Committee Minutes

COMPLIANCE, AUDIT, AND RISK COMMITTEE

110B Classroom Building, Virginia Tech
10:00 a.m.

June 3, 2018

<u>**Closed Session**</u>

Committee Members Present: Mr. Mehmood Kazmi (chair), Ms. Tish Long, Mr. Robert Mills Jr., Mr. Horacio Valeiras

Board Members Present: Mr. Mike Quillen, Mr. Dennis Treacy (rector)

VPI & SU Staff: Mr. Cyril Clarke, Mr. Brian Daniels, Mr. Ryan Hamilton, Ms. Kay Heidbreder, Ms. Sharon Kurek, Ms. Kim O'Rourke, Dr. Timothy Sands, Mr. M. Dwight Shelton Jr.

<u>**Compliance, Audit, and Risk Closed Session**</u>

1. **Motion for Closed Session:** Motion to begin closed session.

2. **Update on Fraud, Waste, and Abuse Cases:** The Committee received an update on outstanding fraud, waste, and abuse cases.

3. **Discussion with the Executive Director of Audit, Risk, and Compliance:** The Executive Director discussed audits of specific departments and units where individual employees were identified.

<u>**Open Session**</u>

Committee Members Present: Mr. Mehmood Kazmi (chair), Ms. Tish Long, Mr. Robert Mills Jr., Mr. Horacio Valeiras

Board Members Present: Mr. Mike Quillen, Mr. Dennis Treacy (rector), Dr. Hans Robinson (faculty representative), Mr. Robert Sebek (staff representative), Mr. Brett Netto (graduate student representative), Mr. Seyi Olusina (undergraduate student representative)

VPI & SU Staff: Mr. Lorenzo Amani, Ms. Beth Armstrong, Mr. Bob Broyden, Ms. Lori Buchanan, Dr. Cyril Clarke, Ms. Shelia Collins, Mr. Al Cooper, Mr. David Crotts, Mr. Brian Daniels, Dr. Lance Franklin, Mr. Ryan Hamilton, Ms. Kay Heidbreder, Ms. Rachel Iwicki, Ms. Sharon Kurek, Dr. Theresa Mayer, Ms. Erin McCann, Dr. Steve McKnight, Dr. Scott Midkiff, Mr. Ken Miller, Ms. April Myers, Ms. Kim O'Rourke, Dr. Patty Perillo, Dr. Scot Ransbottom, Mr. Mike Reinholtz, Dr. Timothy Sands, Ms. Savita Sharma, Mr. M. Dwight Shelton Jr., Ms. Dawn Taylor, Mr. Jon Clark Teglas, Mr. Steve Vantine, Ms. Tracy Vosburgh, Dr. Sherwood Wilson

<u>**Compliance, Audit, and Risk Open Session**</u>

1. **Motion to Reconvene in Open Session:** Motion to begin open session.

2. **Welcome and Introductory Remarks:** The chair of the Compliance, Audit, and Risk Committee provided opening remarks.

3. **Consent Agenda:** The Committee approved and accepted the items listed on the Consent Agenda.

   a. **Approval of Minutes of the March 25, 2018 Meeting:** The Committee reviewed and approved the minutes of the March 25, 2018 meeting.

   b. **Update of Responses to Open Internal Audit Comments:** The Committee reviewed the university's update of responses to all previously issued internal audit reports. As of December 31, 2017, the university had six open recommendations. Seven audit comments have been issued during the second quarter of the fiscal year. As of March 31, 2018, the university has addressed five comments, leaving eight open recommendations in progress.

   c. **Audit Plan Status Report:** The committee reviewed the Audit Plan Status Report. The Office of Audit, Risk, and Compliance (OARC) has completed 58 percent of its audit plan in accordance with the fiscal year 2017-18 annual audit plan.

   d. **Internal Audit Reports:** The following internal audit reports were issued by OARC since the March 25, 2018 meeting. Where applicable, management developed action plans to effectively address the issues in the report with a reasonable implementation timeframe. As noted above, OARC conducts follow-up on management's implementation of agreed upon improvements for previously issued audit recommendations.

i. Biochemistry: The audit received a rating of improvements are recommended. An audit recommendation was issued where opportunities for further improvement were noted in the area of laboratory safety training records. A low-priority audit recommendation of a less significant nature was issued where opportunities for further improvement were noted in the area of service center administration.

ii. Controller's Office – Risk Management: The audit received a rating of improvements are recommended. An audit recommendation was issued where opportunities for further improvement were noted in the area of insurance coverage. Additionally, observations for central administration were noted with respect to inaccurate Graduate Assistant (GAs) subsidies and payroll deductions, and to event management systems.

iii. IT: Mobile Device Security: This review began as a risk-based audit in accordance with the fiscal year 2017-18 audit plan; however, this review was truncated commensurate with the audit planning phase after it was determined that the best use of audit resources was to focus on other projects that had not received such a detailed previous review. A recommendation for continuous improvement was noted in the area of training and outreach related to mobile device security.

iv. Telecommunications Operations: The audit received a rating of improvements are recommended. An audit recommendation was issued where an opportunity for improvement was noted in the area of controls pertaining to the billing and work order system. Additionally, low-priority recommendations of a less significant nature were noted where opportunities for improvement were identified with regards to billing and rate discrepancies and safety training for Network Infrastructure & Services (NI&S) field technicians.

e. **Statewide Reviews and Special Reports:** This report is related to ongoing and forthcoming statewide reviews. Virginia Tech is subject to reviews by a variety of Commonwealth agencies, including the Auditor of Public Accounts, Office of the State Inspector General, and Virginia Department of Veterans Services.

4. **Annual External Audit Scope Discussion with the Auditor of Public Accounts:** The Committee met with the Auditor of Public Accounts (APA) for a

discussion of the scope of the audit of the 2018 financial statements and the APA's plans for conducting and completing the audit.

5. **Proposed Audit Plan for Fiscal Year 2018-19:** The Committee reviewed the proposed audits included on the fiscal year 2018-19 annual audit plan. OARC conducted the annual risk assessment after reviewing financial and operational data and seeking input from senior management. In addition, a university-wide information technology risk assessment and audit plan were created in accordance with industry standards. For fiscal year 2018-19, more than 20 audit projects are proposed given current staffing levels, with approximately 75 percent of available resources committed to the completion of planned projects.

6. **Enterprise Risk Management Program:** The Committee received an update on the Enterprise Risk Management (ERM) program. OARC developed a framework and facilitated its implementation over the previous months resulting in university leadership's identification of key residual risks across six thematic areas, documented in the enterprise risk landscape. An overview of a tabletop exercise related to enrollment management was shared with the committee.

7. **Institutional Compliance Program:** The Committee received an update on the institutional compliance program, which included the establishment of a compliance oversight committee to coordinate best practices regarding risk assessment and monitoring activities. OARC has distributed communication to key university constituents in establishing committee structures to help ensure collaboration and coordination among compliance activities at the university.

8. **Discussion of Future Topics:** The Committee discussed topics to be covered in future committee meetings.

There being no further business, the meeting adjourned at 11:42 a.m.

