AUDIT AND ADVISORY SERVICES

Revenue Generation
Audit
Project No. 15-655

July 14, 2015

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July 14, 2015

John Wilton
Vice Chancellor
Administration and Finance

Vice Chancellor Wilton:

We have completed our audit of revenue generation 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 the Operational Excellence Program 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 Executive

cc: Vice Provost Andrew Szeri
Co-Director William Reichle
Co-Director Halina Wojnicz
Senior Vice President and Chief Compliance and Audit Officer Sheryl Vacca
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University of California, Berkeley
Audit and Advisory Services
Revenue Generation

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OVERVIEW

Executive Summary

The purpose of the audit was to determine whether management's design and implementation of business processes and internal controls to support the New Revenue Initiative are sufficiently robust to enable the campus to build sustainable net revenue streams consistent with the university's teaching, public service, and research mission.

Given the near and longer-term financial outlook at both the system and campus level for revenues and expenses, we believe that campus management's efforts to simultaneously examine both expense containment and revenue growth are prudent. With respect to exploring opportunities to grow new or enhance existing revenue streams, we assessed the process by which the revenue generation proposals are evaluated by the Operational Excellence (OE) Program Office as of February 2015. As an end-to-end process, we observe that the level of evaluation and analysis for proposals appears appropriate.

We observed that opportunities exist to enhance the current design and implementation of processes and internal controls which support the New Revenue Initiative. Opportunities for enhancement include, but are not limited to

- Addressing root causes for low rates of revenue generation ideas being developed and vetted to the point of being approved for funding. Stakeholder perceptions that may affect the willingness to champion such ideas include
  - perceived amount of effort required to complete the vetting and approval process relative to the potential unit benefit;
  - the administrative workload associated with other administrative, academic, and operational initiatives perceived to be of greater benefit or urgency;
  - the lack of specialized analytical skills in areas such as advanced cost accounting and scenario modeling to effectively conceptualize and evaluate potential financial risks and returns; and
  - central campus funding will be reduced commensurate with any gains in net revenue from successful initiatives.

- Increasing the robustness of the proposal vetting process and post-approval monitoring through more extensive scenario-based analysis and the inclusion of the financial impact that unrelated business income tax (UBIT) may have on net revenue forecasts as applicable; developing additional financial and operational metrics beyond the 15 percent return on investment (ROI); and monitoring actual financial outcomes post implementation in order to identify situations where continued operations should be potentially reconsidered.

- Coordinate and optimize skills and effort related to evaluating revenue generating proposals between the OE Program Office, the Campus Budget Office, Berkeley Resources for Online Education (BRCOE), and Intellectual Property and Industry Alliances (IPIRA).

Management's responses and action plans, which we believe are responsive to the observations above, are included in our report.

Source and Purpose of the Audit

The purpose of the audit was to determine whether management's design and implementation of business processes and internal controls to support campus revenue generation such as OE's New Revenue Initiative are sufficiently robust to enable the campus to build sustainable net revenue streams consistent with the university's mission of teaching, research, and public service.

Scope of the Audit

The scope of the audit included

- a review of current efforts by the OE Program Office to encourage and enable campus to think creatively about creating new streams of revenue;
- a review of the OE Program Office's processes for evaluating the viability of revenue generation proposals submitted for funding, including the alignment with the university mission and the tools used to assess ROI;
- a review of the processes in place to perform post-funding project monitoring;
- a review of procedures in place for the repayment of loans made to units; and
- an assessment as to whether current revenue generation efforts are complementary to the teaching, research, and public service mission of the university.

Background Information

OE's New Revenue Initiative was launched in fiscal year 2014 to engage and encourage the campus to develop new sources of net revenue in response to the budgetary challenges associated with sustaining the university's mission of teaching, research and public service.

The New Revenue Initiative is housed in the OE Program Office and shares several of the resources and expertise within program office. As of the close of our fieldwork (February 2015), the program office's budget for salaries, supplies, tools, etc. was approximately $2.2 million. The New Revenue Initiative has two full time staff positions and a director, who also serves as one of the co-directors for the program office.

