AUDIT AND ADVISORY SERVICES

Supply Chain Management
Audit
Project No. 17-696

March 15, 2018

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March 15, 2018

Marc Fisher
Vice Chancellor
Administration

Vice Chancellor Fisher:

We have completed our audit of supply chain management processes as per our annual service plan in accordance with the Institute of Internal Auditors' *Standards for the Professional Practice of Internal Auditing* and the University of California Internal Audit Charter.

Our observations with management action plans are expounded upon in the accompanying report. Please destroy all copies of draft reports and related documents. Thank you to the staff of Supply Chain Management, Campus Shared Services, and the Controller's Office for their cooperative efforts throughout the audit process. Please do not hesitate to call on Audit and Advisory Services if we can be of further assistance in this or other matters.

Respectfully reported,

Wanda Lynn Riley
Chief Audit and Risk Executive

cc: Vice Chancellor Rosemarie Rae
       Assistant Vice Chancellor and Controller Delphine Regalia
       Acting Chief Procurement Officer Stacey Templeman
       Chief Operating Officer Peggy Huston
       Senior Vice President and Chief Compliance and Audit Officer Alexander Bustamante
       Associate Chancellor and Chief of Staff Khira Griscavage

University of California, Berkeley
Audit and Advisory Services
Supply Chain Management

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OVERVIEW

Executive Summary

Over the past five years the campus has implemented a number of organizational, process, and system changes that have resulted in a significant reshaping of the supply chain management environment. These changes have included the combination (and then separation) of the UCSF and Berkeley procurement functions, the joint implementation of BearBuy, various leadership and staffing changes within the Supply Chain Management unit, and the implementation and ongoing organizational reviews of Campus Shared Services (CSS). Furthermore, at the end of our audit, senior leadership announced plans to divide the Vice Chancellor of Administration and Finance portfolio across two separate control units, an additional organizational change with impact to supply chain management governance and processes.

Given this shifting landscape, the purpose of our audit was to assess the current state of the end-to-end procurement process and provide feedback regarding risks or opportunities. Our audit primarily entailed an assessment of the following:

- governance and oversight such as policy implementation and reporting and monitoring activities;
- the assignment of roles and responsibilities to ensure segregation of duties, alignment with delegations of authority, and appropriateness given employee knowledge and organizational context; and
- controls to mitigate fraudulent purchases and payments and policy exceptions related to source selection.

The end-to-end process and system appears to generally function to meet operational needs and to mitigate routine risks. Furthermore, management in Supply Chain Management, CSS Business and Financial Services (CSS B&FS), and the Controller's Office-Financial Operations continue to proactively evaluate processes to identify areas for ongoing improvement.

As the organizational changes and initiatives underway will necessarily drive continued assessment of the campus end-to-end process, we note a more fundamental opportunity to reconsider whether current process activities and role assignments continue to align with leadership priorities and current risks. Specifically, we note that the current model appears to result in an increase in overall process complexity and control over purchases that may not effectively balance potential risk and benefit to the organization, nor effectively align roles and responsibilities with required levels of delegated authority and necessary organizational and transactional context and knowledge.

There is no single model for organizing end-to-end procure-to-pay processes that can best meet campus needs because there are trade-offs with regard to the balancing of efficiency and risk. Ensuring the model balances these trade-offs in a manner that aligns with leadership priorities and risk tolerance is critical.

Source and Purpose of the Audit

Audit and Advisory Services (A&AS) completed our audit of supply chain management processes as part of our annual service plan for FY 2017.

The campus has recently undergone a number of significant changes in the Supply Chain Management organization and in related processes and systems. The purpose of our audit was to assess the current state of certain areas judged to be fundamental to the end-to-end process and to provide feedback regarding any risks or opportunities noted in these areas.

Scope of the Audit

The areas of focus for the audit were identified based on an understanding of recent organizational and process changes that have directly impacted supply chain management activities, as well as certain inherent risks common to any procure-to-pay process. Our audit primarily entailed an assessment of the following areas:

- governance and oversight such as policy implementation and reporting and monitoring activities;
- the assignment of roles and responsibilities to ensure segregation of duties, alignment with delegations of authority, and appropriateness given employee knowledge and organizational context; and
- controls to mitigate fraudulent purchases and payments and policy exceptions related to source selection.

Our audit procedures entailed interviews and walkthroughs with central campus and department personnel from Supply Chain Management (SCM), the Controller's Office-Financial Operations, CSS B&FS, and the College of Letters and Science; reviews of policy/procedural documentation, management reports, and training materials; limited data analysis; and a review of documentation related to a small number of individual purchase transactions.

Our audit testwork concluded in June 2017.

