

INTERNAL AUDIT OFFICE

January 28, 2019

To: Members of the Board of Trustees
Fr: Peg Fish, Senior Director of Audits
Re: Approval of 2018 Annual Report of the Director of Audits

On behalf of the Internal Audit Office, the calendar year 2018 annual report, reflecting the overall results of audit activities for the period, is enclosed. This report demonstrates accountability to the Board of Trustees and that the office is operating in accordance with the *Bylaws of the Trustees of Purdue University*.

Internal Audit is committed to the professional conduct and quality of its work, productive use of its resources, and the professional competence of its staff. Appendix A, the Internal Audit Charter, reflects these commitments.

Internal Audit has recognized stakeholders' expectations and priorities, and has adapted to changes in technology, legislation, and organizational strategic priorities. Institutional requests have been met and broad audit coverage has been provided.

The accomplishments would not have been possible without the dedication and professionalism of the staff. The Internal Audit Office also wishes to acknowledge the vision and direction of the Board of Trustees, the President, executive leadership, and the management teams throughout the University.

Enclosure

c: President Mitch Daniels
Treasurer Bill Sullivan
Provost Jay Akridge
Assistant Treasurer Jim Almond
Corporate Secretary Janice Indrutz
Legal Counsel Steve Schultz

A flexible program of work, spanning various institutional units and activities, was delivered identifying key internal controls that aid in risk mitigation. All audits were executed in accordance with the Institute of Internal Auditor's *International Standards for the Professional Practice of Internal Auditing (Standards)*. A risk-based approach was used to determine the scope of each audit, and all significant findings were reported. Cooperation was received from management in all audits conducted.

Audit Professionals

Staff are recognized for their contribution, dedication, and professionalism in providing quality audit services, flexibility, and maximum coverage of the 2018 audit plan. The plan was developed with eight staff members and finalized with six.

- Auditor Principal Information Systems **Robert Oxender**, CISA, CISSP, CPA, MS in Computer and Information Science
- Auditor Principal Special Projects **Wendi Johnston**, CRISC
 - Auditor Lead **Christina Eakins**, CPA, CIA, CRMA, MS in Accounting
- Auditor Principal **Jane White**, CIA, MBA
 - Auditor **Alex Quinn**, CPA
 - Auditor **Josh Sterrett**, CPA

Staff met all continuing education requirements per the *Standards*.

Allocation of Professional Audit Resources

Staff delivered 9,243 hours (79%) of direct audit work, 777 hours (6%) in support of the anonymous reporting program, external audits, and enterprise risk management initiatives, and 1,725 hours (15%) in office initiatives, professional staff development, and research.

Audits Completed or In-Process

Sixty-seven (67) audit reports were issued with 8 audits in-process at year-end. The hours dedicated to follow-up are included in the total 9,243 hours of direct audit work; however, these activities do not typically result in an audit report so are not included in the audit report count.

A summary of audit hours by primary institutional risk category follows:

- Academic and Student, 679 hours, 7%
- Athletics, 436 hours, 5%
- Engagement, 78 hours, 1%
- Financial, 3,209 hours, 34%
- Information Technology, 3,774 hours, 41%
- Regulatory, 791 hours, 9%
- Research, 276 hours, 3%

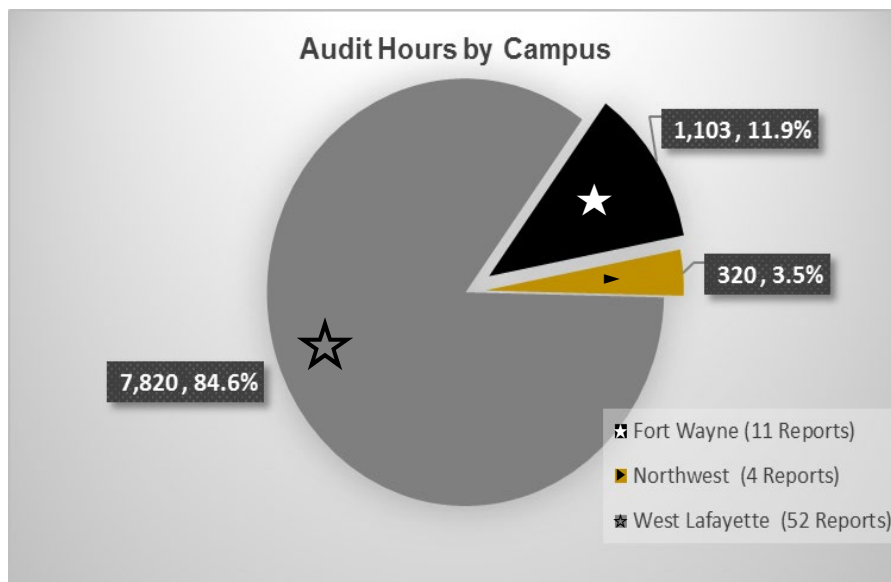
Banner application controls were audited for the Fort Wayne and West Lafayette campuses. Also audited for the Fort Wayne campus were procedures for scholarship awards and the return of federal aid for student withdrawals. Audits of West Lafayette tuition tax forms and Banner One Student One Record processes were completed. These audits are included in the Academic and Student category.

Revenue audits and administration of certain contracts were included in the financial category. Validation of asset transfers and leasing agreements between Purdue Fort Wayne and Indiana University were also conducted. Athletics coverage included basketball/football ticket sales and golf course operations.

Cybersecurity/data security risks and associated controls are considered and tested, as applicable, in all information technology audits. One completed audit focused on security logging and monitoring, and one in-process audit is concentrated on vulnerability management. Vendor cloud controls relevant to transformation were analyzed. Information technology audits of centrally supported server administration, production scheduling, change management, and utility network segmentation were performed. Evaluations of security standards for two Health Insurance Portability and Accountability Act (HIPAA) covered areas were either completed or in-process at year-end. A root cause analysis of a power outage that impacted server capabilities was performed.

