Report on Campus Solutions Post-Implementation Review #14-207

We have completed our post-implementation review of the PeopleSoft Campus Solutions project. This audit was performed at the request of the UTHealth Audit Committee and was conducted in accordance with the International Standards for the Professional Practice of Internal Auditing.

BACKGROUND

In 2008, UTHealth determined that the software solutions for student administration were not meeting current business requirements and utilized tools and platforms which were outdated, resulting in business process inefficiencies, student dissatisfaction, technical risks, business and technology constraints, and compliance and audit risks. As a result, UTHealth began exploring the adoption of a new technology platform to replace the Student Information System (SIS), the Sigma Student Aid Management System (SAMS), redLantern (formerly DARS), EDISmart, UTLINK, and SAS EG. PeopleSoft Campus Solutions (Campus Solutions) was selected and a consultant (CedarCrestone) engaged to assist in the implementation.

Implemented by UTHealth on August 31, 2012, Campus Solutions is a comprehensive student information application that supports the full student life-cycle from prospects through enrollment to alumni management. The Campus Solutions software was acquired through the existing PeopleSoft licensing agreement with UT System and therefore not included in the approximate $7.81 million in implementation costs.

OBJECTIVES

The objective of this audit was to determine whether controls around procurement functioned as intended, project goals and objectives were achieved, lessons learned were identified, and users are satisfied with the outcome, training, and ongoing support.

SCOPE AND METHODOLOGY

Through interviews, review of documentation, and an administered survey, Auditing and Advisory Services (A&AS) performed an audit of the Campus Solutions implementation completed on August 31, 2012. We consulted the Information Technology Infrastructure Library for guidance on conducting post-implementation reviews. Additionally, we reviewed the associated controls in place around the procurement of information technology.
AUDIT RESULTS

Procurement of Information Technology
A&AS obtained the Information Technology Policy on Procuring Information Technology (ITPOL-022), the Handbook of Operating Procedures on Purchase of Consultant Services (HOOP-196), and the Procurement Handbook. We reviewed these policies and procedures as they relate to the procurement of information technology and identified the following controls:

- The procurement of information technology services over $5,000 requires the approval of the Vice President (VP) and Chief Information Officer (CIO) prior to the purchase order being issued (ITPOL-022).
- For technology purchases of more than $5,000, the IT department must review and evaluate the technical requirements and design, configuration and impact analyses, implementation plans and budgets, risk analysis and mitigation plans, vendor proposals/bids/contracts and other risk factors (ITPOL-022).
- Procurement Services is required to review procurements of information technology for appropriate approval and process accordingly (ITPOL-022).
- Requests for consulting services must be reviewed and approved by Procurement Services (HOOP-196).
- Formal procurement is required for purchase requests exceeding $25,000 and a minimum of three formal bids is required (Procurement Handbook).

A&AS interviewed the Purchasing Contract Administrator to confirm our understanding of these requirements. We obtained and reviewed the approval by the VP/CIO, evidence of review and approval performed by both IT and Procurement Services, and copies of the formal bids received. The controls around the procurement of information technology are appropriate and functioning as intended.

Goals & Objectives
A&AS obtained and reviewed both the Student Information Systems Replacement Project (Project Charter) and the Project Management Plan for Campus Solutions. From these documents, A&AS selected the following key goals and objectives for testing:

- Implement software solutions to improve the overall UTHHealth Student Administration business process. Streamline business processes by implementing efficiencies and automation.
- Implement a user-friendly, web-based Student and Faculty Self Service application.
- Ensure that the appropriate hardware and software support is in place.
- Ensure that the university community is sufficiently trained on the new solutions.
- Deliver a solution within the approved project budget and timeline.

In order to determine whether the key goals and objectives were achieved, A&AS conducted interviews of key personnel within IT and the business offices, conducted a survey of Campus Solutions users and IT support personnel, and reviewed supporting documentation to substantiate the project budget actuals and timeline.