The OE Program Office is currently led by a faculty head and two co-directors. In the second quarter of fiscal year 2015, the office's former director, its executive assistant, and its lead financial analyst transitioned to Campus Shared Services (CSS) to assume leadership and operational roles there.

The New Revenue Initiative is the primary vehicle through which the campus seeks to achieve the goal of funding robust entrepreneurial projects at the unit level for which the targeted net return on the campus investment is at least 15 percent after three years. The expectation is that the net revenue from these projects will enable campus entities to fund priorities aligned with the university's mission that would not otherwise be funded. The revenue generation model includes funding in the form of a loan that will augment unit-level investment to launch the project and be repaid over approximately three years.

The New Revenue Initiative defines high quality revenue generation ideas as those which

- project significant and sustainable revenue potential;
- align with the mission of the university;
- demonstrate a strong likelihood of success; and
- recruit an executive sponsor.

As of the close of our fieldwork in February 2015, the New Revenue Initiative has successfully facilitated multiple symposiums and spark sessions (idea-generating discussions) which have been attended by over 130 participants from across the campus. These efforts have yielded over 500 revenue generating ideas and 41 active projects in various stages of the pipeline. The OE Program Office produced an engagement plan for fiscal year 2015 with specific initiatives targeted at a mix of campus stakeholders and also made the campus aware that funding to support the New Revenue Initiative is available. In addition, they have acquired and mobilized tools, resources, and expertise to facilitate the generation, review, and approval of revenue generation proposals.

Summary Conclusion

Based upon our audit fieldwork, we observed that opportunities exist to enhance the current design and implementation of processes and internal controls which support the New Revenue Initiative. Opportunities for enhancement include, but are not limited to

- Addressing root causes for low rates of revenue generation ideas being developed and vetted to the point of being approved for implementation. Stakeholder perceptions that may affect the willingness to champion such ideas include

    - perceived amount of effort required to complete the vetting and approval process relative to the potential unit benefit;
    - the administrative workload associated with other administrative, academic, and operational initiatives perceived to be of greater benefit or urgency;
    - the lack of specialized analytical skills in areas such as advanced cost accounting and scenario modeling to effectively conceptualize and evaluate potential financial risks and returns; and
    - central campus funding will be reduced commensurate with any gains in net revenue from successful initiatives.

- Increasing the robustness of the proposal vetting process and post-approval monitoring through more extensive scenario-based analysis and the inclusion of the financial impact that UBIT may have on net revenue forecasts as applicable; developing additional financial and operational metrics beyond the 15 percent ROI; and monitoring actual financial outcomes post implementation in order to identify situations where continued operations should be potentially reconsidered.

- Coordinate and optimize skills and effort related to evaluating revenue generating proposals between the OE Program Office, the Campus Budget Office, BRCOE, and IPIRA.

SUMMARY OF OBSERVATIONS & MANAGEMENT RESPONSE AND ACTION PLAN

Revenue Generation Lifecycle: From Idea to Approved Proposal

Observation

We observed that the OE Program Office has developed infrastructure to generate, solicit, and fund revenue generation ideas. As of February 2015, approximately 536 ideas were created; 485 ideas closed, which means the office has considered but chosen not to pursue; and 41 ideas were active in various stages of the revenue generation pipeline. Of those, three projects were fully funded as of February, and one project was conditionally funded. While they have provided valuable insight and expertise to approximately ten projects that never sought funding, management asserts that one of the greatest challenge associated with the New Revenue Initiative to date is the insufficient participation of sponsors to champion ideas and advance them from conception to funding. As a result, most of the ideas generated through multiple symposiums and other sessions have not advanced through the revenue generation pipeline for funding and/or advice, expertise, and other resources.