Regulatory audits included campus security authorities for the regional campuses and multiple research compliance areas for the West Lafayette campus.

Campus Coverage*



*Enterprise-wide systems and associated processes were reflected in West Lafayette coverage

Non-audit Categories

Internal Audit has collaborated with Information Technology at Purdue (ITaP) IT Security and Policy (ITSP) to define and communicate key controls that collectively address the following standards and best practices:

- National Institute of Standards and Technology (NIST) Cybersecurity Framework
- NIST Special Publication 800-171 - Protecting Controlled Unclassified Information in Nonfederal Information Systems and Organizations
- Center for Internet Security Critical Security Controls for Effective Cyber Defense

Internal Audit has also collaborated with transformation teams to identify controls pertaining to role security in the finance and human capital systems.

Comparison of the 2018 Annual Report to the Audit Plan

Fifty-one (51) of the 71 planned audits were completed or in-process at year-end. The disposition of the 20 audits planned, but not started, is as follows:

- Evaluated, scope modifications made or combined with other audits, implementation schedules assessed, and moved to the 2019 audit plan: 17
- Evaluated, replaced with other higher risks, not moved to the 2019 audit plan: 3

Sixteen (16) unplanned audits, including emerging issues, were completed or in-process at year-end.

Anonymous Reporting Activity

Purdue is committed to providing an environment in which individuals may report suspected fraud, waste, or abuse of University assets, as well as regulatory noncompliance in a simple, anonymous way. An external firm manages the intake of information via telephone (866) 818-2620, or internet www.purdue.edu/hotline. This information is then provided to Internal Audit for appropriate action. During calendar year 2018, 127 reports were received with 20 of these duplicated.

Appendix A Internal Audit Charter

Mission

The Internal Audit Office is dedicated to aiding the University in accomplishing its strategic and operational initiatives by providing independent, objective assurance, and consulting services with respect to evaluating risk management, control, and governance processes.

Role

The Internal Audit Office serves as a resource to examine and evaluate University activities in service to the Board of Trustees and management. Internal Audit has no direct operating responsibility or authority for management processes, internal controls, or any of the activities or operations it reviews; thereby, maintaining its independence and objectivity.

Purpose and Responsibilities

The purpose of the Internal Audit Office is to determine whether the University's control, risk management, and governance processes, as designed and implemented by management, are adequate and functioning to ensure that:

- Strategic objectives and plans are achieved
- Risks are appropriately identified and managed
- Interaction with various governance groups occurs as needed
- Quality and continuous improvement are promoted in the University's control processes
- Resources are acquired economically, used efficiently, and adequately protected
- Financial, managerial, and operational information is accurate, reliable, and available
- Actions comply with University policies and applicable laws and regulations
- Significant legislative and regulatory issues impacting the University are recognized and appropriately addressed
- Information technologies are integrated and aid in accomplishing University objectives

Responsibilities include:

- Developing a flexible audit plan utilizing an appropriate risk-based methodology
- Ensuring inclusion of resources for unplanned audits when developing the audit plan
- Allocating resources, setting timelines, determining scope of work, and applying the techniques required to accomplish the audit objectives
- Communicating audit results, assessing management responses, and conducting follow-up accordingly
- Maintaining sufficient knowledge, skills, and other competencies to achieve the engagement objectives and to meet the requirements of this Charter
- Administering the anonymous reporting program
- Considering the scope of work of the external auditors or regulators for purposes of providing optimal audit coverage to the institution
- Monitoring, on an ongoing basis, the performance of the internal audit activity

All audit activity is governed by the mandatory guidance of the Institute of Internal Auditor's (IIA) *International Professional Practices Framework*, which includes the definition of Internal Auditing, the Code of Ethics, and the *International Standards for Professional Practice of Internal Auditing*. Consulting procedures generally follow the same processing as assurance audits. Final reports include the scope, testing limitations, and outcome.

Reporting

The Internal Audit Office reports administratively to the Treasurer of the Corporation and functionally to the Audit and Risk Management Committee of the Board of Trustees. This structure is in accordance with *The Bylaws of the Trustees Article IV, Section 6*:

"The Treasurer of the Corporation shall maintain an internal audit office independent of any other office of the Corporation or of the University. The Director of Audits shall submit to the Board

annually a written report on the work of the internal audit office for the preceding calendar year. In addition, the Director of Audits, prior to the presentation of the written annual report, shall make an annual oral presentation concerning the work of the internal audit office to the Audit and Risk Management Committee, which shall be made in the presence of the Treasurer. Immediately following the completion of each oral presentation, the Director of Audits shall confer with the Audit and Risk Management Committee, outside the presence of the Treasurer or any other officer of the University on any subject germane to the area of responsibility of the internal audit office. The written annual report to the Board shall be made at a stated meeting selected by the Audit and Risk Management Committee, but in no event shall it be deferred beyond July 1 of each year without the consent of the Chairman. In addition, at any time when in the judgment of the Director of Audits circumstances warrant or in response to a request from the Chairman of the Audit and Risk Management Committee, the Director of Audits shall make a written or oral report to the Chairman of the Audit and Risk Management Committee without informing the Treasurer or any other University officer. Subject to the foregoing, the Treasurer shall attend the meetings of the Audit and Risk Management Committee and serve as its Secretary and keep a record of its proceedings”.

Authority

The Internal Audit Office provides system-wide audit coverage and has unrestricted access to all University functions, records, property, and personnel, subject to state and federal law.