Update of Responses to Open Audit Comments

COMPLIANCE, AUDIT, AND RISK COMMITTEE

March 31, 2018

As part of the internal audit process, university management participates in the opening and closing conferences and receives copies of all final audit reports. The audited units are responsible for implementing action plans by the agreed upon implementation dates, and management is responsible for ongoing oversight and monitoring of progress to ensure solutions are implemented without unnecessary delays. Management supports units as necessary when assistance is needed to complete an action plan. As units progress toward completion of an action plan, the Office of Audit, Risk, and Compliance (OARC) performs a follow-up visit within two weeks after the target implementation date. OARC is responsible for conducting independent follow up testing to verify mitigation of the risks identified in the recommendation and formally close the recommendation. As part of management's oversight and monitoring responsibility, this report is provided to update the Compliance, Audit, and Risk Committee on the status of outstanding recommendations. Management reviews and assesses recommendations with university-wide implications and shares the recommendations with responsible administrative departments for process improvements, additions or clarification of university policy, and inclusion in training programs and campus communications. Management continues to emphasize the prompt completion of action plans.

The report includes outstanding recommendations from compliance reviews and audit reports. Consistent with the report presented at the March Board meeting, the report of open recommendations includes three attachments:

- Attachment A summarizes each audit in order of final report date with extended and on-schedule open recommendations.

- Attachment B details all open medium and high priority recommendations for each audit in order of the original target completion date, and with an explanation for those having revised target dates or revised priority levels.

- Attachment C charts performance in implementing recommendations on schedule over the last seven years. The 100 percent on-schedule rate for fiscal year 2018 reflects closing 23 of 23 recommendations by the original target date.

The report presented at the March 25, 2018 meeting covered audit reports reviewed and accepted through December 31, 2017 and included six open medium and high priority recommendations. Activity for the quarter ended March 31, 2018 resulted in the following:

Open recommendations as of December 31, 2017	6
Add: medium and high priority recommendations accepted March 25, 2018	7
Subtract: recommendations addressed since December 31, 2017	5
Remaining open recommendations as of March 31, 2018	8

While this report is prepared as of the end of the quarter, management continues to receive updates from OARC regarding auditee progress on action plans. Through May 4, 2018, OARC has closed two of the eight outstanding medium and high priority recommendations for an adjusted total of six open recommendations. The remaining open recommendations are progressing as expected and are on track to meet their respective target due dates. Management continues to work conjointly with all units and provides assistance as needed to ensure action plans are completed timely.

Presentation Date: June 3, 2018

ATTACHMENT A

Open Recommendations by Priority Level

COMPLIANCE, AUDIT, AND RISK COMMITTEE

March 31, 2018

Report Date	Audit Name	Audit Number	Total Recommendations						
			ISSUED	COMPLETED	OPEN				
					Extended		On-schedule		Total
					High	Medium	High	Medium	Open
23-Aug-17	University Policy Review	17-1323	1					1	1
01-Feb-18	Biomedical Engineering and Mechanics	18-1367	1					1	1
02-Feb-18	Chemistry	18-1368	1					1	1
28-Feb-18	Vice President for Research and Innovation	18-1392	1					1	1
02-Mar-18	Fire Safety Compliance	18-1371	1					1	1
08-Mar-18	College of Engineering	18-1388	1					1	1
09-Mar-18	VCE Central District	18-1382	2					2	2
Totals:			**8**	**0**	**0**	**0**	**0**	**8**	**8**

ATTACHMENT B

Open Audit Recommendations

COMPLIANCE, AUDIT, AND RISK COMMITTEE

March 31, 2018

| Report Date	Item	Audit Number	Audit Name	Recommendation Name	Priority		Target Date		Follow Up Status	Status of Recommendations with Revised Priority / Target Dates
					Original	Revised	Original	Revised		
02-Feb-18	1	18-1368	Chemistry	Oversight of Lab Safety Training	Medium		02-Apr-18		1	
01-Feb-18	2	18-1367	Biomedical Engineering and Mechanics	Oversight of Lab Safety Training	Medium		30-Apr-18		1	
09-Mar-18	3	18-1382	VCE Central District	Fiscal Responsibility	Medium		15-Jun-18		1	
09-Mar-18	4	18-1382	VCE Central District	Funds Handling	Medium		15-Jun-18		1	
08-Mar-18	5	18-1388	College of Engineering	Fiscal Responsibility	Medium		29-Jun-18		1	
23-Aug-17	6	17-1323	University Policy Review	Policy Governance Strategy	Medium		30-Jun-18		1	
02-Mar-18	7	18-1371	Fire Safety Compliance	Fire Evacuation Drills	Medium		02-Jul-18		2	
28-Feb-18	8	18-1392	Vice President for Research and Innovation	Fiscal Responsibility	Medium		30-Aug-18		2	

Follow Up Status

1   As of March 31, 2018, management confirmed during follow up discussions with the Office of Audit, Risk, and Compliance (OARC) that actions are occurring and the target date will be met. OARC will conduct testing after the due date to confirm that the Management Action Plan is implemented in accordance with the recommendations.

2   Target date is beyond current calendar quarter. Management has follow-up discussions with the auditor to monitor progress, to assist with actions that may be needed to meet target dates, and to assess the feasibility of the target date.

Presentation Date: June 3, 2018

**Management Performance and Trends Regarding
Office of Audit, Risk, and Compliance Recommendations**

COMPLIANCE, AUDIT, AND RISK COMMITTEE

March 31, 2018

Seven Year Trend of Recommendations Closed - On Schedule
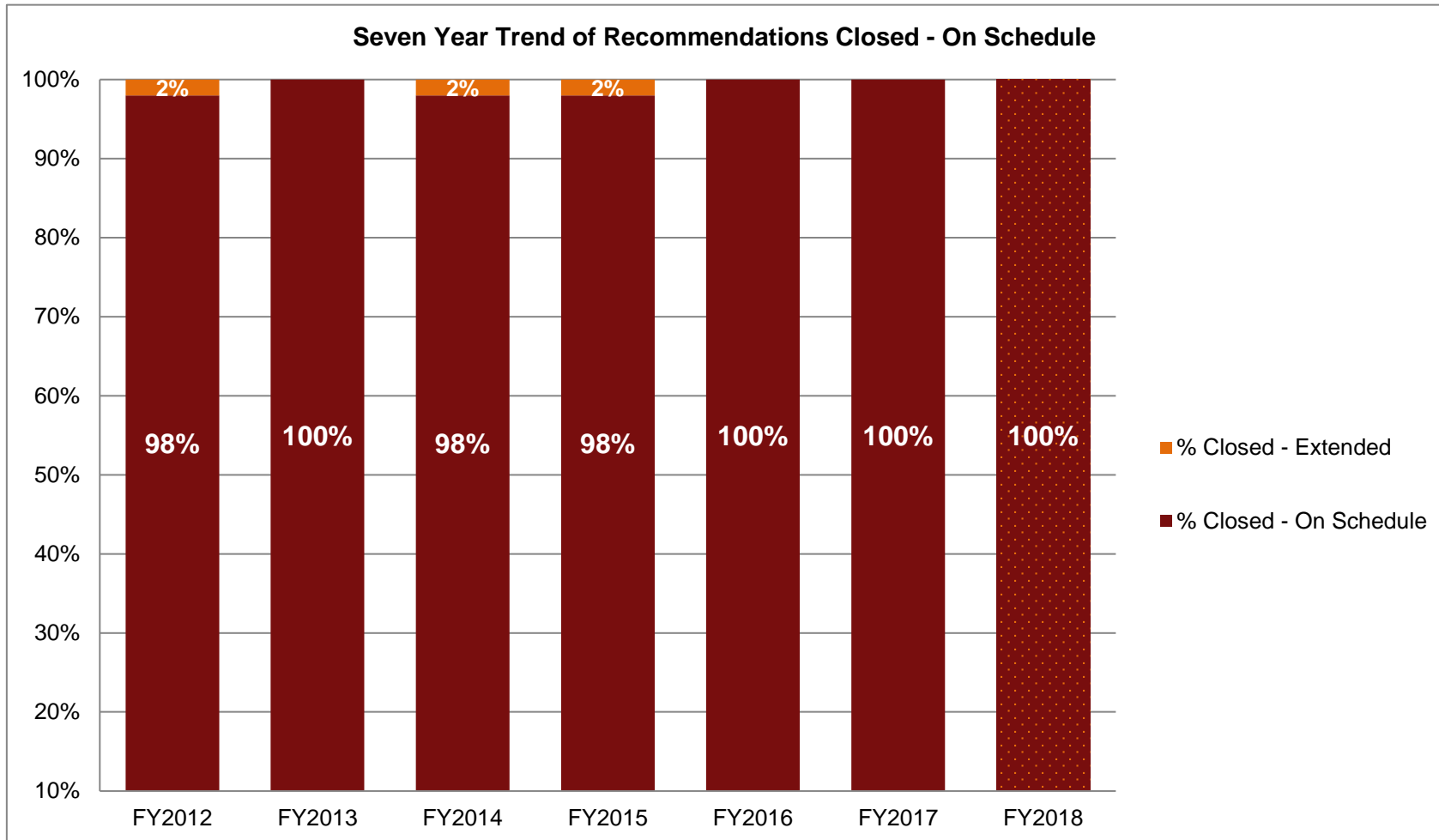
Audit Plan Status Report