Background Information

Campus procurement expenditures in FY 2016 totaled approximately $465 million[1]. The university has implemented a number of strategic sourcing programs; however, because of the heterogeneity of purchasing needs related to the research enterprise, as well as a focus on small and minority-owned business contracting, campus purchases are fairly broadly dispersed across more than 2,000[2] individual suppliers.

Over the past five years, the campus has implemented a number of organizational, process, and system changes that have resulted in a significant reshaping of the supply chain management environment. These changes have included the combination (and then separation) of the UCSF and Berkeley procurement functions; the joint implementation of BearBuy, a third-party procure-

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[1] Amount does not include non-procurement related payments such as for subawards, utilities, or reimbursements.
[2] Ibid.

to-pay system used on several campuses; various leadership and staffing changes within the Supply Chain Management unit; and the implementation of CSS. As part of the CSS implementation, responsibility for creating purchase requisitions, among other purchasing-related functions, was centralized and transitioned to the CSS B&FS organization. Although these various changes occurred during the same timeframe, they were each managed as part of separate campus initiatives or occurrences, complicating the coordination of decisions affecting the end-to-end process.

At the end of our audit, senior leadership announced plans to divide the Vice Chancellor of Administration and Finance portfolio across two separate control units, an additional organizational change with impact to procure-to-pay governance and processes.

Summary Conclusion

The end-to-end process and system appears to generally function to meet operational needs and to mitigate routine risks. Furthermore, management in Supply Chain Management, CSS B&FS, and the Controller's Office-Financial Operations continue to proactively evaluate processes to identify areas for ongoing improvement. However, there are currently a number of organizational changes and initiatives underway that will necessarily drive continued assessment of campus end-to-end procure-to-pay processes.

As part of these efforts, we noted the following process improvement opportunities:

- an increase in overall process complexity and control over purchases that may not effectively balance potential risk and benefit to the organization for both low and high risk purchases or activities; and

- a misalignment between role assignment and the delegations, skill set, knowledge, and experience required to effectively fulfill the responsibilities of the role.

In addition, BearBuy is currently used to route the non-procurement transactions also processed by CSS B&FS. For certain transaction types such as payment requests, including bluCard and travel and entertainment (T&E), the use of BearBuy creates new process steps that do not replace, but are instead additive, to existing processes and systems. Although central record retention and consolidated tracking reporting are benefits of this approach, it is not clear that the additional processing time and effort required for these transactions is warranted.

SUMMARY OF OBSERVATIONS & MANAGEMENT RESPONSE AND ACTION PLAN

Operational Efficiency and Effectiveness

Observation

There are a number of recent organizational changes and initiatives underway that will necessarily drive continued assessment of campus procure-to-pay processes, including the dissolution of the Berkeley-UCSF joint supply chain management organization and the division of the Vice Chancellor of Administration and Finance portfolio across two separate control units. In addition, we understand that, as part of an on-going review of the shared services model, the campus will be piloting the delivery of certain business processes via regional service hubs in lieu of the current centralized model. Given this background of organizational change, we believe that there is an opportunity for management to re-assess whether the current model for managing procure-to-pay (P2P) activities continues to align with leadership priorities and current risks. There is no single model that can best meet campus needs because there are trade-offs with regard to balancing efficiency, compliance, and risk. However, ensuring the model balances these trade-offs between leadership priorities, risk tolerance, and efficiency goals is critical. Specifically, we noted the following process improvement opportunities.

- Currently, BearBuy approval workflow varies only by the type of form used and the dollar amount of the transaction, but CSS B&FS is always in the queue as the requisition creator, regardless of the level of transaction risk. We believe there is an opportunity for management to reconsider whether this current transaction approval work flow design is appropriate, however, for both high value and low value transactions given that CSS B&FS cannot be a full substitute for either department or Supply Chain Management's review for high value or high risk purchases and that it is not clear that the benefits of its involvement in processing low value transactions outweighs the costs. University policy allows and encourages flexibility for low value purchases (under $5,000), and we note opportunities for Supply Chain Management and the Controller's Office as P2P policy owners to consider alternative models that may better balance transaction risk with transaction review protocols.

- Conversely, certain common P2P risk areas including split orders, change orders, or changes to the vendor master file, are not currently being systematically monitored. We also understand that, as a result of system configuration issues, there are instances in which appropriate transaction routing may not always occur. Although unauthorized activity may be identified by the review of individual transactions, these control activities rely on the knowledge and skill of individual employees reviewing individual transactions. We understand that when monitoring and reporting protocols were developed a number of years ago, management intended at a later stage to reassess their sufficiency. Although ad hoc reports are run directly from BearBuy, BAIRS or CalAnswers, an overall reassessment of P2P reporting and monitoring has not yet occurred. It is appropriate to revisit how reporting and monitoring is used to effectively and efficiently mitigate risk including fraud risks. Effective systematic monitoring can also support overall process efficiency by providing

insight into where procedures and controls are working well, and where adjustments are needed.

