

**UNIVERSITY OF CALIFORNIA, SAN FRANCISCO
AUDIT & ADVISORY SERVICES**

**Computer Equipment Management Review
Project #23-014**

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University of California
San Francisco

Audit & Advisory Services

UCSF Box 0818
1855 Folsom Street
San Francisco, CA 94143

tel: 415.476.3851
fax: 415.476.3326
www.ucsf.edu

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Shondell Moody
Chief Administrative Officer
Department of Bioengineering and Therapeutic Sciences

Maria Novellero
Associate Chair for Administration
Department of Medicine

Susan Tinch
VP IT Infrastructure
IT Operations Administration

SUBJECT: Computer Equipment Management Review

UCSF Audit & Advisory Services (A&AS) conducted a review of computer equipment management. The purpose of this review was to evaluate the adequacy of processes and internal controls in place over purchasing, distribution and tracking of computer equipment.

Our services were performed in accordance with the applicable International Standards for the Professional Practice of Internal Auditing as prescribed by the Institute of Internal Auditors (the "IIA Standards").

Our review was completed and the preliminary draft report was provided to department management in June 2023. Management provided their final comments and responses to our observations in July 2023. The observations and corrective actions have been discussed and agreed upon with department management and it is management's responsibility to implement the corrective actions stated in the report. A&AS will periodically follow up to confirm that the agreed upon management corrective actions are completed within the dates specified in the final report.

This report is intended solely for the information and internal use of UCSF management and the Ethics, Compliance and Audit Committee, and is not intended to be and should not be used by any other person or entity.

Sincerely,

Irene McGlynn
Chief Audit Officer
UCSF Audit & Advisory Services



EXECUTIVE SUMMARY

I. BACKGROUND

As a planned audit for Fiscal Year 2023, Audit & Advisory Services (A&AS) conducted a review of computer equipment management to evaluate the adequacy of processes and internal controls in place over purchasing, distribution and tracking of computer equipment.

Computer purchasing data for the last five fiscal years (FYs 2018-2022) was analyzed to select the three departments with high amounts of spend for review. These departments were:

- Department of Medicine – sub-selected three divisions within the Department of Medicine
- Information Technology Services (ITS)
- Department of Bioengineering and Therapeutic Sciences (BTS)

Below is the breakdown of the computer equipment expenditures for the selected departments for FY 2022:

Department	Total Expenditure for FY 2022:
ITS ¹	\$7,077,792
Department of Medicine ²	\$520,716
BTS	\$245,647

Departments procure computer equipment in several ways; they can be purchased via BearBuy³, through ITS bulk computer program, or they can be purchased out of pocket and reimbursed via MyExpense. While these options are available, the preferred method is either through BearBuy or ITS bulk computer program. ITS purchase computers in bulk and recharges back to the department the cost of the computer when there is a request for computers.

II. AUDIT PURPOSE AND SCOPE

The purpose of this review was to evaluate the adequacy of processes and internal controls in place over purchasing, distribution and tracking of computer equipment.

Procedures performed as part of the review included: interviews and walkthroughs with relevant personnel to get an understanding of activities for the areas under examination,

¹ The total computer expenditure for ITS comprise of purchases for both campus and health, and bulk computer purchases. Health computer refresh spend is approximately \$1M and rest is Campus with vast majority recharged back to departments computer order requests (both Campus and Health departments.).

² In preparation for the audit, a survey was conducted of its divisions across Department of Medicine to gather information about tracking and purchasing of computer equipment. Based on the survey results, three divisions were selected for detailed testing.

³ BearBuy is the UCSF campus e-procurement system for purchasing goods and services. It is an online application that automates many aspects of the procurement process including requisition creation and approval, sending purchase orders to suppliers, invoice approval, and payment.

analysis of computer purchases by the departments; validation testing of a sample of computer purchases to determine whether the computer purchases are approved and tracked; validation testing of a sample separated employees to verify that the computer equipment has been returned.

For more detailed steps, please refer to Appendix A.

The scope period included transactions and activities from FY 2021 to FY 2022. Work performed was limited to the specific activities and procedures described above. As such, this report is not intended to, nor can it be relied upon to provide an assessment of compliance beyond those areas specifically reviewed. Fieldwork was completed in May 2023.

