

## Best Practice: Web Based Customer Work Order System

Erskine College is located in Due West, a town of 1,200 residents located in historic Abbeville County, South Carolina, an area rich in colonial, Revolutionary War, and Civil War History. The town and the college, with a number of antebellum buildings, are listed on the National Register of Historic Places. The College is the only national Christian liberal arts college in the South, based on its national academic ranking from the Carnegie Foundation and membership in the Council for Christian Colleges and Universities. The College has over 1,000 students and 300 employees. Dr. William J Stauff is the Vice President of Finance and Operations.

A customer oriented web based on-line work order system was developed and implemented in October 2000. The system was a joint project between the Vice President of Finance and Operations William Stauff and professor of Science, Bill Junkin. Junkin who received his PHD from MIT had already developed and marketed “Beyond Question” a software package to aid Erskine teachers in the classroom. His software is now being used by Duke Power and is available for other educational uses. Stauff combined his experience gained while at the University of Virginia Facilities Management and Junkin’s computer skills to help develop a much needed work order and preventive maintenance system for the Facilities Department.

The cost for developing the software was less than \$5,000. The only hardware cost was a printer needed in Facilities to print out the work orders. A similar off the shelf software

package would have cost at least \$50,000 and would not have met most of the unique requirements that we have. The project did not include any changes in the electronic process. The scripting is done in PHP, already available on the Erskine College servers, and the program uses a MySQL database, which also is already on the Erskine College servers. Both the scripting program and the database are usually provided at no additional charge with Linux servers and can usually be obtained for free for most other servers.

All faculty, staff and a limited number of key students have access to the system by going to Erskine's web page. They are able to submit work orders on line. They must enter a few fields and give enough specifics of what the problem is. Once entered the requester hits send and the work order is sent electronically to the Facilities Systems Administrator Angie McClain. Angie prioritizes the work request with either an A, B or C. She also assigns a person to do the job, and places a status to it. The work order takes on a life cycle beginning with received, waiting approval, in process and complete. The work order is printed out and placed in the box of the worker assigned. The document is returned to her when the work is completed. Once she changes the status to complete, an automatic e-mail is sent back to the requester informing him that his requested work is completed. The customer can also run on line reports on the web of all work in process either by building, requestor, date received, priority, or status.

The system has been very valuable to the college in that anyone who sees work to be done can enter it from any computer and expect action to be taken by Facilities. Facilities now has knowledge of the scope of work that needs to be done in all 37 buildings on 86

acres. The Resident Directors use the system as they see problems in the dorms. They report problems with dryers and washers, with temperature (too hot or too cold) and with general maintenance problems. Junkin programmed the system so that when an RD enters a work request a copy of it is sent automatically to Monty Wooley the Vice President of Student Services. He now has the information he needs. He can see all the work being done in the dorms he is responsible for. He can also determine if any of the requested work is the result of vandalism. He will use these work requests to get reimbursed from the students. Randy Estep, the Safety Officer who patrols the buildings and grounds at night, returns to his office at the end of the shift and enters an average of 6 to 8 requests dealing with door problems, lighting and any other security needs.

Professors use the system as they see problems in their classrooms like desks and chairs that need to be repaired or work needed done in their offices. Admission uses the system to enter special set ups needed for weekend events for prospective students.

The administration is pleased that they have met the requirement for such a system as noted by the Southern Association of Colleges and Schools (SACS) accrediting committee in their report to Erskine earlier this Fall.

Dr, Junkin also developed a preventive maintenance (pm) system that feeds work orders automatically on a timed scheduled into the work order system. The Daniel Moultrie Science Center for instance has scheduled maintenance for the HVAC system four times a year. The PM system is programmed to send a work request with a job plan to the work

order system automatically four times a year. Ron our PM man will receive the pm work order and perform the work only at the required time.

The major benefits for the new system are numerous. Facilities Management now has a way to document and prioritize work. There are over 300 people besides Facilities staff now that are involved in reporting and documenting routine work that needs to be done, which in many cases Facilities was totally unaware of. The campus today is safer, cleaner, and the backlog of deferred maintenance is progressively being eliminated. Preventive maintenance is now a priority and easy to keep up with because the PM system automatically generates the necessary work orders at the time they need to be ready for Ron. Faculty, staff and students now feel they have a hands-on approach to helping in keeping their working environment safe and sound.

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