CHRISTOPHER NEWPORT UNIVERSITY

REPORT ON AUDIT
FOR THE YEAR ENDED
JUNE 30, 2009

APA

Auditor of Public Accounts

COMMONWEALTH OF VIRGINIA

AUDIT SUMMARY

Our audit of Christopher Newport University (University) for the year ended June 30, 2009, found:

- the financial statements are presented fairly, in all material respects, with generally accepted accounting principles;

- certain internal control matters requiring management's attention;

- instances of noncompliance or other matters required to be reported under Government Auditing Standards;

- the University has not taken adequate corrective action with respect to the previously reported finding titled "Deactivate eVA accounts in a Timely Manner;" therefore, that finding is repeated in this year's report; and

- the University did take adequate corrective action with respect to audit findings reported in the prior year that are not repeated in this report.

We have audited the basic financial statements of Christopher Newport University as of June 30, 2009, and for the year then ended and issued our report thereon dated June 1, 2010. Our report, included with the University's basic financial statements, is available at the Auditor of Public Accounts' web site at www.apa.virginia.gov and at the University's web site at www.cnu.edu.

– T A B L E   O F   C O N T E N T S –

<u>AUDIT OBSERVATIONS AND RECOMMENDATIONS</u>

Background

The University implemented a major enterprise administrative system, known as Banner, which includes finance, student, and financial aid modules. Banner has additional modules which gives the University the capability to expand the system into other administrative aspects of the institution. As with any major implementation of a modern system, there exist opportunities to further enhance operations and re-examine the system's impact on existing internal controls and processes.

As part of our audit, we conducted a post-implementation review of Banner and have noted some opportunities which we believe can improve efficiencies, eliminate or reduce manual efforts, and potentially enhance the University's operations.

Additionally, there are areas where the University needs to re-examine their existing internal controls and processes in light of how Banner operates. Since Banner processes information and transactions differently than their legacy system, old internal control processes may no longer work effectively and new risks may arise. Finally, the University could benefit from the work of other Commonwealth universities, which have automated processes using Banner.

The first section of this report, **Efficiency Issues,** deals with the recommendations we believe could improve operations and reduce manual efforts. The second section deals with **Other Internal Control and Compliance Matters** that management will need to address.

Efficiency Issues

Efficiency Issues are areas where management should consider altering the university's operations to enhance the use of resources. These items, in many cases, take advantage of system controls while at the same time increase the productivity of its staff. While we noted adequate manual controls surrounding these areas, use of system controls could reduce or eliminate the need for manual controls.

<u>Implement System Functionalities to Increase Efficiencies and Controls</u>

Other Commonwealth universities have implemented an interface between the state's procurement system, eVA, and Banner. Using the interface allows institutions to reduce or eliminate duplicate data entry into both systems and would allow the University to take advantage of several automated features in Banner.

The automated features include budget checking for sufficient funds both when the order is initiated and when it is processed by purchasing; automating the matching of purchase orders, receiving reports, and invoices; reducing the effort to identify and track possible fixed assets; and improve tracking and monitoring of purchase credit cards. Management could gain efficiencies and controls if it utilized the eVA to Banner interface.

    a. The Accounts Payable department could stop requiring other departments to print and manually match eVA purchases and receiving documents to invoices. With the eVA and Banner interface, departments could continue using eVA for purchasing, and Banner can electronically match the eVA purchases with receiving and invoice information.

    b. The Accounts Payable department could eliminate the duplicate data entry of information into both eVA and Banner.

c. The Banner fixed asset module could electronically accept fixed asset information from accounts payable module reducing the workload for the Fixed Asset Technician. Using the interface will reduce data entry information duties of the Fixed Asset Technician.

Automate Deferred Revenue Calculations

The University could use Banner to automate the calculation of deferred revenues for summer school classes. Automating the calculation will allow the University to forgo performing these calculations manually after collecting revenues. By eliminating these manual calculations, the University would not need to dedicate the staff resources every year to create and verify the entries to correctly report deferred revenues for its summer sessions. Additionally, the system could create the entries as the University collects revenues, thus reducing the time to produce financial statements.