COMPLIANCE, AUDIT, AND RISK COMMITTEE

June 3, 2018

Audit Plan Update

Audits were performed in accordance with the fiscal year 2017-18 annual audit plan at a level consistent with the resources of the Office of Audit, Risk, and Compliance (OARC). Four risk-based audits have been completed since the March board meeting.

Due to personnel turnover and position vacancies held due to budgetary constraints, eight risk-based audits have been canceled or deferred to next fiscal year since we last met, including Biocomplexity Institute of Virginia Tech, Human Resources: Benefits, Hume Center, IT: Third Party Access to University Data, IT: Windows Server Security, Office of International Research Education and Development, School of Public and International Affairs, and University Registrar. Four advisory projects, Government Relations, Fair Labor Standards Act Practices, Title IX Program Policies and Procedures, and Youth Protection Activities, have been canceled or deferred as well.

The following six audit projects are underway: Global Activities, IT: Employee Access Lifecycle, University Scholarships and Financial Aid, Utilization of Endowed Professorship, Department of Athletics compliance review, and Vice President for Advancement compliance review. Additionally, four advisory service projects, requested by management in the areas of Facilities and Administrative Charge Utilization, the Steger Center for International Scholarship, Club Sports, and the Virginia Tech Carilion School of Medicine, are underway.

So far in fiscal year 2017-18, OARC has completed 58 percent of its amended audit plan as depicted in Exhibit 1. While we had 42 projects on the audit plan during the year, we have had to defer or cancel 16 projects (38%) due to seven vacancies equivalent to over 4,500 hours of audit effort.

Exhibit 1
FY 2017-18 Completion of Audit Plan

Audits	
Total # of **Audits** Planned	34
Total # of Supplemental **Audits**	1
Total # of Carry Forwards	7
Total # of Planned **Audits** Deferred and/or Canceled	16
Total **Audits** in Plan as Amended	26
Total **Audits** Completed	15
Audits - Percentage Complete	58%
Audits - Percentage Complete or Underway	96%

Note: Includes Compliance Reviews and Advisory Services

COMPLIANCE, AUDIT, AND RISK COMMITTEE

June 3, 2018

Background

This report provides a summary of audit ratings issued this period and the full rating system definitions. The following reviews have been completed during this reporting period. The Office of Audit, Risk, and Compliance has made a concerted effort to ensure progress on the annual audit plan.

Consent Agenda Reports	Rating
Biochemistry	Improvements are Recommended
Controller's Office – Risk Management	Improvements are Recommended
IT: Mobile Device Security	N/A*
Telecommunications Operations	Improvements are Recommended

*A memorandum was issued to highlight recommendations for continuous improvement after truncation of the project based on results of initial project phases.

Summary of Audit Ratings

The Office of Audit, Risk, and Compliance's rating system has four tiers from which to assess the controls designed by management to reduce exposures to risk in the area being audited. The auditor can use professional judgment in constructing the exact wording of the assessment in order to capture varying degrees of deficiency or significance.

<u>Definitions of each assessment option</u>

Effective – The audit identified opportunities for improvement in the internal control structure, but business risks are adequately controlled in most cases.

Improvements are Recommended – The audit identified occasional or isolated business risks that were not adequately or consistently controlled.

Significant or Immediate Improvements are Needed – The audit identified several control weaknesses that have caused, or are likely to cause, material errors, omissions, or irregularities to go undetected. The weaknesses are of such magnitude that senior management should undertake immediate corrective actions to mitigate the associated business risk and possible damages to the organization.

Unreliable – The audit identified numerous significant business risks for which management has not designed or consistently applied controls prior to the audit. Persistent and pervasive control weaknesses have caused or could cause significant errors, omissions, or irregularities to go undetected. The weaknesses are of such magnitude that senior management must undertake immediate corrective actions to bring the situation under control and avoid (additional) damages to the organization.

<u>**RECOMMENDATION**</u>:

That the internal audit reports listed above be accepted by the Compliance, Audit, and Risk Committee.

June 3, 2018

Statewide Reviews and Special Reports

COMPLIANCE, AUDIT, AND RISK COMMITTEE

June 3, 2018

Background

Virginia Tech is subject to reviews by a variety of Commonwealth agencies, including the Auditor of Public Accounts (APA), the Office of the State Inspector General (OSIG), and others. In addition to the annual audits of the university's financial statements and its Intercollegiate Athletics program conducted by the APA, Virginia Tech has been included along with other agencies in statewide reviews typically included as part of an agency's annual work plan. Due to the breadth of the programs and the dollar volume of activities at Virginia Tech, the university is often selected for inclusion in a variety of statewide reviews. The following report provides an analysis of statewide audit activities consistent with the university's planned approach to manage and report on these audit activities.

OSIG Chemical Inventory Management

In accordance with the Code of Virginia § 2.2-309 [A](10), OSIG conducts performance audits of executive branch state agencies, including colleges and universities, to ensure state funds are spent as intended and to evaluate the efficiency and effectiveness of programs. As previously reported, most recently at the March meeting, all higher education institutions, including Virginia Tech, were originally notified that OSIG will conduct a performance audit at a sampling of Virginia's colleges and universities during fiscal year 2018. Virginia Tech, among others, was notified in February 2018 of its inclusion for the planning phase of this project centered on chemical inventory management. Virginia Tech subsequently responded to a detailed survey provided by OSIG and will continue to engage in the process as additional communication is received.

Virginia Department of Veterans Services (DVS)

Virginia Tech received notice of its selection in a Compliance Survey, which will be conducted to ensure that schools, training establishments, and their approved courses are in compliance with all applicable provisions of the laws administered by the U.S. Department of Veterans Affairs and State Approving Agency (DVS). This limited scope review will monitor compliance based on a review of records for a specific set of students.

Annual APA Financial Statement Audit

The entrance conference was held with the APA in May for the upcoming annual financial statement audit. The objectives of this APA review include ensuring:
- The financial statements present fairly the financial position, the changes in financial position, and the cash flows for fiscal year 2017-18 in conformity with accounting principles generally accepted accounting principles;
- Disclosures in the financial statements are adequate and fairly stated;
- Management has appropriately reviewed the financial statements, accruals, adjustments and disclosures;
- Adequate internal controls exist over material account balances and transactions;
- and, the University is in compliance with applicable laws, regulations, and provisions of contracts or grant agreements.