III. **SUMMARY**

Based on work performed, two of the three departments reviewed had inconsistent practices for the tracking of computer equipment resulting in incomplete departmental records of computer inventory. There are opportunities for departments to leverage ITS' Configuration Management Database (CMDB) to track and monitor computer equipment issued to employees within each department. Additionally, opportunities for enhanced controls exist in the areas of purchasing controls, segregation of duties for inventory management, oversight of inventory records and physical security of computer equipment.

The specific observations from this review are listed below:

A: Departmental Practices:

1. Inconsistent departmental practices are in place for tracking and monitoring of computer equipment.
2. A large number of computers were purchased out-of-pocket and reimbursed through employee expense reimbursements and by-passed procurement controls.
3. BTS computer purchases are not posted to the correct general ledger account.

B: ITS:

4. There is insufficient segregation of duties between the purchasing function, inventory count and inventory reconciliation for computers purchased in bulk by ITS.
5. ITS does not have a process in place for the review of quarterly inventory reconciliation.
6. The inventory of bulk computer purchases is not securely stored.
7. A formal process has not been established to report missing computers/laptops.

IV. **OBSERVATIONS AND MANAGEMENT CORRECTIVE ACTIONS (MCAs)**

A. Departmental Practices

<u>No.</u>	<u>Observation</u>	<u>Risk/Effect</u>	<u>Recommendation</u>	<u>MCA</u>
1.	<p><i>Inconsistent departmental practices are in place for tracking and monitoring of computer equipment.</i></p> <p>Review of departmental practices for the recording and tracking of computer equipment purchases identified the following:</p> <p>(a) BTS</p> <p>Review of 15 expense reports (processed via MyExpense) for the purchase of computers found that none of the computers were logged in the department tracking list. Discussion with the Chief Administration Officer (CAO) disclosed that there was no single consistent listing to log computer purchases for the department and labs, and computer purchases have not been consistently tracked in all labs after coming out of the pandemic.</p> <p>(b) Department of Medicine</p> <p>In preparation for the audit, a survey was conducted to determine computer equipment purchasing and monitoring practices across the Department of Medicine. Review of the survey results highlighted inconsistent practices across the divisions with 54% of the divisions did not have a process in place to monitor computer equipment. The remaining 46% tracked their computer equipment, either used the asset report in the Configuration Management</p>	Without a consistent method of tracking and monitoring computer equipment, the departments risk not being able to detect stolen or misplaced computer equipment.	The departments should consider implementing a consistent practice for recording and tracking its computer equipment such as using ITS' asset system for tracking computer equipment and reviewing these records periodically for accuracy and completeness.	<p>Actions:</p> <p>a) A&AS will facilitate discussions with ITS leadership to explore the possibility of an enterprise-wide solution for tracking of computer equipment.</p> <p>In the interim, the Department of Medicine will work with ITS to obtain a report from the CMDB and perform a review of the report on an annual basis to ensure it is complete and accurate.</p> <p>Responsible Party: Associate Chair-Administration-DOM</p>

No.	Observation	Risk/Effect	Recommendation	MCA
	<p>Database (CMDB)⁴ from ITS or kept manual records on Excel worksheets.</p> <p>As part of the review, we selected three divisions that were maintaining computer equipment records and verified that their computer equipment records (which included purchases and disposals) were accurately recorded and tracked.</p> <p>According to BFB-BUS-29: Management and Control of University Equipment Section A (iii): University locations may establish guidelines governing the control of theft-sensitive items valued at less than \$5,000. These items should be expensed; not capitalized. Examples of theft-sensitive items include but are not limited to: Computers and communication devices, including desktop, laptop, tablet and smart phones.</p>			<p>Target Date: September 30, 2023</p> <p>b) ITS will assess the feasibility of sending out reports from the CMDB annually to all departments of their computer equipment for verification and attestation.</p> <p>Responsible Party: VP IT Infrastructure</p> <p>Target Date: December 31, 2023</p> <p>c) BTS will utilize SMARTSHEET to consistently document current and future equipment purchases and will reconcile SMARTSHEET</p>

⁴ The Configuration Management Database (CMDB) is the single system of record for managing assets and is managed by UCSF Information Technology (IT). In compliance with UCSF Minimum Security Standards, any device or virtual system used to store or process UCSF data must be registered into the CMDB.