There are three funding options available for revenue generation proposals: sponsoring unit resources, the Revenue Generation Fund, and the Trustees Operational Investment Fund. The Revenue Generation Fund provides approximately $30 million available to fund project loans and the Trustees Operational Investment Fund provides approximately $5 million. While both funds provide loans, two separate committees make final funding decisions. As of February 2015, the Trustees Operational Investment Fund provided funding for the University Partnership Program and the Haas Courtside Club in the amount of approximately $1.4 million. During this same time period, the Revenue Generation Fund loaned $496,000 to Cal Performances. Ten projects have not sought funding but have utilized the OE Program Office staff's analysis, advice, and other resources. One additional proposal was conditionally approved to be funded by the Revenue Generation Fund.

We explored in discussions with OE Program Office management, as well as stakeholders with revenue generation ideas that are in various stages of the vetting and approval process, perceived challenges to pursuing funding and why resources are currently underutilized by campus entities. Among the candid responses we received were the following:

- Potential participants are reluctant to engage in revenue generation activity due to the perceived amount of effort required to complete the process relative to the potential unit benefit. In addition, units are often engaged in other administrative, academic, and operational initiatives perceived to be of greater benefit or urgency. This perception may be particularly relevant for smaller academic departments with few administrators and faculty with heavy teaching loads.

- Even if time and resources were available to devote to development of a revenue generation proposal, some departments and units do not have sufficient financial expertise such as advanced cost accounting and scenario modeling to effectively conceptualize and evaluate potential financial risks and returns associated with their idea.

- Unit-level perception that central campus funding will be reduced commensurate with any gains in net revenue from successful initiatives.

OE Program Office leadership has indicated that consideration is being given to alternatives that would provide faculty and staff with incentives to allow them the flexibility to dedicate effort toward revenue generation conception and development. Further analysis of the challenges units face in the effort to move revenue generating ideas to proposals is likely warranted. Proposed solutions to assess revenue challenges faced by units should also be further assessed.

Management Response and Action Plan

The OE Program Office agrees with the observations of Audit and Advisory Services and believes it raises salient points that will lead to improvements in this effort.

The ratio of ideas submitted to eventual proposals funded, while worth tracking, is not necessarily a proxy for the quality of ideas submitted. Indeed, the OE Program Office's engagement strategy encourages the submission of loosely-formulated ideas in an effort to encourage campus-wide participation and entrepreneurial thinking. However, as this program matures and we learn more about what aspects lead to successful proposals, we anticipate the quality of proposals will improve.

Since the period in which this audit observation was made, the OE Program Office has implemented three significant enhancements to better solicit, analyze, and act upon ideas submitted. First, it has designed and implemented an *Initial Assessment Model* to quantify all submitted ideas from 0 to 10 across five criteria. This model will enable us to focus resources on ideas with potential value and track the quality of idea submissions over time.

Secondly, the OE Program Office has developed a multi-audience engagement plan to proactively reach out to most-interested stakeholders to submit new revenue ideas. In particular, we are working closely with deans and other campus leaders who have financial incentives to seek out new revenue as well as the ability to commit to new initiatives. Through this effort, we are seeing an increase in the number of ideas with executive sponsorship built in.

Thirdly, after a successful pilot of an online idea innovation platform in 2014, the OE Program Office will soon deploy an open platform to thousands of students, faculty, staff, and alumni in order to solicit ideas, and interest, from the a large cross-section of stakeholders. Through these efforts, we hope to deploy a wide net to solicit new ideas while educating different communities to the new fiscal realities facing the university.

The OE Program Office will deploy an action plan with three deliverables to more fully engage and interest the campus in revenue generation in order to establish a sustainable supply of innovative ideas and proposals.

First, we will deploy the *Berkeley Innovation Fellows* program to provide a limited amount of funding to departments with promising revenue generation ideas but no resources to champion them internally. At the end of FY 2016, the OE Program Office will assess the effectiveness of the Berkeley Innovation Fellowships and measure their impact on developing quality business ideas.