The APA encourages the Board of Visitors to provide input regarding the risks they perceive to the University in completing its mission. The Board members can direct their comments to the Audit Committee Chair or Executive Director of Audit, Risk, and Compliance to be forwarded to the APA Project Manager.

Auditor of Public Accounts
Audit Engagement Memorandum
Virginia Tech – Compliance, Audit and Risk Committee
June 3, 2018

- APA Audit Management
  - J. Michael Reinholtz, Project Manager (mike.reinholtz@apa.virginia.gov)
  - Meghan Finney, Auditor In-Charge (meghan.finney@apa.virginia.gov)

- Audit Period – July 1, 2017 through June 30, 2018

- Audit Deadline – November 2018

- Audit Objectives, to ensure:
  - The financial statements present fairly the financial position, the changes in financial position, and the cash flows for the 2018 fiscal year in conformity with accounting principles generally accepted in the United States of America.
  - Disclosures in the financial statements are adequate and fairly stated.
  - Management has appropriately reviewed the financial statements, accruals, adjustments and disclosures.
  - Adequate internal controls exist over material account balances and transactions.
  - The University is in compliance with applicable laws, regulations, and provisions of contracts or grant agreements.

- Discussion of Risk
  - The APA encourages the Board of Visitors to provide input regarding the risks they perceive to the University in completing its mission. The Board members can direct their comments to the Audit Committee Chair or the Internal Audit Director to be forwarded to the APA Project Manager.

Terms of the Engagement

The Auditor's (APA) Responsibilities

Overall Audit Objectives

The objective of our audit is the expression of opinions as to whether your basic financial statements are fairly presented, in all material respects, in conformity with U.S. generally accepted accounting principles. We will conduct our audit in accordance with auditing standards generally accepted in the United States of America (GAAS) and standards for financial audits contained in the *Government Auditing Standards*. The audit of the financial statements does not relieve management or those charged with governance of their responsibilities.

Audit Procedures-General

An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements; therefore, our audit will involve judgment about the number of transactions to be examined and the areas to be tested. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements. We will plan and perform the audit to obtain reasonable, rather than absolute assurance, about whether the financial statements are free of material misstatement whether from (1) errors, (2) fraudulent financial reporting, (3) misappropriation of assets, or (4) violations of laws or governmental regulations that are attributable to the entity or to acts by management or employees acting on behalf of the entity. Because the determination of abuse is subjective, *Government Auditing Standards* do not expect auditors to provide reasonable assurance of detecting abuse.

Because of the inherent limitations of an audit, together with the inherent limitations of internal control, an unavoidable risk that some material misstatements may not be detected exists, even though the audit is properly planned and performed in accordance with GAAS and *Government Auditing Standards*.

Audit Procedures-Internal Control and Compliance

Our audit will include obtaining an understanding of internal controls, sufficient to assess the risks of material misstatement of the financial statements and to design the nature, timing, and extent of further audit procedures. An audit is not designed to provide assurance on internal control or to identify significant deficiencies or material weaknesses. However, we will communicate in writing to management and those charged with governance any significant deficiencies or material weaknesses in internal control relevant to the audit of the financial statements that we have identified during the audit. Also, as part of obtaining reasonable assurance about whether the financial statements are free of material misstatement, we will perform tests of compliance with the provisions of applicable laws, regulations, contracts, agreements, and grants

Those charged with governance

We are responsible for communicating significant matters related to the financial statement audit that are, in the auditor's professional judgment, relevant to the responsibilities of those charged with governance in overseeing the financial reporting process. GAAS do not require the auditor to design procedures for the purpose of identifying other matters to communicate with those charged with governance.

Management's Responsibilities

Our audit will be conducted on the basis that Management acknowledge and understand that they have the following responsibilities:

- Preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America
- Design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error
- Identify and ensure compliance with applicable laws, regulations, contracts, and grant agreements
- Informing the APA about all known or suspected fraud affecting the entity involving (1) management, (2) employees who have significant roles in internal control, and (3) others where the fraud could have a material effect on the financial statements
- Informing the APA (and others as required by the Code of Virginia § 30-138) of knowledge of any allegations of fraud or suspected fraud affecting the University received in communications from employees, former employees, regulators, or others
- As received, forward copies of each federal audit performed on agency or institution programs or activities to the Auditor of Public Accounts as required by Chapter 836 § 4-8.02 a. of the 2017 Virginia Acts of Assembly. To forward these reports to the Auditor of Public Accounts, use APAFederal@apa.virginia.gov. If the federal report is only available in hardcopy or contains FOIA exempt information, DO NOT email the report, use this same email account to notify the Auditor of Public Accounts of the federal report and provide the contact information of the individual with the report
- Informing the APA of any potential documents that are FOIA exempt
- Ensuring that management is reliable and financial information is reliable and properly recorded
- Making all financial records and related information available to the APA
- Providing the APA with (1) access to all information of which you are aware that is relevant to the preparation and fair presentation of the financial statements, (2) additional information that we may request for the purpose of the audit, and (3) unrestricted access to persons within the government from whom we determine it necessary to obtain audit evidence
- Responding to audit findings and recommendations, as well as providing your planned corrective actions and the timing and format for providing that information
- Providing the APA at the end of the audit with a written letter confirming certain representations made during the audit

- Adjusting the financial statements to correct material misstatements and providing the APA with a representation that the effects of any uncorrected misstatements are immaterial, both individually and in the aggregate, to the financial statements taken as a whole
- Preparation of the supplementary information in conformity with U.S. generally accepted accounting principles. You agree to include our report on the supplementary information in any document that contains and indicates that we have reported on the supplementary information. Your responsibilities include acknowledging to us in the written representation letter that (1) you are responsible for presentation of the supplementary information in accordance with GAAP; (2) that you believe the supplementary information, including its form and content, is fairly presented in accordance with GAAP; (3) that the methods of measurement or presentation have not changed from those used in the prior period (or, if they have changed, the reasons for such changes); and (4) you have disclosed to us any significant assumptions or interpretations underlying the measurement or presentation of the supplementary information.

Audit Committee Responsibilities

- Communicate with APA about audit scope
- Communicate with management and internal audit regarding progress
- Receive reports and findings from management and external audit

Other Elements of the audit process:

Overall planned scope of the audit

Approach to internal control – We review internal controls to identify those areas where we can replace substantive testing with transactional testing. We look for management to have written formal policies and procedures and check for the implementation of those procedures.

Concept of materiality – We do not review all transactions or accounts in detail. We use materiality to focus our work on those financial statement line items and those transactions that are material or significant to the University.

Identification of potential fraud risks

Approach to fraud – Most of our audit is focused on our opinion on the financial statements and materiality. Our primary interest related to fraud would be in how it may affect the financial statements and those controls that the financial statements rely upon. The audit is not designed to detect error or fraud that is immaterial to the financial statements. However, we review policies and procedures for fraud risk and may direct our testwork towards addressing fraud risk.

Responsibility for identifying fraud risks and fraud – Auditing standards require us to assess fraud risk, interview management and staff about their knowledge of fraud and fraud risk, and review exceptions for indications of possible fraudulent transactions. Auditors should be looking for red flag fraud

indicators. Even though government entities are not always profit oriented, the auditors remain vigilant about financial statement fraud.

Report fraudulent transactions as required by Code of Virginia § 30-138 Agencies are responsible for reporting circumstances that suggest a reasonable possibility that a fraudulent transaction has occurred involving funds or property under their control, where an officer or employee of the state or local government may be involved. Items should be reported to the Auditor of Public Accounts, the State Inspector General, and the Superintendent of State Police.

