

ENTERPRISE STUDENT ADMINISTRATIVE INFORMATION SYSTEM

2005 COMPUTERWORLD HONORS CASE STUDY

EDUCATION & ACADEMIA

A UNIVERSITY IS 75% COMPLETE IN REPLACING ITS ENTIRE LEGACY STUDENT INFORMATION SYSTEM, ON TIME AND ON BUDGET. [20055395]



Robert Carrigan,
Chairman of the Chairmen's Committee

Ron Milton,
Vice-Chairman of the Chairmen's Committee

Dan Morrow,
Chief Historian

SUMMARY

The University of Pittsburgh has led one of the most successful implementations of PeopleSoft's Campus Solutions technology to replace its legacy student information system. The implementation, conducted by a cross-organizational project team, is 75% completed and remains on time and on budget.

APPLICATION

Central among the core "business" functions of a major teaching and research university is the effective management of student administrative information and processes. These processes include applications for admissions and financial aid, enrollment and registration, student financial services, housing, and many others. The University of Pittsburgh serves 32,000 students on its five campuses located across western Pennsylvania. Sixteen undergraduate and graduate schools ranging from business and international affairs to six schools of the health sciences comprise the University. More than 300 administrative staff are involved with student affairs processes and information.

Prior to implementing the PeopleSoft system, the University managed student administrative information using a highly-customized version of SCT's ISIS product on a mainframe environment, which had been in place since the early 1980's. Users had significant concerns about data integrity, duplicate data entry, poor functionality, slow access, and the need for a large number of "shadow system." These concerns made it difficult to track students, generate meaningful reports, respond to requests from stakeholders and outside agencies in a timely manner, and make judicious management decisions about students, programs, and strategic direction. In addition, the level of service available to students was seriously limited by the inadequacies of the current system including providing students online access to course registration, tuition, and financial aid information at any time from any location.

The University engaged in a lengthy process of preparing for the selection and implementation of a new student information system. The Office of the Provost assumed oversight responsibility for the project and engaged a nationally-recognized project management consulting firm with extensive experience in student information system implementations to coordinate the effort. A committee with representation from each stakeholder department was formed and in 2001 worked to fully map out all of the relevant processes before consideration of a commercial software product began.

Following this work, an extensive software evaluation and selection process was undertaken. A request for information was issued in early Fall 2002 to all of the major student administrative information system vendors. Detailed evaluation of their responses resulted in a decision to further evaluate the SCT and PeopleSoft solutions. Both vendors received copies of the 114 process maps representing processes in the office of the Registrar, Admissions and Financial Aid, Student Financial Services, Housing, Food Service, the ID Center, and Study Abroad. Each vendor was asked to complete a fit-gap analysis to determine how well its product addressed the documented process workflows. In late Fall 2002 a subset of the University selection committee made site visits to reference institutions. Each vendor subsequently provided an onsite demonstration, and in early 2003 a series of scripted process demonstrations were conducted. The selection process culminated in the issuance of a formal RFP to both vendors in order to obtain detailed cost and technical proposals. The committee unanimously recommended the selection of the PeopleSoft system.

With the selection process complete, the task of implementing the system began. The University continued to retain its project management consulting firm and engaged PeopleSoft's professional services consultants. The implementation schedule was set to begin on July 1, 2003 and end on June 30, 2005.

The early successes of this project were the direct result of careful and effective strategic planning. Immediately following the software selection, a steering committee was formed to ensure that the

project remained on track. This committee developed the following guiding principles:
“In the implementation of the student administration system, we are guided by the following principles:
1. We will implement the software without modification, and if necessary, we will change business processes rather than the software.
2. We will take every opportunity to reduce the complexity and the cost of existing administrative operations.
3. We will review all current processes in order to take full advantage of the power of the software and to implement PeopleSoft-identified “best practices.”
4. We will complete tasks on time or earlier, within budget or under, and exceed expectations with regard to quality, service, and functionality.”