Second, the OE Program Office will engage broad-based constituencies through the deployment of its *Ideation* idea platform in spring of 2015. By the end of the calendar year 2015, the OE Program Office will have targeted specific campaigns at students, faculty, staff, and alumni to encourage their participation in this platform. By March 1, 2016, the OE Program Office will issue a report on the effectiveness of these campaigns and the participation rates by audience.

Finally, the OE Program Office will issue a report and recommendation on the introduction of personal incentives to encourage submission and development of ideas with potential value to the university. The report will include an examination of other successful incentive programs in higher education and corporations that incentivize innovation. This report will be presented in the third quarter of FY2016.

Bill Reichle, OE Program Office Co-Director, will be responsible for this action plan and these deliverables.

Robustness of Proposal Vetting Process and Post-Approval Monitoring

Observation

Given the near and longer-term financial outlook at both the system and campus level for both revenues and expenses, we believe that campus management's efforts to simultaneously examine both expense containment and revenue growth are prudent. With respect to exploring opportunities to grow new or enhance existing revenue streams, we assessed the process by which the revenue generation proposals are evaluated by the OE Program Office. As an end-to-end process, we observe that the level of evaluation and analysis for proposals appears appropriate. However, there are several points along the process where we believe control enhancements would be beneficial.

- First, proposal submissions currently require a three to five year financial model and projections of both revenue and expenses associated with the initiative. We believe the quality of submissions would be enhanced by requiring (where relevant) modeling of different potential outcomes (e.g., best case scenario, worst case scenario, most likely scenario, etc.) with assumptions underlying the different outcomes clearly explained. Given that there is uncertainty associated with any initiative, it is generally prudent to incorporate such scenario analysis during the vetting so that all stakeholders can have an informed dialogue on the relative merits and potential risks associated with each proposal.

- Second, the potential impact of UBIT should be included in the scenario analysis of proposal submissions if the revenue activity is determined to be unrelated to the university's exempt purpose. While the OE Program Office directs sponsors submitting proposals seeking funding to the controller's website so that UBIT impact could be considered, the completion of a survey that adequately assesses the revenue generating activity for UBIT implication is not required.

- Third, the OE Program Office's goal of sponsoring and funding proposals that have a reasonable likelihood of achieving a 15 percent net ROI is only one metric for the outcome of a project. We observed that there are not additional operational metrics established to assess the revenue generating enterprise prior to or post funding. Based upon our interviews, we understand management has not yet developed a consistent methodology for developing and employing operational metrics to complement ROI calculations.

- Finally, once approved, funded, and implemented, revenue generating proposals may experience circumstances which differ significantly from the financial and operational scenarios projected in the proposal phase. Currently, the New Revenue Initiative process does not provide for periodic monitoring of the actual results of the initiative after implementation and prior to loan repayment. We believe periodic reporting and monitoring of actual performance is important to identify those situations where financial conditions significantly underperform projections and continued operation should potentially be reconsidered.

Management Response and Action Plan

The OE Program Office agrees with the observations described above with one clarification: it is an important part of our mission to track the performance of new revenue generating activities in all stages of their development: implementation, initial operation, ramp-up to full operations, and long-term operation. The OE Program Office declared during this audit that it will have less leverage to make adjustments to an on-going program once the operational unit has paid off its start-up loan. However, the OE Program Office will continue to monitor the progress of all new revenue generating activities indefinitely in order to track and report on the effectiveness of this portfolio.

With the exception of the above clarification, the OE Program Office would like to take a moment and thank Audit and Advisory Services for their though-partnership that led to these observations. This is a nascent program and processes are still new. Audit and Advisory Services provided valuable insights and recommendations that will lead to more robust proposals and measured risk as the university pursues this effort to generate new resources.

One improvement to the proposal vetting process has been implemented since this audit was conducted. The current proposal application packet consists of a revenue generation workbook and a financial template. Once funding is approved, an MOU specifying the terms and mechanics of the start-up loan are drawn-up and agreed to by the OE Program Office, the Campus Budget Office, and the operational unit. Going forward, it has been decided to require written agreement to these terms and mechanics as part of the application packet before a funding decision is made.