Audit Reporting

We will issue a written report upon completion of our audit of the University's financial statements. We will make reference to the Component Auditor's audit of Virginia Tech Foundation, Inc. and Virginia Tech Services Inc. in our report on the University's financial statements. Our report will be addressed to the Board of Visitors of the University. We cannot provide assurance that an unmodified opinion will be expressed. Circumstances may arise in which it is necessary for us to modify our opinion or add an emphasis-of-matter or other-matter paragraph(s). If our opinions on the financial statements are other than unqualified (unmodified), we will discuss the reasons with you in advance. If, for any reason, we are unable to complete the audit or are unable to form or have not formed opinions, we may decline to express opinions or to issue a report as a result of this engagement.

We will also provide a report (that does not include an opinion) on internal control related to the financial statements and compliance with the provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a material effect on the financial statements as required by *Government Auditing Standards.* The report on internal control and compliance will include a statement that the report is intended solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Audit Standards* in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

Virginia Tech

Office of Audit, Risk, and Compliance
Fiscal Year 2018-19 Audit Plan
June 3, 2018

OVERVIEW

The Office of Audit, Risk, and Compliance (OARC) conducts risk-based assurance engagements, compliance reviews, management advisory services, and investigations. The risk-based assurance engagement is an objective examination of evidence to provide an independent assessment of governance, risk management, and the control systems within the university. The objective of the policy compliance review is to ensure all senior management areas (even low risk) receive periodic reviews from OARC every five years to perform tests of compliance with major university business policies. The nature and scope of management advisory service activities, developed through agreement with the client, add value and improve the university's governance, risk management, and control processes without the internal auditor assuming management responsibility.

RISK ASSESSMENT PROCESS

Enterprise Risk Assessment (ERM)
The university began a new Enterprise Risk Management (ERM) initiative during fiscal year 2017-18 to provide enhanced visibility into the university's risks and align strategic planning with the resulting risk awareness. OARC began facilitating the ERM program by working with university leadership to establish the framework for collectively identifying and assessing risks across the enterprise. The ERM program will ultimately strengthen the university's ability to achieve its mission and strategic objectives by:
- Obtaining a holistic view of the most critical risks to the achievement of Virginia Tech's mission and objectives;
- Creating a risk-aware culture, including the management of risks to an appropriate level of risk tolerance;
- Improving focus and perspective on both internal and external risks and opportunities, including emerging risks and value drivers;
- Enhancing decision making and alignment with strategic goals; and
- Improve efficiency and optimized allocation of resources through risk prioritization.

University leadership provided feedback for the initial ERM process by assessing the risks in terms likelihood of occurrence, significance of impact, and the velocity of onset, all grouped by the categories depicted below:

ERM RISK CATEGORIES	ALTITUDES OF RISK
Strategic	Systemic and Existential
Financial	Institutional
Compliance	Unit-Level
Operational	
Reputational	

In order to maximize efficiency and engagement from university senior leadership, OARC leveraged this complimentary process as an element of the traditional annual risk assessment in support audit plan development.

OARC Audit Planning Risk Assessment
University departments and administrative operations were grouped into approximately 175 auditable entities or responsibility centers based on common missions and the existing organizational structure. For each auditable entity, OARC reviewed financial data, including expenditures, revenues, cash receipts, federal contracts and grants, and total employees.

Auditable Entities Risk Ranking

■ HIGH ■ MEDIUM ■ LOW
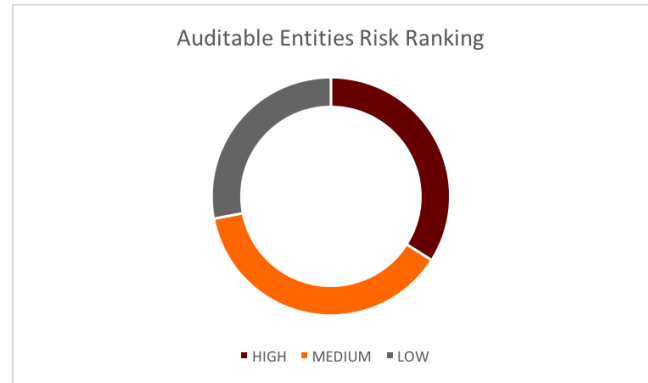
The relative business risk was assessed on a judgmental basis for the following qualitative and quantitative factors.

RISK FACTORS
Quality and Stability of Control Environment
Business Exposure (Materiality and Liquidity of Operational Resources)
Public and Political Sensitivity
Compliance Requirements
Information Technology and Management Reporting

Elements considered within these factors included:
- Management's awareness of internal controls;
- Stability and expertise of management;
- Interval since the last audit review;
- Complexity of operations and technology applications;
- Materiality or financial impact to the university;
- Potential impact to reputation;
- Impact of noncompliance with internal and external policy, procedure, regulatory, and statutory requirements; and
- Reliance on information and management reporting for operating decisions, monitoring performance, providing services, and allocating resources.

The chart depicts the results of the risk assessment classifications. The risk assessment results were consistent with previous risk assessments conducted by OARC.

IT Risk Assessment
OARC has also created a university-wide information technology (IT) risk-based audit plan mapped to the ISO 27002 standard, a best practice for developing and maintaining enterprise-wide IT security that is also references by university policies. OARC consulted with key IT personnel to ensure that audit coverage is maximized and properly targeted.

The assessment of IT and business operations at the university identified four high-level risk domains intended to encapsulate the vast majority of the systems and computing environments within the university as follows:

- Student Systems;
- Finance and Administrative Systems;
- Human Resources Systems; and
- Research Systems.

The IT audit approach includes a variety of topical audits to gain a better understanding of the university-wide environment instead of narrowly focusing on the performance of individual departments. This approach also allows OARC to maintain current knowledge of the IT security and operating conditions in a dynamic industry through the constant evaluation and reassessment of planned audit engagements.

CORE AUDIT PLAN

OARC has identified certain critical areas for inclusion in the core audit plan to ensure that adequate coverage is provided over a reasonable time. To obtain additional insight and validate the plan, one-on-one discussions were conducted with senior leadership to identify reputation factors, regulatory changes, organization shifts, new initiatives, and deployment of new systems or technology tools.

The critical areas for core audit plan inclusion are:

- Academic Units
- Auxiliary Enterprises and Athletics
- Campus Safety and Security
- Enrollment Services
- Facilities and Operations
- Financial Management
- Human Resources
- Information Technology
- Off-Campus Locations
- Research
- Student Services

The core audit plan includes several multi-year audits that will allow for annual reviews of selected components of the entities with high external compliance risk and complex operations. These entities are University Scholarships and Financial Aid, Research, Human Resources, and Intercollegiate Athletics.

FISCAL YEAR 2018-19 AUDIT PLAN

The audit plan focuses on delivering value to Virginia Tech with an emphasis on the following risk areas: strategic, operational, financial, compliance, and IT. If new topics emerge during the audit plan period that require more immediate attention, reconfiguration of the plan can be undertaken to accommodate these changes. OARC's goal is to complete 85 percent of the audit plan. As each audit is undertaken, risks will be re-evaluated to ensure proper audit coverage with consideration of confidentiality,

integrity, and availability. Annual expenditures and revenues referenced below reflect fiscal year 2016-17 data unless otherwise noted.

At the direction of the Board of Visitors, significant effort has gone in to the development of a more senior staff within the internal audit function. This effort has been generally successful; however, budgetary considerations have not necessarily kept pace with these efforts. This factor, combined with the continued general migration of audit staff to promotional opportunities in management across the university, requires the Draft Audit Plan to be tempered. As such, you will see the 21 projects we have on the audit plan for this year, as well as 8 projects that would have been included on the plan if the office were able to maintain its prior staffing levels.