No.	Observation	Risk/Effect	Recommendation	MCA
				<p>with the CMDB annually for completeness.</p> <p>Responsible Party: Chief Administrative Officer</p> <p>Target Completion Date: December 31, 2023</p>
2.	<p><i>A large number of computers were purchased out-of-pocket and reimbursed through employee expense reimbursements and by-passed procurement controls.</i></p> <p>Analysis of BTS department procurement transactions noted that a significant number of computer purchases were processed through MyExpense as employee reimbursements. Of the 45 transactions for fiscal year 2021-22, 42 were processed through MyExpense (for \$43,906, by 28 different employees). The other three transactions were posted via BearBuy (for \$201,741 – two of these were servers that cost over \$100,000 each).</p> <p>Additionally, a computer valued over the \$5,000 was not capitalized. Equipment of \$5,000, or more should be capitalized (and not expensed).</p> <p>As the reimbursement of the purchases is after-the-fact, it by-passes prior purchasing approval processes as well as built-in BearBuy procurement system controls and can result (as indicated above) in assets not being appropriately identified for capitalization.</p>	<p>Purchasing computers outside of the preferred procurement methods may by-pass pre-approval controls and hinder the University's ability to aggregate campus spend with preferred vendors to obtain better pricing contracts.</p>	<p>(a) Department management should review the best practices for buying goods and services with department shoppers to encourage strategic sourcing to optimize spend and purchasing activities.</p> <p>(b) Management should work with the Controller's Office to appropriately capitalize the</p>	<p>Action:</p> <p>a) BTS will obtain P-Card(s) for the department and implement them for purchases of equipment not readily available due to the uniqueness of the computational research.</p> <p>Responsible Party: Chief Administrative Officer</p> <p>Target Completion Date: September 30, 2023</p> <p>b) The department will contact</p>

No.	Observation	Risk/Effect	Recommendation	MCA
	<p>BearBuy is the UCSF campus e-Procurement system for purchasing goods and services. It is the preferred method to purchase goods and services for campus departments.⁵</p>		<p>identified computer expense.</p>	<p>Capital Accounting to correct the capitalization of the identified equipment.</p> <p>Action Complete</p>
3.	<p><i>BTS computer purchases are not posted to the correct general ledger account.</i></p> <p>Review of 18 computer purchases made by BTS via BearBuy showed that 16 were not posted to account codes identified as computer hardware purchases⁶. These purchase orders were posted to non-computer accounts (e.g., supply, equipment, or materials accounts), primarily account 52312: non-medical supplies/materials.</p>	<p>If expenditures are not accurately classified in the accounting records, then it may adversely affect the department's ability to monitor expenses and budget for future periods.</p>	<p>Department management should review the best practices for buying goods and services with department shoppers and provide training on the appropriate account codes to charge for computer purchases to help ensure that they are appropriately categorized in department records.</p>	<p>Action:</p> <p>BTS will query the Transaction Detail Report (TDR) report monthly to monitor computer equipment purchases and ensure that computer equipment purchases are posted to the correct general ledger codes.</p> <p>Action Complete</p>

⁵ Supply Chain Management has a page on purchasing computers on their website: <https://supplychain.ucsf.edu/computers-and-peripherals>.

⁶ Account codes identified as computer hardware purchases are: 51322 - Sponsored Project Computers > \$5k, 52304 – Computers less than \$5k, and 52601 - Computers \$5k and above