Automate Holds on Student Accounts

The University could utilize automated functions within Banner to place and remove holds on student accounts when balances are past due or collected, respectively. If the University uses the automated functions to place and remove holds, it can reduce the amount of staff time that it dedicates to processing these transactions and decrease the risk of human error. Improving this process and reducing the processing time for these transactions is important for the students, since they cannot access their academic information or register for classes while the hold remains on their account.

Set Variance Criteria for Purchases

With Banner, the University can establish and enforce variance criteria for paying invoices. The Accounts Payable department can develop variance criteria for handling invoices that do not exactly match their purchase orders. The Controller should consider establishing variance criteria for certain departments and use this functionality within Banner to notify Accounts Payable staff when they need to get a department's override. Establishing variance criteria may reduce the amount of time Accounts Payable staff is using to obtain overrides. Other universities use overage tolerance thresholds within their Banner system without weakening internal controls.

Improve Access

Fundamental to a sound system of internal controls are separation of duties and proper approval of transactions. Modern enterprise systems such as Banner rely on separating duties by restricting system access and requiring on-line approvals. Failing to restrict automated access increases the risk of fraud or error occurring and going undetected.

University senior management needs to review and evaluate the process for assigning access and on-line approval, since it has completed the first phase of implementation and must now assess how it will use the system. We recommend that senior management use the University's internal auditor and information security officer to lead this review, since restriction of existing access may meet with some resistance because some managers may not fully comprehend the impact of their earlier access decisions.

Finally, this group should have the responsibility for developing long-term policies and procedures for granting access, reviewing access and when necessary terminating access. This group should consider a combination of both internal and external departmental reviews and assessments.

The following are some specific access concerns we encountered during the audit.

Tuition and Fees

The Banner tuition and fees data tables include the key data elements for all student billings and therefore are the most important information for correctly billing all students. The University's policy states that only two employees, the Registrar and the Director of Student Services Information Systems, should have access to change tuition and fees within Banner.

According to the University's Comptroller, for back-up purposes, the Business and Registrar's offices have agreed to allow another five individuals to have access to change the tuition and fees data table. The University's management should determine if they still need seven employees who can change tuition and fees information.

If University management determines it needs to expand the number of individuals who can change this data table, it should also consider implementing some form of approval of the changes before they become effective. University management should also change its policies and procedures to reflect this decision.

Account Write-Offs

Twelve employees have access to initiate the write-off of account balances; however, according to management's policies only five employees within the Office of Student Accounts should have access to write-off account balances. Employees in both Student Accounts and the Cashier's Office have data entry access to a screen that tracks and changes financial information for students, including writing off account balances.

While management has assured us a supervisor would question any write-off done outside of Student Accounts, they have neither developed nor produced a report to indicate when these write-offs occurred. Having personnel in a cashiering function with any access, other than read-only, and the ability to post payments creates a high risk and a potential internal control issue.

We recommend that management re-evaluate both who and how many employees have the access to write-off accounts. If this review indicates that the number of employees should increase, the University should change its policy. Finally, we recommend that a student account supervisor must approve all write-offs in the Cashier's Office if this practice continues.

Evaluate the Bookstore's Administrative Operations

Now that the University has made a significant investment in a modern administrative system, Banner, management should evaluate if it can use its functionalities to enhance the bookstore's administrative operations. Currently, the bookstore has its own administrative staff of three that provide accounting and bill paying services.

As the bookstore staff works to strengthen its internal controls in response to the finding entitled "Ensure Bookstore Payments have Proper Approval" in the following section, management should evaluate if it can leverage Banner to provide the bookstore with the same level of administrative services and oversight while decreasing the University's overall costs.

Internal Control and Compliance Matters

Ensure Bookstore Payments have Proper Approval

Staff operating the University' bookstore failed to follow a critical preventive control. Of the twelve invoices we reviewed, the staff issued one check without proper authorization. To ensure that payments over

$25,000 are appropriate, two university employees must sign these checks. During our review, we found one check for $25,090.85 that had only one signature.

Bookstore staff should adhere to the University's policy requiring dual signatures. Additionally, the Business Office Accountant who reviews cashed checks should bring any checks without proper approval to University management's attention. University management should then determine if the checks are valid and why bookstore personnel did not use this control.

