



UCSB Audit and Advisory Services

Internal Audit Report

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**Financial System Implementation Project (FSIP)  
Limited Scope Progress Review**

October 8, 2015

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**Performed by:**

Antonio Manas-Melendez, Senior Auditor

**Approved by:**

Robert Tarsia, Director

Report No. 08-16-0001

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AUDIT AND ADVISORY SERVICES  
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October 8, 2015

To: Katie Mankins, Director, Enterprise IT Project Management Office  
Jessie Masek, Financial System Project Manager  
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Distribution

Re: **Financial System Implementation Project (FSIP)**  
**Limited Scope Progress Review**  
**Audit No. 08-16-0001**

As part of the 2015-16 annual audit services plan, Audit and Advisory Services has completed an audit of the University of California, Santa Barbara (UCSB) Financial System Implementation Project (FSIP). This audit was a limited scope progress review, performed as part of a series of audits and advisory service projects designed to support FSIP efforts.

The purpose of this review included evaluating the status of production roles and profiles prior to Phase 1 go-live, and assessing the status of issues reported in our previous FSIP reviews. Our audit also included review of compliance with selected provisions of University of California Policy BFB IS-10, *Systems Development Standards*.

The issues identified by our review of roles and profiles were communicated to the FSIP team and resolved prior to go-live. Based on the results of the other work performed, there has been significant progress on the issues addressed in our previous reviews, including operational readiness and training, adequacy of resources, testing and gap resolution, reorganization and realignment of administrative computing department responsibilities, and project procedures and documentation. The results of our work also indicate that the project is generally in compliance with Policy IS-10 in the functional areas we selected for detailed review.

Detailed observations and management corrective actions are included in the following sections of the report. The management corrective actions provided indicate that each audit observation was given thoughtful consideration and that positive measures have been taken or planned to implement the management corrective actions. We sincerely appreciate the cooperation and assistance provided by Enterprise Technology Services and Business and Financial Services personnel during the review. If you have any questions, please feel free to contact me.

Respectfully submitted,

A handwritten signature in black ink that reads "Robert Tarsia". The signature is written in a cursive style.

Robert Tarsia  
Director  
Audit and Advisory Services

Katie Mankins, Jessie Masek  
October 8, 2015  
Page 2 of 2

Enclosure

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Enterprise Technology Services

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cc: Chancellor Henry Yang  
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Senior Vice President and Chief Compliance and Audit Officer Sheryl Vacca

## PURPOSE

The purpose of this review included evaluating the status of roles and profiles in the production environment<sup>1</sup> of the Financial System Implementation Project (FSIP) prior to Phase 1 go-live, and assessing the status of issues reported in our previous *Financial System Implementation Project (FSIP) Project Progress Review* report, dated April 1, 2014. Our audit also included a review of compliance with selected provisions of University of California (UC) Policy BFB IS-10, *System Development Standards* (Policy IS-10). This audit is part of the University of California, Santa Barbara (UCSB) 2015-16 annual audit services plan and is one of a series of audits and advisory projects designed to support FSIP efforts.

## SCOPE, OBJECTIVES, AND METHODOLOGY

The scope of work included a review of roles and profiles in the production environment prior to Phase 1 go-live, and follow-up work in several functional areas addressed in a previous FSIP review, including issues related to operational readiness and training, adequacy of resources, testing and gap resolution, reorganization and realignment of administrative computing department responsibilities, project procedures and documentation, and other areas, during the stabilization period following go-live. Our audit also included a review of compliance with selected provisions of Policy IS-10. The scope of the review was limited to FSIP activities and documentation available through September 3, 2015.

Our audit objectives included the following:

- Determine whether administrative privileges have been properly restricted and whether roles and profiles in the production environment of FSIP were in compliance with the separation of duties matrix approved by the Controller and Director, Business and Financial Business.
- Assess the implementation progress of management action plans to address previous audit findings related to enhancing operational readiness and training, adequacy of resources, testing and gap resolution, reorganization and realignment of administrative computing department responsibilities, and processes and procedures related to application support and maintenance.
- Determine whether FSIP is in compliance with selected provisions of Policy IS-10, including the reorganization and realignment of administrative computing department responsibilities and project documentation.

As part of this audit, we also updated the FSIP risk assessment we completed for our previous audit. The purpose of this risk assessment is to identify and prioritize key FSIP risk areas for additional analysis and audit efforts; we used the updated risk assessment results to select Policy IS-10 areas for coverage during this audit.

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<sup>1</sup> The environment in which the application is actually put into operation for its intended uses by end users.