Risk-Based Assurance

Planned Engagement	Overview	Risk Area
Athletics *	The Department of Athletics (Athletics), with 22 varsity sports at the NCAA Division I level, monitors and supports more than 550 student-athletes each academic year. Athletics had operating revenues of approximately $87.4 million and total operating expenses of approximately $90.7 million. The Office of Audit, Risk, and Compliance conducts various components of a complete audit of Athletics over a five-year period.	Compliance – Athletics
Americans with Disabilities Act (ADA) Compliance	Virginia Tech is committed to equal opportunity in employment and education for individuals with disabilities and complies with the Americans with Disabilities Act, as amended, and Section 504 of the Rehabilitation Act of 1973. ADA and Accessibility Services consults with colleges and departments both on and off campus to ensure equal opportunity for individuals with disabilities. Employees with disabilities may be entitled to reasonable accommodations under Title 1 of the Americans with Disabilities Act. Given the applicability to students, the Services for Students with Disabilities office also has a role in helping to ensure reasonable accommodations and ADA compliance. ADA compliance has not previously received a focused review.	Compliance – Human Resources and Student Services
Human Resources: Benefits*	Human Resources administers the commonwealth benefits program and provides benefit management and guidance for approximately 7,500 faculty and staff. The benefits program is an integral part of the university's employee compensation package and includes health insurance, leave, legal resources, retirement plans through the Virginia Retirement System, tuition assistance, and workers compensation. This function was last reviewed in 2011.	Operational – Human Resources
Hume Center	The mission of the Ted and Karyn Hume Center for National Security and Technology (Hume Center) is to cultivate the next generation of national security leaders by developing and executing curricular, extracurricular, and research opportunities to engage students. Jointly operating in the National Capital Region and the Blacksburg campuses, Hume Center research activities principally focus on cybersecurity, resilience, and autonomy challenges faced by the national security and homeland security communities. While not officially established in its current format until 2010, organizational oversight of the Hume Center has transitioned several times since inception. Research expenditures	Operational – Research

Planned Engagement	Overview	Risk Area
	totaled approximately $6.6 million. Elements of the Hume Center's activity have been previously reviewed; however, there has not yet been a focused audit.	
IT: Controlled Unclassified Information (CUI) and Secure Research Environment (SRE)	CUI is defined as information that requires safeguarding or dissemination controls pursuant to and consistent with applicable law, regulations, and government-wide policies but is not deemed as classified. The federal security requirements apply only to components of nonfederal systems that process, store, or transmit CUI when it resides in nonfederal systems and/or organizations such as Virginia Tech. The offices of Collaborative Computing Solutions within the Division of IT and the Office of Export and Secure Research Compliance within the Division of Research and Innovation jointly developed the SRE to allow for sponsored research projects working with covered data sets to be processed, stored, and transmitted with appropriate and required security considerations in place. Although a previous advisory review was done during the establishment of this project, a dedicated review has not yet occurred.	Compliance – Research
IT: Industrial Control Systems	Industrial Control Systems (ICS) is a general term that encompasses several types of systems and instrumentation related to industrial processes. At Virginia Tech, this may include operations related to power generation and distribution among other areas. Given the growing complexity of industrial environments, it is important that organizations make an effort to adequately protect against digital threats. Doing so requires a multi-step approach that focuses on network security, server security, and device-level security. ICS has not previously received a dedicated review.	Information Technology
IT: Third-Party Access to University Data	In addition to mandatory submission of data to third parties, the university has procured entire systems and services through outsourcing agreements to host and process institutional data. Examples include an outsourced e-commerce system for procuring goods or services and systems intended to meet federal immigration requirements. In addition to these high-visibility centrally purchased systems, there may be departmental systems outside of the university environment that may have highly sensitive data, yet have not been approved by central administration due to long-term existence or relatively low financial impact. This audit is intended to identify and review the security of university data in outsourced systems as well as other third-party vendor access to data. The outsourced environment was last audited in 2013.	Information Technology
Maintenance Reserve	Maintenance Reserve work is described as any major repair or replacement with a cost of $25,000 to $1 million to a fixed component of existing physical plant or property intended to extend the useful life of an asset in its current form. The first priority of Maintenance Reserve is to maintain the integrity of a building envelop to prevent intrusion of weather and natural elements, which can quickly destroy a building beyond repair when allowed to progress unchecked. Thus, repairs of roofs, windows, and building skin are considered the first priority for the use of these resources. Maintenance Reserve projects are generally not intended to enhance, upgrade, or otherwise improve plant, property, or equipment. Maintenance Reserve is a significant	Operational – Facilities

Planned Engagement	Overview	Risk Area
	activity at the university, with more than $27 million allocated from the commonwealth budget process over the current biennium. This activity has not previously received a dedicated review.	
Office of the University Bursar	The Office of the University Bursar (OUB) has the responsibility of providing timely and accurate billings to students and general users of the university's services and ensuring that payments and credits are received and properly applied to each customer's account in a timely manner. The specific responsibilities of this department include: providing timely and accurate billings to students and general users of the university's services and ensuring that payments and credits are received and properly applied to each customer's account in a timely manner, receipt and timely application of all other cash payments made to the university, disbursement of payroll, all university payables, Perkin's loan fund repayment, collection of delinquent accounts and notes receivable, and administration of the Budget Tuition Program. The Office of the University Registrar also partners closely with University Scholarships and Financial Aid in the administration of scholarships for students. The last audit of OUB was in 2012.	Financial – Financial Management
Research: Grant Management *	In addition to safety and other compliance matters, the university's research portfolio requires significant fiscal oversight and management. Principal Investigators (PIs) are responsible for monitoring the day-to-day fiscal performance and technical progress of their sponsored award. Proper monitoring practices for PIs include: assuring salaries and equipment are charged accurately, tracking budget reports carefully, noting any restrictions placed by the sponsor on the expenditure of awarded funds. Additional considerations requiring active management and oversight from PIs and their departments include cost sharing, which is a financial commitment by the university to share in the funding of a sponsored activity. Various elements of this topic have been included in various distributed reviews, but this broad centralized approach will leverage data analysis in a manner not previously conducted.	Financial – Research
Research: Subrecipient Monitoring *	The Office of Sponsored Programs functions as the steward of Virginia Tech's research portfolio and is responsible for ensuring that all research proposals and projects comply with university, federal, and sponsor regulations, policies, and procedures. A Subrecipient refers to a recipient that receives a subaward or subcontract from a pass-through entity to carry out part of a program. Subrecipient monitoring guidelines and responsibilities are shared among PIs, departmental administrators, OSP personnel, and the OSP Subrecipient Monitoring Committee. This topic is a significant federal compliance area requiring close attention to ensure compliance and avoid significant financial or other penalties. This topic has not previously received a targeted review.	Compliance – Research
School of Public and International Affairs	The School of Public and International Affairs (SPIA), operating within the College of Architecture and Urban Studies, offers degree programs in the Center for Public Administration and Policy, Government and International Affairs, and Urban Affairs and Planning. Research initiatives are carried out by the Metropolitan Institute in the National Capital Region and the Institute for Policy	Operational – Academic