An implementation team with membership representing all of the major stakeholder areas and information technology services was formed. A technical team was also formed to ensure that the system was appropriately implemented and that it followed the University’s standards for enterprise applications and services.

In keeping with the guiding principles, a total of 11 changes were made to policies and business processes in lieu of customizing the software. Those functions that the out-of-the-box software could not perform were accomplished either through integration with other software systems or the development of “bolt-on” components to manage housing and recruitment, online student applications, and through an interface to the University’s data warehouse system. In August 2004 the academic structure was completed and the course catalog and admissions components were brought online. The financial aid component was brought online in January 2005. All remaining components are on schedule for full implementation, with no significant risks for delay of the final July 2005 implementation date.

BENEFITS

The PeopleSoft system provides the University with a robust, comprehensive web-based student administrative information system. Perhaps more important is that the University’s students will themselves have the ability to interact with the appropriate components of the system at any time, from any location, using only a standard web browser. The University will realize significant financial savings by eliminating a costly and highly ineffective legacy computer system. Having already eliminated most other mainframe-based applications, the University will be able to eliminate this system entirely. Administrative users will for the first time have the opportunity to query data and produce reports using the feature-rich capabilities of the University’s enterprise data warehouse rather than having to request data feeds for shadow systems or customized reports from busy information technology staff. The decision to limit the number of customizations of the base software package in favor of modifying business processes or using “bolt-on” components will avoid the mistakes made years earlier with the SCT ISIS system. The extensive customizations to that system made it virtually impossible to upgrade software versions. Consequently, a vicious cycle was created in which new functionality requirements were attempted by further customizations.

IMPORTANCE

Web-based access to applications and services is increasingly becoming the norm along with the expectation that applications and services will be available at any time from any location. Although web-based front ends had been created for the legacy system, these retrofitted applications were poor substitutes at best for the web-enabled, functionally rich applications available today. The PeopleSoft system provided the University the ability to integrate a modern, high-performance application with its existing enterprise directory, user authentication, network operations center, and enterprise Web portal systems. The result is an enterprise-class system capable of meeting current and future University operational and technological needs.

ORIGINALITY

Implementation of a commercial student information management system is not in itself unique, as a review of PeopleSoft’s customer list will quickly show. The originality of this project lies with the careful management of the planning, software selection, and implementation phases of the project in order to reduce development time, ensure that University requirements were effectively addressed, and complete the project within budget and on time. This required identification of clear goals, careful mapping and re-evaluation of existing policies and workflow processes with changes wherever needed, and highly effective project management. Strong commitment from the software vendor was also required to ensure that the software truly performed as expected along with expert assistance with installation and configuration.

SUCCESS

Full implementation of the University's new student system is not due until the start of the Fall 2005 term, but the project has achieved critical early successes including on-time implementation of the academic structure of the system, admissions, financial aid, and course catalog functions. The establishment of four guiding principles appropriately set expectations of stakeholders and project team members and provided a set of standards against which success could be directly measured. As a result, the implementation of the initial system modules was smooth and virtually problem-free in addition to being completed on time and on budget. Early feedback indicates wide acclaim for the usability and functionality of the PeopleSoft solution. The University fully anticipates that the remaining module implementations scheduled for the first half of 2005 will meet with similar success.

DIFFICULTY

The implementation of a new enterprise student administrative information system is inherently difficult because of the sheer number of workflow processes and institutional offices that are both involved and affected. The application itself must be scalable to accommodate the sheer number of data elements and records associated with these processes. The inherent expectations from stakeholders, University officials, and even students is that the application is secure, always available, performs well and has sufficient flexibility to meet current and future needs. The University of Pittsburgh, through careful planning, expert advice, and effective software selection processes, has achieved what many of its peers have not: implementation of a new student administrative information system on time and within or below the established budget and without significant disruption to on-going administrative activities.