Audit and Advisory Services  
Financial System Implementation Project (FSIP)  
Limited Scope Progress Review

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To accomplish our objectives, our work included interviews, direct observations, review of documentation, testing, and other steps, which included:

- Review and analysis of previous audit and advisory work we performed for FSIP, including the following projects:
  - *Financial System Implementation Project: Campus Use of Shadow Systems* - Audit report dated October 5, 2012.
  - *Financial System Implementation Project: Project Progress Review* - Audit report dated May 2, 2013.
  - *Financial System Implementation Project (FSIP): Limited Scope Progress Review* - Audit report dated April 1, 2014.
  - *Financial System Implementation Project (FSIP): Roles and Profiles - Preproduction Phase* – Advisory service memorandum dated January 15, 2015.
  - *Financial System Implementation Project (FSIP): Testing Assistance* - Advisory service report dated July 17, 2015.
- Utilized Audit Command Language (ACL), a data mining and analysis tool, to review roles and profiles in the production environment as of June 17, 2015.
- Reviewed and analyzed FSIP documentation available as of September 3, 2015, including, the FSIP segregation of duties matrix, project plan, training plan, communication plan, project status reports, manuals, procedures, UCSB's contract amendments with the vendor, and various other plans, reports, and documents available on the FSIP SharePoint site.
- Interviewed Enterprise IT Project Management Office (PMO) personnel and project stakeholders.
- Monitored the progress of the project through participation in weekly FSIP management and FSIP Executive Steering Committee meetings, and through ongoing consultations with the Financial System Project Manager and other project personnel.

This audit was conducted in conformance with the *International Standards for the Professional Practice of Internal Auditing*.

## **BACKGROUND**

UCSB implemented its previous legacy mainframe financial system over thirty years ago. Over the years, limitations in a number of areas resulted in a number of workaround solutions to meet campus needs, including a wide range of shadow systems and a data warehouse. In December 2011, the campus decided to implement Oracle/PeopleSoft Financials to replace the legacy system. Because the UC Office of the President chose the Oracle platform for UCPath, the new systemwide human resources and payroll system, the selection of Oracle/PeopleSoft Financials also created an opportunity to leverage synergies between existing products. In September 2012, the campus contracted with Ciber, Inc. to implement Oracle/PeopleSoft Financials; the project is managed by the Enterprise IT Project Management Office of Enterprise Technology Services (ETS).

Audit and Advisory Services  
 Financial System Implementation Project (FSIP)  
 Limited Scope Progress Review

---

FSIP Phase 1 encompassed implementation of the general ledger, chart of accounts, commitment control (budget), accounts payable, asset management, and project costing modules, as well as relevant interfaces with other campus and UC Office of the President systems. The implementation of these modules has laid the groundwork for replacing the legacy campus mainframe system and proceeding with additional modules in subsequent FSIP phases. After previous changes in the project schedule, UCSB began replacing some of the financial system applications currently on the mainframe with the core modules of the new PeopleSoft financial system on July 1, 2015<sup>2</sup>.

Table 1	PeopleSoft Modules – FSIP Phase 1
	Description
AM	Asset Management
AP	Accounts Payable
GL	General Ledger
KK	Commitment Control (Budgeting)
PC	Project Costing

Source: Auditor analysis.

The following are important milestones for FSIP go-live:

- 2015 fiscal year-end processes were completed on the legacy system.
- June 29, 2015 - The last payments from the legacy accounts payable system, APEX, were produced.
- June 30, 2015 - The BARC/Cashier’s Office was closed to prepare for the system changeover.
- June 29 through July 5, 2015 - Campus accounts payable web applications Travel, Disbursements, Form-5, and FlexCard were unavailable.
- July 1, 2015, through July 20, 2015 - Asset Management records could not be updated.
- Beginning July 6, 2015, invoice data from PeopleSoft appeared in the campus Data Warehouse. Purchasing-related data tables and EZAccess reports reflected new fields and formats.
- August 8, 2015, through August 10, 2015 - Campus ledger web applications (TOE, TOF, TOSF) were unavailable.

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<sup>2</sup> Source: ETS Website.

Audit and Advisory Services  
 Financial System Implementation Project (FSIP)  
 Limited Scope Progress Review

---

- August 14, 2015, through August 18, 2015 - General ledger tables and reports in the campus Data Warehouse were unavailable while tables were updated for PeopleSoft.
- Beginning August 19, 2015, July ledger data (from PeopleSoft Financials) was available in the Data Warehouse.
- July 1, 2015, through December 31, 2015 - Stabilization period, during which the resolution of open issues, load and validation of fiscal year-end close data into PeopleSoft, operational readiness, project documentation, realignment of responsibilities, and other activities will be completed.

