd would not be possible without the structure built for the new paperless/e-Storage system.

Implementation status: The pre-award (proposal) team went paperless in September of

2013. The rest of Research Administration went paperless in late March of 2014. Adopting a strategy for continuous improvement, we will continue to examine our processes, adopting quick, easy wins, while laying the groundwork to pursue more comprehensive improvements.

Now that documents and business process are managed electronically, we have begun the process of collecting measures and metrics to understand the work flow and how we are performing. Metrics will guide decision-making to improve operations, including how to best deploy staff, allocate strategic resources, and eliminate non-value activities, all of which will improve our capacity to support research administration across the campus.

Groups audience:
Controller

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