Management Response and Action Plan

During the changes to systems and processes over the last five years, processes and department assignments have been layered on top of existing campus structures. The end-to-end P2P process has not been evaluated or reviewed since its roll-out in 2012. The campus is currently in progress of implementing a new regional service delivery model (regional model) for various administrative services, including purchasing. This effort will necessarily entail a review of roles, responsibilities, and delegations across the central campus, the regional service delivery organization, and the department. The first phase of this effort is expected to be completed by July 1, 2018.

There are also additional efforts underway within SCM to evaluate and enhance P2P processes, including changes to the vendoring process and the implementation of new compliance reporting requirements. These projects are expected to be completed by July 1, 2018.

SCM also acknowledges an opportunity to revisit the purchasing-related operational and internal control reports to ensure that key risks are being monitored and that decision-making is adequately supported.

Following the roll-out and stabilization of the regional model, management will re-evaluate whether an end-to-end process review continues to be warranted to further streamline procedures and support fund management accountability and policy compliance.

Roles and Responsibilities

Observation

In establishing and assigning roles and responsibilities within BearBuy, management has taken into account the need to maintain segregation of duties, as well as the need to preserve department involvement in purchases. However, there have been challenges in ensuring that role assignments effectively align with operational risks and needs, and we note that current assignments may also result in potential inefficiencies.

- The org node approver role is not tiered or limited by dollar amount and therefore may not readily mirror any department delegations of authority that may exist. Therefore, for departments that require additional or tiered purchase authorizations, transactions must be manually routed and/or monitored outside of BearBuy to ensure appropriate approvals are obtained.

- In addition, there are inefficiencies in the assignment of certain roles (specifically match exception preparer/approver and voucher approver) to CSS in that these staff, given that they are not located in the department, are not well positioned to efficiently identify and resolve issues. While the ability to receive purchases is enabled in BearBuy, it is not required and CSS voucher approvers therefore need to contact department personnel to

confirm receipt of goods and services or to identify any invoicing discrepancies, which can be a time-consuming process. Related to this, segregation of duties may not be preserved within the department between the purchase requisition creator, purchase requisition approver, and voucher approver roles because the Controller's Office and Supply Chain Management allow individuals to be both requisition creators, requisition approvers and voucher approvers.

- Finally, there are inherent risks associated with segmenting responsibility for transaction review between the department and CSS B&FS. Depending on the nature and value of a purchase, there can be as many as seven or more people handling an individual transaction. Although review and approval responsibilities across each of these roles were initially documented as part of the BearBuy implementation, based on input from one large unit, it appears that some confusion may persist regarding review accountabilities between CSS and departments.

Management Response and Action Plan

The campus is currently in progress of implementing a new service delivery model for various administrative services, including purchasing. This effort will necessarily entail a review of roles, responsibilities, and delegations. The first phase of this effort is expected to be completed by July 1, 2018.

BearBuy Expanded Uses

Observation

In addition to the processing of purchase requisitions, BearBuy is currently used to route certain non-procurement transactions also processed by CSS B&FS. For some transaction types such as payment requests, BearBuy replaced existing processes for approval routing and document retention and therefore does not create additional process complexity. For other transaction types, however, including bluCard and T&E, the use of BearBuy creates new process steps that do not replace, but are instead additive to existing processes because these transactions must now be manually entered twice since there is no systematic link between BearBuy and the bluCard or T&E systems. Although central record retention and consolidated tracking reporting is arguably a benefit of BearBuy, it is not clear that the additional processing time and effort required for these transactions is warranted. We understand that management is evaluating opportunities to streamline the processing of these transactions, including restoring both bluCard and T&E processing responsibilities to departments augmented with central monitoring.

Management Response and Action Plan

Accounts Payable is in the process of identifying methods to bring the bluCard program back to Berkeley to be managed internally. Accounts Payable will work to define and implement program requirements that balance efficiency and risk, and include reconciliations, supporting documentation, purchase limits by amount and merchant category code, training, and monitoring. Management plans to have this completed by July 1, 2018.

Regarding personal T&E reimbursement system, management agrees that the added processing time and duplication of approvals of both T&E approvers on paper forms with electronic approvals from BearBuy approvers is redundant and also creates data security issues related to the need to redact personal information in BearBuy. The campus is currently piloting an option for employees to directly enter their travel and entertainment vouchers to the campus reimbursement system.