<b>Table 2</b>		<b>Definitions</b>
<b>Name</b>	<b>Description</b>	
BARC	Billing Accounts Receivable Collections	
EZAccess	Pre-defined reports from the campus Data Warehouse	
FlexCard	UCSB's procurement credit card	
Form-5	A payment request form for non-payroll expenses	
TOE	Transfer of Expense	
TOF	Transfer of Funds	
TOSF	Transfer of Soft Funds	

Source: Auditor analysis

*Roles and Profiles*

There are several critical aspects of computer system security, including physical security, access control, monitoring, and properly implementing roles and profiles. Roles and profiles refers to the process of creating roles for various job functions, along with assigning to specific roles the permissions to perform certain operations. Each user is assigned a profile that consists of selected roles, while each role is made up of selected permission lists. Users who belong to a particular role need a specific set of permissions or authorizations in order to complete their daily tasks within the PeopleSoft system. This aspect of security deals primarily with system access and segregation of duties. These definitions provide a good overview of the PeopleSoft security model:<sup>3</sup>

- User - A uniquely named user of the PeopleSoft system who will be able to sign onto the system to perform tasks.
- Role - Can be thought of as a named set of work that a user can do.

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<sup>3</sup> Adapted from content included in FSIP documentation.



Audit and Advisory Services  
Financial System Implementation Project (FSIP)  
Limited Scope Progress Review

---

- Permission List - The specific authorizations needed to carry out a business task or set of tasks.
- User Profile - Defines all of a particular user's authorizations as the union of all the linked roles and permission lists.

**SUMMARY OBSERVATIONS**

The issues identified by our review of roles and profiles were communicated to the FSIP team and resolved prior to go-live.

Based on the results of the other work performed, there has been significant progress on the issues addressed in our previous reviews, including operational readiness and training, adequacy of resources, testing and gap resolution, reorganization and realignment of administrative computing department responsibilities, and project procedures and documentation. The results of our work also indicate that the project is generally in compliance with Policy IS-10 in the functional areas we selected for detailed review. The following issues should be fully addressed during the stabilization period:

- Completing the technical knowledge transfer.
- Ensuring that the project has adequate resources during and after the stabilization period.
- Formalizing plans to document responsibilities after the stabilization period.
- Completion of required documentation.

## DETAILED OBSERVATIONS

### **A. Production Roles and Profiles**

#### 1. Administrative Privileges

We found that user accounts with administrative privileges were completely identified and appropriately restricted:

- Access to administrative accounts was restricted to users with administrative responsibilities.
- Administrative accounts represented only 5% of total FSIP user accounts.

Our review of administrative user accounts highlighted a minor issue related to the frequency of administrative users changing their passwords. Two administrative user accounts had not changed their passwords since September 2013.

#### 2. Segregation of Duties

Our review of FSIP functional roles highlighted that:

- A segregation of duties matrix for functional roles has been defined and functional roles and administrative roles had been adequately segregated between ETS and Business and Financial Services personnel.
- There were some differences between the segregation of duties matrix and roles granted in the production environment:
  - 75 roles for nine users were not granted.
  - 75 roles for 22 users should not have been granted.
  - 98 roles were not documented in the segregation of duties matrix.

All identified issues were resolved prior to go-live, and an updated segregation of duties matrix was approved by the Controller and Director, Business and Financial Services. We did not assess the appropriateness of roles and profiles from a functional or operational perspective. This work will be included in the scope of a post-implementation internal control review of Business and Financial Services, planned to start after the end of the stabilization period.

### **B. Status of Issues Addressed in Previous FSIP Reviews**

Our April 1, 2014, *FSIP Project Progress Review* report included two comprehensive recommendations with five action plans related to organizational readiness and training, adequacy of resources, testing and gap resolution, reorganization and realignment of administrative computing department responsibilities, and procedures and documentation related to application support and maintenance. The Enterprise IT PMO committed to actions plans, or management corrective actions, within reasonable timeframes in all cases.

Audit and Advisory Services  
 Financial System Implementation Project (FSIP)  
 Limited Scope Progress Review

---

Based on the result of the work performed, we found that management action plans are in place and progress has been made. However, three of the five action plans have not been fully addressed. Table 3 summarizes the results of our evaluation.

Table 3	Status of Management Corrective Actions	
Finding Title		Status
Enhancing Operational Readiness & Training		Implemented
Adequacy of Resources		In Progress
Testing and Gap Resolution		Implemented
Reorganization and Realignment of Certain IT Roles and Responsibilities		In Progress
Processes and Procedures Related to Application Support and Maintenance		In Progress

Source: Auditor Analysis

1. Enhancing Organizational Readiness and Training

An extensive training plan, in addition to a testing plan that included substantial additional training, has been executed for Business and Financial Services and the two other departments directly affected by Phase 1. A plan for technical knowledge transfer from Ciber<sup>4</sup> to UCSB technical staff also has been initiated. However, additional measures should be taken by the Enterprise System Integration unit of ETS to provide assurance that technical personnel have the knowledge to provide technical support. These measures include:

- Completing the transfer of technical knowledge from Ciber.
- Providing acknowledgement that the training has been completed as planned.