Compare Changes in Blackboard Back to Banner

The University does not compare changes in its system for managing room and meal assignments, Blackboard, to its billing system, Banner. The University makes housing and meal assignments in Banner. Once the assignments are complete, the University bills the students using the information in Banner. Additionally, University transfers the assignment information to Blackboard for managing student meal plans and student access to dormitories throughout the semester. By not comparing information in Blackboard back to Banner, the potential exists for an employee with access to Blackboard to alter a student's meal plan or housing assignment without the student bill reflecting the change. We recommend that the University compare Blackboard to Banner periodically to ensure the appropriateness of student billings.

Deactivate eVA Accounts in a Timely Manner

The University did not deactivate three out of ten eVA accounts within one working day of the employees' termination. One eVA user retained their access for up to 21 days after their termination date, while the University removed the other two's access after one week. While one of the exceptions is fairly straightforward, we explain the other two cases below.

- While the Department of General Services (General Services) processed the University's request to deactivate the employee's access within 24 hours of receiving it, the University sent its request five days after the employee's termination.

- The employee, who retained access for twenty-one days after termination, was a supervisor with pending transactions. We could find no evidence within eVA that the University assigned another employee as the custodian of this account. The practice of assigning custodians to the account of a terminated employee allows for operations to continue while filling the position. Additionally, it gives management the ability to change the account's password without sharing passwords, which would be a violation of the Commonwealth's security standards.

The eVA Electronic Procurement System Security Standards section 3.1.5, issued by General Services, requires deactivation of all system privileges within 24 hours after an employee ceases employment. eVA is a web based application that is accessible from anywhere. The user's eVA ID must be deactivated in order to keep terminated employees from accessing the system. Terminated employees with active IDs in eVA could potentially access the system and make unauthorized approvals or purchases.

While the Security Officer at the University can deactivate eVA accounts, the University still relies on General Services to deactivate accounts for terminated employees. General Services typically manages eVA access for smaller agencies with limited number of users. Given the number of eVA users at the University and the difficulties it is having with deactivating accounts, management should start requiring their Security Officer to deactivate eVA accounts for terminated employees and stop relying on General Services.

Improve Information Security Management

The University has only one employee responsible for managing security for its Oracle database and UNIX system. Oracle and UNIX are the database and operating systems, respectively, which work together to support Banner.

Industry best practices recommend and the Commonwealth's security standards require that security employees follow certain procedures. During our audit, we found the security employee for Oracle and UNIX was not completing the following procedures.

- Not logging upgrades and critical patches, if applied
- Not monitoring audit logs and user access
- Not changing administrator passwords
- Not reviewing default Oracle and UNIX security settings before putting them into the production environment

By not securing the Oracle and UNIX environments, the University is placing Banner at risk for data breach and exposure, loss of availability, and loss of data integrity. We recommend that the University's management provide the necessary resources, which may include training to review, monitor, and maintain Oracle and UNIX in a secure environment.

Improve Administrative Password Management

The University does not change the administrative passwords for the UNIX system in accordance with the University's security policy. The University's Password Management Policy states that passwords must change at least every 90 days. Additionally, the Commonwealth of Virginia Security Standards also requires the changing of passwords when events occur that may compromise the password.

During our audit, we found administrative accounts for UNIX that had not had their passwords reset since September 2009 and, in most cases, an even longer period. During this timeframe, several employees left or the University terminated the employee's employment. Some of these employees had access to the UNIX administrative accounts and knew passwords to UNIX. Not changing passwords on a timely basis or when key employees leave, places the University information systems at risk for data breach and exposure, loss of availability, and loss of data integrity.