Planned Engagement	Overview	Risk Area
	and Governance at the Blacksburg campus. Total expenditures were approximately $9.2 million, while revenue was just over $2.2 million. SPIA has not previously received a dedicated review.	
Student Medical Insurance Reimbursement Program	The Student Medical Insurance office within Insurance and Risk Management has overseen the reimbursement of students related to overpayments for insurance premiums based on inflated rates charged to Virginia Tech students by third parties during the period of 2003-2011. Reimbursements have been based upon a percentage of each student's actual recorded payment toward their health insurance coverage. The university has worked with an outside entity to manage the repayment of affected individuals. This review will focus on the closeout of the reimbursement program.	Compliance – Financial Management
Title IX Compliance	Maintaining a campus free of sex discrimination, including sexual misconduct and sexual harassment, is important for all students and employees. Title IX of the Education Amendments (1972) prohibits discrimination on the basis of sex in any educational program or activity that receives federal financial assistance. Failure to comply with Title IX can include the termination of all or part of a university's federal funding. This includes grants, subsidies, and other program funds from the federal government. In addition to the loss of federal funds, universities may be sued by those seeking redress for violations of Title IX. It is essential that institutions receiving federal financial assistance operate in a nondiscriminatory manner. Although external reviews have occurred, this topic has not previously received a dedicated review.	Compliance – Campus Safety and Security
University Building Official	Virginia Tech has its own University Building Official serving as the authority having jurisdiction for projects governed by the Virginia Uniform Statewide Building Code and administered directly by the university on campus and the sites throughout the Commonwealth owned by the university. The Office of the University Building Official provides technical engineering and code related support and serves as the primary liaison with outside regulatory agencies, working closely with them on code issues that affect the design, construction, and ultimately the approval to occupy a new university facility or maintain existing facilities. The last dedicated review of this topic was in 2015.	Operational – Facilities
University Registrar	The Office of the University Registrar provides many services, including academic records maintenance for more than 33,000 current students across 250 undergraduate and graduate degree programs. Other areas of responsibility include data stewardship; data integrity; ensuring compliance with all agency, state, and federal regulations; and development of semester course offerings. The last dedicated review of this office was in 2012.	Operational – Enrollment Services
University Scholarships and Financial Aid*	The Office of University Scholarships and Financial Aid (USFA) supports the university's student access, enrollment, and retention goals by providing the financial means to encourage economic, social, cultural, and academic diversity in the student body. USFA provided or monitored approximately $462 million in student financial assistance. A complete audit of the various activities within USFA is performed over a four-year period.	Compliance – Enrollment Services

* Entity receives an annual audit on different components of their operation.

University Policy Compliance Reviews

OARC will continue its program of limited scope reviews of senior management areas. These surveys review major aspects of a department's administrative processes using internal control questionnaires and limited testing that provides broad audit coverage ensuring compliance with university policies on campus.

Planned Engagement	Overview	Risk Area
College of Agriculture and Life Sciences	The College of Agriculture and Life Sciences, with 12 academic departments and more than 2,700 students, offers a diverse range of degree programs ranging from an associate's program in Agricultural Technology to doctoral programs. CLAHS had $139.8 million in expenditures including $44.3 million in sponsored research. The last policy compliance audit of this area was in 2014.	Operational
Vice President and Dean for Graduate Education	The Virginia Tech Graduate School is responsible for the development, administration, and evaluation of graduate education throughout the university and administers all graduate degrees. The Graduate School currently offers more than 150 master's and doctoral programs for over 7,000 students at multiple locations throughout the Commonwealth of Virginia, through partnerships with the University of Maryland and Wake Forest University, and at several international sites. The last policy compliance audit of this area was in 2014.	Operational
Vice President for Student Affairs	The Division of Student Affairs is committed to the growth, development, and achievement of students at Virginia Tech. This organization works closely with academic colleagues to support students as they learn to be successful and effective leaders in the emerging global community. The division employs approximately 3,600 faculty and staff. The last policy compliance audit of this area was in 2014.	Operational

Management Advisory Services

Planned Engagement	Overview	Risk Area
School of Plant and Environmental Sciences	The School of Plant and Environmental Sciences will be a national and international leader for improving human well-being and quality of life through learning, discovery, and engagement in plant and environmental sciences. The school will integrate three existing departments that share certain mission elements: Crop and Soil Environmental Sciences; Horticulture; and Plant Pathology, Physiology, and Weed Science. These units, with $8 million in research and $23 million in total expenditures, already share cross-cutting interdisciplinary research and will be further connected through undergraduate curricula and linked graduate programs, as well as through statewide research, extension, and outreach activities. This review is intended to assess initial control structure for the operations of the new school as it continues establishment.	Operational – Academic
Youth Protection Activities	The university is committed to the safety and welfare of its students, employees, and visitors through the establishment of practices that support a safe and secure environment in all buildings and grounds owned, controlled, or leased by Virginia Tech, including satellite locations, as well as promoting safety through policies and programs. Administrators, employees, students, volunteers, and others working with minors (children under the age of 18) have a responsibility to promote their protection.	Operational – Campus Safety and Security

Special Projects and Annual Audit Activities

Activity	Overview
Special Projects	Investigate fraud, waste, and abuse allegations.
Annual Audit Activities (Follow-up, Inventory)	Conduct follow-up audit procedures to ensure that management is implementing controls as described within their responses to audit report recommendations. Assist management with year-end inventory counts for financial statement verifications.
External Audit Coordination	Manage and serve as the liaison for all external audit services including contracted and regulatory-imposed audits.
Quality Assurance	OARC will undergo a mid-cycle review of its Quality Assurance and Improvement program to assess operations and practices with applicable standards. Additional effort will go into internal assessment to ensure the most effective and efficient procedures are in place and identify means of improving overall performance.

ADDITIONAL AUDIT COVERAGE PENDING RESOURCES

With additional resources, the following projects would have been included for the fiscal year 2018-19 audit plan. Otherwise, these projects will be considered for inclusion on the fiscal year 2019-20 plan.

Planned Engagement	Overview	Risk Area
College of Natural Resources and Environment	The College of Natural Resources and Environment (CNRE) is comprised of four academic departments containing eight undergraduate majors and is the only college specializing in natural resource education, research, and outreach in Virginia. CNRE had expenditures of $33.9 million including $16.5 million in sponsored research. The last policy compliance audit of this area was in 2014.	Operational
Contract Approval and Delegated Authority	The Vice President for Finance and Chief Financial Officer is designated as the university's Chief Contracting Officer by the Board of Visitors, but has also been authorized to delegate signature authority. All contractual agreements must be reviewed by University Legal Counsel prior to execution, and may also require a review from the IT Security Office. University policy delegates to department heads the authority to enact purchases of goods and services valued up to $2,000 per transaction. Department heads are responsible for the correct exercise of delegated purchasing authority and must ensure that personnel are properly trained and supervised, that all rules and procedures are followed, and that prices being paid are fair and reasonable. A focused review of this topic had not previously been conducted.	Financial – Financial Management
Eastern Shore AREC	Virginia Tech's Eastern Shore Agricultural Research Extension Center (AREC) is committed to supporting commercial vegetable and agronomic crop production. The center sits on a 226-acre farm that hosts an office complex, laboratories, equipment buildings, garages, a greenhouse, graduate student housing, a large freshwater pond, and woodland areas. More than 25 agricultural crops are grown annually for research and extension studies. This unit has not previously received a dedicated review.	Operational – Off-Campus Locations
GDPR	The General Data Protection Regulation (GDPR) (EU) 2016/679 is a regulation in EU law on data protection and privacy for all individuals within the European Union. It addresses the export of personal data outside the EU. This advisory review will develop a	Compliance – Information Technology