As the implementation of Campus Solutions resulted in less manual data entry, two full-time positions in the Registrar’s Office were reassigned to other functions. Additionally, the survey
results indicate that Campus Solutions is a user-friendly application that is easy to navigate and fairly intuitive. Users are generally satisfied with the quality of support from the IT Campus Solutions Support Team.

The implementation was 97% complete as of the project go-live date of August 31, 2012, with a few tasks remaining to be completed, including the transfer credit rules conversion, self-service transcript requests, and customization of reports from the data warehouse. These tasks were transitioned to the IT department for further development at the end of the project.

Concerns about the sufficiency of initial training were noted by the user surveys; however, the project team indicated that training sessions offered during the implementation were sparsely attended. Training for new employees is now addressed with self-service solutions and on-the-job instruction from supervisors.

Due to resource constraints, UTHealth has not been able to take advantage of additional features and functionality introduced since the implementation in 2012.

The key goals and objectives were generally met. The project budget and timeline are discussed below.

**Project Costs**
A&AS performed a reasonableness check on the actual costs reported. For internal labor, we obtained and ran the SQL query from the Project Manager to independently verify the costs. For external labor, we agreed the cumulative CedarCrestone fees to the final purchase/change order and for external costs, we judgmentally selected a sample of purchases and agreed them to purchase orders. No issues were noted.

The following is a comparison of the actual to budgeted costs for the Campus Solutions implementation project:

<table>
<thead>
<tr>
<th>Type</th>
<th>Budgeted Costs</th>
<th>Actual Costs</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal Labor</td>
<td>$2,352,240</td>
<td>$2,760,720</td>
<td>$408,480</td>
</tr>
<tr>
<td>External Labor/Costs</td>
<td>$5,118,948</td>
<td>$5,051,095</td>
<td>($67,853)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$7,471,188</td>
<td>$7,811,815</td>
<td>$340,627</td>
</tr>
</tbody>
</table>

Internal labor costs were budgeted based upon the anticipated project organization while taking into consideration that the project was scheduled to last approximately 21 months. External costs, which included consultant labor and travel, software licenses, hardware, contingency funds and other miscellaneous expenditures, were budgeted at $5.12 million and the actual costs were $5.05 million, resulting in a savings of approximately $68k. The savings were realized from lower than expected software licenses, hardware, and training costs.

The total project costs exceeded the budget by approximately $340,000, or 4.5%. Based on the length and scope of this project, a variance of this size which included a positive variance in external costs is commendable.
Milestones
A&AS compared the target milestone dates contained in the Project Management Plan with the actual delivery dates in the Project Close-Out Report. Of the 21 individual milestones reviewed:

- Two were delivered before the target milestone date.
- Six were delivered by the target milestone date.
- Eleven were delivered after the target milestone date. The variances ranged from 7 to 77 days.
- Two were not delivered by the project go-live date of August 31, 2012. Both involved the customization of reports from the data warehouse, which were transitioned to the IT department for further development at the end of the project. Currently, these tasks are still being addressed by the IT department.

A&AS judgmentally selected 6 of the 21 individual milestones and obtained supporting documentation to evidence the actual delivery dates in the Project Close-Out Report.

Additionally, A&AS selected three milestones that exceeded the target milestone date by 20 days or more and reviewed the justifications for reasonableness. No issues were noted.

A&AS recognizes the enormous effort involved in this project. Given that the target go-live implementation date of August 31, 2012 was met and the project spanned approximately 21 months and 63,400 hours, instances in which individual milestones modestly exceeded target dates are not considered to be significant.

Lessons Learned
A&AS reviewed a variety of project documentation, including project status meeting minutes, Steering Team meeting minutes, quality review reports, issue management logs, and the Project Close-Out Report from CedarCrestone to identify potential lessons learned from the project. Interviews were conducted with the Project Manager and others to discuss the potential lessons learned and assess the applicability for future changes to the Campus Solutions project, as well as other project implementations.

One lesson learned involving identification management is applicable to future changes to the Campus Solutions project as well as other project implementations. Numerous discussions were held throughout the project concerning the granting of Campus Solutions access to student candidates enrolled in distance education programs. These discussions evolved into a wider initiative across UTHealth to develop policies and procedures around identity proofing and credential issuance. As a result, ITSOP-011 Identity Proofing and Credential Issuance SOP and ITPOL-030 Identity Proofing and Credential Issuance Policy were developed and implemented.