It is expected that these measures will be implemented before the end of the stabilization period.

2. Adequacy of Resources

Our interviews with the Financial System Project Manager highlighted risks related to the level of resources allocated to FSIP. The project has a defined plan for supporting the new financial system through the end of the stabilization period. However, the authorized PeopleSoft technical lead has not yet been hired.<sup>5</sup> It is expected that sufficient PeopleSoft Technical resources will be in place in Enterprise System Integration before the end of the stabilization period.

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<sup>4</sup> UCSB's Implementation partner.

<sup>5</sup> A PeopleSoft developer has already been hired and is now on staff.

### 3. Testing and Gap Resolution

Consistent with the conclusions communicated in our FSIP advisory report dated July 17, 2015, we observed that some areas required additional development and other work, including some reports, application functionalities, and one interface. However, an extensive testing plan was prepared, then implemented during systems integration testing (SIT) and user acceptance testing (UAT). The Financial System Project Manager, ETS Quality Assurance, and UCSB's implementation partner coordinated these plans and additional measures to provide assurance that critical issues were identified and addressed.

The results of our follow-up work for the management action plans in the areas of reorganization and realignment of IT roles and responsibilities, and application support and maintenance, are included in the following section.

### **C. Compliance with UC Policy IS-10, System Development Standards**

Based on our audit risk analysis, we selected two areas for review of Policy IS-10 compliance; as noted, management action plans addressed in our previous review are already in place for these areas. The objectives for both areas are to ensure that there are adequate processes and documentation in place after the end of the Phase 1 stabilization period. We found that FSIP is generally in compliance with Policy IS-10 in these areas, but that additional work is required.

#### 1. Administrative Computing Department Responsibilities

According to the Financial System Project Manager, several ETS units have shared responsibility for supporting FSIP during Phase 1 implementation and the stabilization period. Reorganization and realignment of certain IT roles and responsibilities have been implemented as part of the creation and organization of the Enterprise Technology Services organization. FSIP technical open issues resolution and application maintenance will be performed by Enterprise System Integration, and Business Relationship & Service Management will manage the future vendor management, application change management and the hosting contract with Ciber<sup>6</sup>. However, plans have not been completely formalized for the transfer of the daily open issue resolution, issue tracking and reporting, and PeopleSoft technical personnel management responsibilities from the PMO to Enterprise System Integration after go-live, due to lack of Enterprise System Integration resources. It is our understanding that Business and Financial Services, Enterprise System Integration, and Business Relationship & Service Management transition readiness plans were to be initially discussed by the end of September or beginning of October.

#### 2. Project Procedures and Documentation

Policy IS-10 requires specific documentation, including an operations manual, system manual, and user documentation. Although procedures for a FSIP help desk and the process for escalating issues have been documented, we found that it is uncertain that all Business and Financial Services, Business Relationship & Service Management, and Enterprise System Integration procedures and required documentation have been fully documented and properly distributed.

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<sup>6</sup> Business and Financial Services personnel will perform part of FSIP operations.

Audit and Advisory Services  
Financial System Implementation Project (FSIP)  
Limited Scope Progress Review

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Given the current stage of the project, we cannot yet determine whether FSIP documentation will fully comply with Policy IS-10 after the stabilization period.

The following issues should be fully addressed by Enterprise Technology Services during the stabilization period:

- Complete the technical knowledge transfer from the vendor and provide acknowledgement that training has been completed as planned.
- Conclude hiring processes to ensure that the project has adequate resources during and after the stabilization period.
- Evaluate whether additional documentation is required to complete the minimal documentation required by Policy IS-10, and ensure that any gaps are addressed. This issue will need to be coordinated with Business and Financial Services.

Enterprise Technology Services should validate with Business and Financial Services that Business Relationship & Service Management and Enterprise System Integration responsibilities have been documented after the stabilization period.

**Management Corrective Actions**

As the auditors note, we have made progress in addressing the remaining issues highlighted in previous reviews. The status of these activities is generally consistent with the revised timeline for Phase1 stabilization.

Enterprise System Integration will address the following issues during the stabilization period:

- Complete the technical knowledge transfer from the vendor and provide acknowledgement that training has been completed as planned.
- Conclude hiring processes to ensure that the project has adequate resources during and after the stabilization period.
- Evaluate whether additional documentation is required to complete the minimal documentation required by Policy IS-10, and ensure that any gaps are addressed.

Business Relationship & Service Management will:

- Evaluate whether additional documentation is required to complete the minimal documentation required by Policy IS-10, and ensure that any gaps are addressed.
- Ensure that Business and Financial Services, Business Relationship & Service Management, and Enterprise System Integration responsibilities have been documented after the stabilization period.

*Audit and Advisory Services will follow up on the status of these issues by March 31, 2016.*