Commonwealth of Virginia

Walter J. Kucharski, Auditor

Auditor of Public Accounts
P.O. Box 1295
Richmond, Virginia 23218

June 1, 2010

The Honorable Robert F. McDonnell
Governor of Virginia

The Honorable Charles J. Colgan
Chairman, Joint Legislative Audit
   and Review Commission

Board of Visitors
Christopher Newport University

INDEPENDENT AUDITOR'S REPORT ON INTERNAL CONTROL OVER

FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS

We have audited the financial statements of the business-type activities and aggregate discretely presented component units of **Christopher Newport University** (University) as of and for the year ended June 30, 2009, which collectively comprise the University's basic financial statements and have issued our report thereon dated June 1, 2010. Our report was modified to include a reference to other auditors. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in Government Auditing Standards, issued by the Comptroller General of the United States. We did not consider internal controls over financial reporting or test compliance with certain provisions of laws, regulations, contracts, and grant agreements for the financial statements of the component units of the University, which were audited by other auditors in accordance with auditing standards generally accepted in the United States of America, but not in accordance with Government Auditing Standards.

Internal Control Over Financial Reporting

In planning and performing our audit, we considered the University's internal control over financial reporting as a basis for designing our auditing procedures for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the University's internal control over financial reporting. Accordingly, we do not express an opinion on the effectiveness of the University's internal control over financial reporting.

Our consideration of internal control over financial reporting was for the limited purpose described in the preceding paragraph and would not necessarily identify all deficiencies in internal control over financial reporting that might be significant deficiencies or material weaknesses. However, as discussed below, we identified certain deficiencies in internal control over financial reporting that we consider to be significant deficiencies.

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A control deficiency exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent or detect misstatements on a timely basis. A significant deficiency is a control deficiency, or combination of control deficiencies, that adversely affects the entity's ability to initiate, authorize, record, process, or report financial data reliably in accordance with generally accepted accounting principles such that there is more than a remote likelihood that a misstatement of the entity's financial statements that is more than inconsequential will not be prevented or detected by the entity's internal control over financial reporting. We consider the deficiencies entitled "Ensure Bookstore Payments have Proper Approval", "Compare Changes in Blackboard Back to Banner", "Deactivate eVA Accounts in a Timely Manner", "Improve Information Security Management", and "Improve Administrative Password Management", which are described in the section titled "Internal Control and Compliance Matters" to be significant deficiencies in internal control over financial reporting.

A material weakness is a significant deficiency, or combination of significant deficiencies, that results in more than a remote likelihood that a material misstatement of the financial statements will not be prevented or detected by the entity's internal control over financial reporting.

Our consideration of internal control over financial reporting was for the limited purpose described in the first paragraph of this section and would not necessarily identify all deficiencies in internal control over financial reporting that might be significant deficiencies and, accordingly, would not necessarily disclose all significant deficiencies that are also considered to be material weaknesses. However, we believe that none of the significant deficiencies described above is a material weakness.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether the University's financial statements are free of material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit and, accordingly, we do not express such an opinion. The results of our tests disclosed instances of noncompliance or other matters that are required to be reported under Government Auditing Standards. Instances of noncompliance, entitled "Deactivate eVA Accounts in a Timely Manner", "Improve Administrative Password Management", and "Improve Information Security Management" are described in the section titled "Internal Control and Compliance Matters". Other matters, entitled "Implement System Functionalities to Increase Efficiencies and Controls", "Automate Deferred Revenue Calculations", "Automate Holds on Student Accounts", "Set Variance Criteria for Purchases", "Improve Access", and "Evaluate the Bookstore's Administrative Operations" are described in the section titled "Efficiency Issues."

The University's response to the observations and recommendations is included in the section titled "University Response." We did not audit the University's response and, accordingly, we express no opinion on it.

Status of Prior Findings

The University has not taken adequate corrective action with respect to the previously reported finding titled "Deactivate eVA accounts in a Timely Manner." Accordingly, we included this finding in the section entitled "Internal Control and Compliance Matters." The University did take adequate corrective action with respect to audit findings reported in the prior year that are not repeated in this report.

<u>Report Distribution and Exit Conference</u>

The "Independent Auditor's Report on Internal Control over Financial Reporting and on Compliance and Other Matters" is intended solely for the information and use of the Governor and General Assembly of Virginia, the Board of Visitors, and management, and is not intended to be and should not be used by anyone, other than these specified parties. However, this report is a matter of public record and its distribution is not limited.

We discussed this report with management at an exit conference held on June 1, 2010.