The OE Program Office will immediately begin incorporating scenario analysis into funding proposals. Current proposals contain a single financial projection. Going forward, they will include scenarios for *optimistic*, *pessimistic*, and *realistic* financial scenarios for decision makers to evaluate. Moreover, as part of this analysis, the OE Program Office will make recommendations on *decision points* and *exit strategies* in the event that a new activity is not meeting projections.

The OE Program Office will immediately begin to incorporate an assessment of the university's obligation to pay UBIT into each funding proposal. The current worksheet discusses the importance of UBIT but asks the idea submitter to make a determination with the Financial Accounting & Controls office as to whether a particular idea is subject to UBIT or not. Going forward, the OE Program Office will contact the Financial Accounting & Controls office to assess each proposed activity and it will include this assessment as part of the funding application packet.

ROI is a financial metric that is used to evaluate each funding proposal to determine if it is an attractive use of university funds. Audit and Advisory Services observed that additional operational metrics should also be incorporated to evaluate the operational effectiveness of each business idea. Metrics will vary due to the wide variety of ideas submitted to the OE Program Office (from new graduate degrees, to real estate ventures, to retail services). Beginning immediately, the OE Program Office will identify and require specific operational metrics that the operational unit will need to track in order to qualify for start-up loan funds. Tracking of these performance metrics will be agreed to as part of the funding application packet.

The OE Program Office will monitor and report on the results of all revenue generation projects. By the end of FY 2016, the OE Program Office will produce and distribute a revenue generation progress report on a quarterly basis that tracks the results of all funded projects including all operational metrics. Additionally, this report will include Key Performance Indicators for the OE revenue generation portfolio. This reporting will allow the OE Executive Committee to evaluate each proposal as an isolated project as well as part of an overall portfolio. As this program matures, the OE Program Office will be able to develop modeling to predict cash investment needs and anticipated revenue flows up to five years out.

OE Program Office Co-Director Bill Reichle will be responsible for this action plan. The top three suggested action items can all be implemented immediately (scenario analysis, UBIT assessments, and required operational metrics). Quarterly reporting will begin by the fourth quarter of FY 2016.

Campuswide Collaboration, Analysis, Impact, and Reporting

Observation

In our recent audits on related revenue generation initiatives around the campus, we noted that there are currently multiple units on campus with responsibilities for evaluating revenue generating proposals: the Campus Budget Office for self-supporting graduate degree programs, the BRCOE office for online education programs, IPIRA for industry research partners to interact with campus, and the OE Program Office for other opportunities.

Although for different programmatic purposes, each of these units represents that they have developed specialized skills for evaluating revenue generating proposals, such as financial analysts, market analysts and other expertise that provide a full range of analytical input. Given this specialization and potential duplication of skill sets, we believe there is an opportunity for greater efficiencies through collaboration and coordination of these offices, which is currently limited.

Management Response and Action Plan

The OE Program Office agrees with this observation. As the OE Program Office revenue generation initiative is the most broadly focused mission of the offices mentioned, it entertains a wide variety of ideas. In many cases, it refers prospective clients to these and other units on campus when appropriate.

The OE Program Office has met with each of these units to discuss roles, handoffs, referrals, and coordination. The OE Program Office is open to the idea of sharing similar resources and has proposed sharing one business analyst FTE with another unit. The proposal was not workable at the time but future possibilities exist.

The OE Program Office has held meetings with each one of these units but it has not yet convened all of these groups to discuss synergies.

The OE Program Office will contact the unit leaders in BRCOE, IPIRA and the Campus Budget Office, as it relates to new graduate degree programs, to propose a joint meeting to assess new opportunities and potential for collaboration and coordination in service of our shared goals. The first meeting will be proposed for fall semester of 2015.

OE Program Office Co-Director Bill Reichle will take responsibility for this action plan and it will be complete by the end of the second quarter of FY 2016.