While the lesson learned involving identification management resulted in the implementation of policies and procedures, a formal list of lessons learned was not documented as part of the project documentation. Going forward, we suggest that IT formally document a list of lessons learned, integrate them into the project documentation, and ensure their consideration on future projects.
User Satisfaction
The Information Technology Infrastructure Library (ITIL) is the most widely accepted approach to IT service management in the world and provides a cohesive set of best practices drawn from both public and private sectors internationally. As part of the post-implementation review guidance set forth by ITIL, a user satisfaction survey is considered a necessary tool for determining whether users perceive the results of an implementation to be satisfactory.

As the Campus Solutions project concluded approximately two years prior to this post-implementation review, it was determined that assessing the satisfaction around the transition of the application to users would not be optimal given that considerable time has passed. As a result, A&AS developed survey questions that focused on the current state of Campus Solutions, the quality of support services, training, and opportunities for improvement. A combination of survey questions (Likert scale and open-ended) were included in the survey of users, while only open-ended questions were included in the survey of IT personnel.

User Survey Results
A total of 94 surveys were sent to administrative users and 28 were completed for a response rate of 30%. The following is a summary of the survey responses to the questions measured by the Likert scale:

<table>
<thead>
<tr>
<th>Question</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Agree or Disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campus Solutions meets my needs.</td>
<td>25%</td>
<td>36%</td>
<td>21%</td>
<td>7%</td>
<td>11%</td>
</tr>
<tr>
<td>I am satisfied with the quality of support services from the IT Campus Solutions Support Team.</td>
<td>26%</td>
<td>30%</td>
<td>37%</td>
<td>7%</td>
<td>0%</td>
</tr>
<tr>
<td>I am satisfied with the training provided on Campus Solutions.</td>
<td>18%</td>
<td>26%</td>
<td>30%</td>
<td>22%</td>
<td>4%</td>
</tr>
</tbody>
</table>

Approximately 61% of respondents indicated that Campus Solutions currently meets their needs, while 18% disagreed. With regards to the quality of support from the IT Campus Solutions Support Team, approximately 56% of users expressed satisfaction, while only 7% did not. Thirty-seven percent of users did not agree or disagree, which could be indicative of not needing to utilize support from the IT Campus Solutions Support Team. Only 44% of users reported being satisfied with the training provided on Campus Solutions, with 30% expressing no opinion, and 26% indicating their dissatisfaction.

When responding to the open-ended questions, many users commented on the overall functionality of Campus Solutions, noting that it is easy to navigate, user-friendly, and fairly
intuitive. Other comments included that it interfaces well with other systems, provides essential information, has great query capabilities, and allows the assignment of students to more specific plans, sub-plans, and student groups.

Concerns noted by users included the desire to take advantage of additional features and functionality, as well as the need for more training.

**IT Support Survey Results**

A total of nine surveys were sent to IT personnel supporting Campus Solutions and six were completed for a response rate of 67%. As with the user survey responses, IT support personnel commented on the overall functionality of Campus Solutions, noting that it is easy to navigate, user-friendly, fairly intuitive, and interfaces well with other systems. Other comments included that it has increased the efficiencies in the student services areas and more information can be accessed by students with a quicker turnaround. Concerns mentioned included constrained resources which make it difficult to take advantage of additional features/functionality and that more time is needed between bundle releases.

We suggest that the Registrar’s Office and IT engage Campus Solutions users for further discussion of the themes identified by the survey and determine if additional training, support, functionality, or other initiatives are warranted.

**CONCLUSION**

Controls around procurement are functioning as intended, project goals and objectives were generally achieved, lessons learned were identified, and users are generally satisfied with the outcome, training, and ongoing support.

We would like to thank the Registrar, Bursar, Student Financial Services, Public Affairs, and Administrative Technology staff and managers who assisted us during our review.

[Signature]

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