AUDITOR OF PUBLIC ACCOUNTS

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CHRISTOPHER NEWPORT
UNIVERSITY

June 1, 2010

Mr. Walter J. Kucharski
Auditor of Public Accounts
P.O. Box 1295
Richmond, VA 23218-1295

Dear Mr. Kucharski,

Christopher Newport University has reviewed the findings and recommendations provided by the Auditor of Public Accounts for fiscal year ended June 30, 2009. The University appreciates the effort the APA auditors put towards the audit this year and has the following responses to the Efficiency Issues and the Internal Control and Compliance Matters:

Efficiency Issues

The University understands the efficiency issues to better utilize the Banner ERP system and will review and implement those deemed in the best interest of the University based on a timeline that will be driven by time, effort and costs involved.

Internal Control and Compliance Matters

Ensure Bookstore Payments have Proper Approval

In FY2009 34 of 915 checks over $25,000 were written. One check for $25,090.25 did not contain the dual signatures. The check was written to McGraw-Hill Publishing on 11-12-08 and was supported by documentation requiring payment. To insure this does not occur in the future all checks and the system generated check register will be reviewed before check signing to ensure all checks over $25,000 have dual signatures. The Bookstore Accountant and the Sr. Associate VP will sign the printed copy of the check register to validate their review. Copies of signed check registers will be provided to the Business Office who is responsible for the reconciliation of the account.

Compare Changes in Blackboard Back to Banner

Meal plan changes are updated in the Banner system and a list passed to the Blackboard Data Administrator to make changes to individual student records. Current procedures will be enhanced by having someone independent of the person making the change validate the accuracy of the change before updating in the Blackboard System.

Current procedures include a monthly validation of meal plan balances recorded in Blackboard to the value of meal plans collected plus receivables for the current semester. This procedure is completed by the Sr. Associate VP Auxiliary Services.

Deactivate eVA Accounts in a Timely Manner

The University understands the importance of deactivating all employees within the 24 hour period and will begin deactivating all users including supervisors within the timeframe.

The University purchasing department will deactivate all eVA accounts for terminated employees and discontinue relying on General Services

Improve Information Security Management

The University understands the critical nature of Information Security and will ensure that procedures and training are put in place to maintain a secure environment.

Upgrades and critical patches are applied in a timely manner to both Oracle and Banner. These upgrades and patches do not show up on the log command requested by the APA. We have initiated contact with Oracle and will correct the application. Banner is upgraded when the upgrade has been both tested and requested by the functional units. For example, Financial Aid is using version 8.7, but Student Services has requested that we not move to Banner 8.3 for the rest of its systems.

CNU logs user access in Banner. CNU does not routinely monitor the logs, but uses the logs when troubleshooting some problems.

All administrator passwords have been changed, and a schedule for their subsequent replacement has been established.

IT Services will ensure that Oracle and Unix settings and application will be reviewed prior to loading into the production system.

The DBA activity is divided between Oracle and Banner systems. Oracle backup is provided by Thomas MacKay, who has a work-record as an Oracle DBA. CNU has no backup on staff for the Banner DBA activities, but has developed a contingency plan due to limited resources.

The intermediate solution while we wait for a permanent position to become available is to change the Employee Work Profile of one of our senior programmer-analysts, Adrienne Joynes, so that half of her effort is directed toward Banner database administration. Adrienne Joynes would attend three training courses, one a year, as part of her job-retraining, and would be supervised by our current DBA, Shane Leasure. In addition, he would take a course a year to increase his database knowledge. This plan would reduce significantly the risk associated with the depth of our support in the area of Oracle and Banner database administration.

Improve Administrative Password Management

No current or previous employees have administrator privileges to Banner through UNIX, nor do any employees who have left the University still have UNIX accounts.

The UNIX accounts that are Banner related are ora9i, banner and banjob. Their passwords are changed according to the University policy on service accounts.

Information Services has changed all administrative passwords and are requiring that they be changed as policy dictates.

Sincerely,

William L. Brauer
Executive Vice President

CHRISTOPHER NEWPORT UNIVERSITY
Newport News, Virginia

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