B. Information Technology Services (ITS)

No.	Observation	Risk/Effect	Recommendation	MCA
4.	<p><i>There is insufficient segregation of duties between the purchasing function, inventory count and inventory reconciliation for computers purchased in bulk by ITS.</i></p> <p>On average ITS spends up to \$6 million annually on computer equipment purchases. During discussions with IT, it was noted that the same person is responsible for purchasing computer equipment in bulk, conducting inventory count, and performing the inventory reconciliation for the computers purchased in bulk. This lack of segregation of duties between the purchasing, custody and reconciliation functions introduce risks for fraud and errors may go undetected.</p> <p>According to Campus Administrative Policy 350-12 Internal Controls: Separation of duties</p> <p>a. Duties are separated so that one person's work routinely serves as a check on another's work.</p> <p>b. No one person has complete control over more than one key function or activity (e.g., authorizing, approving, certifying, disbursing, receiving, or reconciling).</p>	Without proper segregation of duties, there are opportunities for errors and fraud may go undetected.	ITS should consider segregating duties for the following functions: purchasing, inventory count, and inventory reconciliation.	<p>Action: ITS will segregate duties for the following functions: purchasing, inventory count, and inventory reconciliation. Each of these roles will be assigned, along with a backup staff identified.</p> <p>Responsible Party: VP IT Infrastructure</p> <p>Target Date: September 30, 2023</p>
5.	<p><i>ITS does not have a process in place for the review of quarterly inventory reconciliation.</i></p> <p>Although an inventory reconciliation was performed on a quarterly basis, there was no review by an independent person to ensure it is accurate, complete, and that discrepancies were investigated and addressed timely.</p>	Errors and fraud can go undetected when inventory reconciliations are not reviewed.	ITS should assign another person to perform the review of the inventory reconciliation.	<p>Action: ITS will assign another person(s) to perform the review of the inventory reconciliation on a quarterly</p>

No.	Observation	Risk/Effect	Recommendation	MCA
				<p>schedule. Any discrepancies found will be investigated and addressed timely (within 3 business days).</p> <p>Responsible Party: VP IT Infrastructure</p> <p>Target Date: September 30, 2023</p>
6.	<p><i>The inventory of bulk computer purchases is not securely stored.</i></p> <p>During the review, A&AS completed a physical inspection of the room where the inventory of bulk computer purchases is kept and noted that new computers and laptops were kept in an unlocked room within the ITS' office suite at Mission Center Building. On average at any given time, there is approximately 120 laptops and 70 desktops stored in this room.</p> <p>While access to the ITS suite is restricted through badge reader, it was noted that not everyone in that suite needs to have access to the inventory storage room.</p>	By not adequately safeguarding computer equipment in a locked room, there is an increased risk of theft.	ITS should ensure the computer storage room is locked at all times and allow access to only authorized individuals.	<p>Action: ITS will ensure the computer storage room is locked at all times and allow access to only authorized individuals by installing a new lock on storage room doors.</p> <p>Responsible Party: VP IT Infrastructure</p> <p>Target Date: October 31, 2023</p>
7.	<i>A formal process has not been established to report missing computers/laptops.</i>	By not filing a police report when a	ITS should develop a process to report	Action:

No.	Observation	Risk/Effect	Recommendation	MCA
	<p>ITS does not currently have a process in place to report missing computers. As part of the inventory count in September 2022, one laptop was identified as missing from the depot in 2022. After an extensive search, the laptop was not found and deemed as missing some time in 2022. However, a police report was not filed for the missing laptop. It was noted that the missing laptop is brand new and did not contain any data.</p>	<p>computer was missing, ITS misses the opportunity for the theft to be investigated.</p>	<p>missing computers to the police more promptly and develop a deadline for how long a search for the missing computer equipment can occur before it gets reported as missing to the police.</p>	<p>ITS will develop a clear process to report missing computers to the police more promptly. A police report will be filed within 1 business day for cases where its clear that the loss was due to theft. For computer equipment identified missing as part of the quarterly reconciliation place, ITS will conduct a search and if the missing computer equipment is not found within 3 business days, then it will be reported to the police.</p> <p>Responsible Party: VP IT Infrastructure</p> <p>Target Date: September 30, 2023</p>

Appendix A

To conduct our review the following procedures were performed for the areas in scope:

- Interviews and walkthroughs with relevant personnel to gain an understanding of the area under review;
- Data analysis of computer purchases by the departments for the past five fiscal years (FYs 2018-2022);
- Assessment to determine if controls have changed due to remote working;
- On a sample basis, reviewed selected items to:
 - Verify that the computer purchase was per the policy, including appropriate approvals;
 - Determine whether the computer equipment is logged in the departments tracking list;
 - Verify in UCPath that computer equipment was issued to active employees at the time;
- Reviewed computer equipment purchases on P-Cards and determined the rationale for using this method;
- Reviewed separated/terminated employees and verified that the computer equipment has been returned;
- Reviewed the SOM survey of thirteen SOM departments about their tracking and accounting of computer equipment; and
- Reviewed ITS bulk computer purchase process to ensure there is a reconciliation in place to account for the inventory.