Planned Engagement	Overview	Risk Area
	more complete understanding of the applicability and impact to the university and assess the continuing efforts by various university constituents.	
Graduate Education	The Virginia Tech Graduate School is responsible for the development, administration, and evaluation of graduate education throughout the University, and administers all graduate degrees. The Graduate School currently offers more than 150 master's and doctoral programs for over 7,000 students at multiple locations throughout the Commonwealth of Virginia, through partnerships with the University of Maryland and Wake Forest University, and at several international sites. The last dedicated review was in 2013.	Operational – Enrollment Services
IT: Windows Server Security	Servers are used widely to perform a variety of tasks, from network attached file storage or collaborative database hosting to processing email or print requests. As such, servers often present significant risks when not properly secured. A large percentage of the university's servers operate on the Windows platform. Focus will be on Windows Server security across the university including distributed locations, in various administrative, academic, and research departments. Windows Server security was last audited in 2014.	Information Technology
Licensing and Trademarks	University Relations, within the Division of Advancement, promotes and protects the Virginia Tech brand through appropriate use of the university's trademarks. Licensing and Trademarks approves internal use of trademarks and administers a licensed collegiate merchandise program through a partnership with IMG Licensing. Licensing and Trademarks had revenues of $1.8 million and was last reviewed in 2009.	Financial – Auxiliary
Parking and Transportation	Virginia Tech has more than 16,400 parking spaces, a motorist assistance program, a fleet of approximately 300 vehicles, and a robust and award-winning alternative transportation program that includes daily shuttles from the Blacksburg campus to the Virginia Tech Carilion Research Institute in Roanoke as well as to the National Capital Region. In addition to the 33,000 students and 13,000 employees, an estimated 60,000 alumni, parents, and community members visit the campus each year. This area had $6.5 million in revenue and last received a dedicated review in 2014.	Operational – Auxiliary Enterprise

AUDIT RESOURCES

The audit plan for fiscal year 2018-19 is based on professional staffing of 11 full-time equivalents (FTEs). This is a reduced figure from prior years with two positions held vacant to cover other unfunded expenses, as relative seniority for audit staff has been prioritized when filling positions at the urging of the audit committee. Staffing will continue to be augmented by the continuation of the student internship program in which 2-3 Virginia Tech students are employed.

Approximately 75 percent of OARC's available resources are committed to the completion of planned audit projects, management advisory reviews, and investigations. The annual

audit plan is designed to provide appropriate coverage utilizing a variety of audit methodologies including audits of individual units, functional and process audits, university-wide reviews, and information system projects. OARC conducts follow-up audit procedures throughout the year to ensure that management is implementing controls as described within their responses to audit report recommendations.

Audit resources are allocated as follows:
- 52 percent of the OARC's available resources are committed to the completion of planned audit projects and follow-up audit procedures.
- 10 percent to accommodate requests from management and consultations with university departments.
- 11 percent to conduct investigations into fraud, waste, and abuse allegations.
- 14 percent for employee professional development, internal quality improvement projects, and other internal administrative functions.
- 13 percent for compensated absences such as annual, sick, and holiday leave.

AUDIT PLAN MAPPED TO ERM

As part of the ERM program, university leadership recently identified key residual risks across six thematic areas. The graphic below depicts how planned projects will provide audit coverage of enterprise risks.

ENTERPRISE RISK LANDSCAPE

ACADEMIC	CAMPUS CULTURE AND CLIMATE	EXTERNAL ENVIRONMENT	FINANCIAL	RESEARCH	UNIVERSITY OPERATIONS
Faculty & Staff Recruitment & Retention	Leadership & Governance	Legal & Regulatory	Federal & State Funds	Research Compliance	Expanding Physical Footprint
Global Engagement	Athletics	Socio-Political Environment	Tuition Dependency	Competitive Growth	Safety & Security
Evolving Pedagogy & Delivery	Title IX	Partners	Resource Management	Integrity & Conflicts of Interest	IT Security & Operations
Enrollment Management	Diversity & Inclusion	Alumni & Friends	Advancement	Restricted Research	Infrastructure & Facilities
Academic Quality	Student Experience	Accreditation	Endowment Management	Intellectual Property	Disaster Recovery & Business Continuity

REPUTATIONAL / COMPLIANCE

11

OFFICE OF AUDIT, RISK, AND COMPLIANCE

PROPOSED AUDIT PLAN
Fiscal Year 2018-19

June 3, 2018

BRIAN DANIELS
DIRECTOR OF INTERNAL AUDIT
OFFICE OF AUDIT, RISK, AND COMPLIANCE

VIRGINIA TECH

OVERVIEW – ANNUAL AUDIT PLAN

The Office of Audit, Risk, and Compliance (OARC) conducts:

- Risk-Based Assurance Engagements
- Policy Compliance Reviews
- Management Advisory Services
- Investigations

Annual risk assessment process informs and guides the development of the audit plan for the next fiscal year

RISK ASSESSMENT PROCESS

Components of the annual risk assessment process included:

- **ERM**
  - Separate but related university initiative
  - Incorporates perspective of university leade

- **OARC Audit Planning Risk Assessment**
  - Approximately 175 auditable entities
  - Control Environment, Business Exposure, Pu Sensitivity, Compliance Requirements, Inform Technology & Management Reporting

Auditable Entities Risk Ranking

HIGH MEDIUM LOW

- **IT Risk Assessment**
  - Variety of systems and technologies to include emerging topics
  - Mapped to ISO 27002 standard
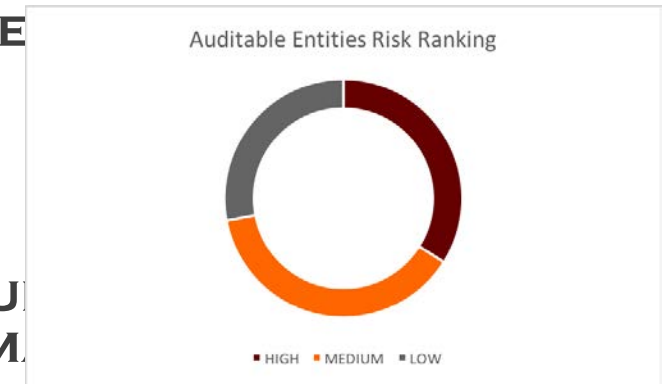
OVERVIEW – ANNUAL AUDIT PLAN

OARC has identified certain critical areas for inclusion in the core audit plan to ensure that adequate coverage is provided over a reasonable time. The critical areas for core audit plan inclusion are:

• Academic Units	• Human Resources
• Auxiliary Enterprises and Athletics	• Information Technology
• Campus Safety and Security	• Off-Campus Locations
• Enrollment Services	• Research
• Facilities and Operations	• Student Services
• Financial Management	

RISK-BASED AUDIT PROJECTS

THE AUDIT PLAN FOCUSES ON STRATEGIC, OPERATIONAL, FINANCIAL, COMPLIANCE, AND IT RISKS. THE AUDIT PLAN WILL BE RECONFIGURED AS NEEDED WHEN NEW TOPICS REQUIRING MORE IMMEDIATE ATTENTION EMERGE.

ATHLETICS *	RESEARCH: GRANT MANAGEMENT *
AMERICANS WITH DISABILITIES ACT (ADA) COMPLIANCE	RESEARCH: SUBRECIPIENT MONITORING *
HUMAN RESOURCES: BENEFITS*	SCHOOL OF PUBLIC AND INTERNATIONAL AFFAIRS
HUME CENTER	STUDENT MEDICAL INSURANCE REIMBURSEMENT PROGRAM
IT: CONTROLLED UNCLASSIFIED INFORMATION (CUI) AND SECURE RESEARCH ENVIRONMENT (SRE)	TITLE IX COMPLIANCE
IT: INDUSTRIAL CONTROL SYSTEMS	UNIVERSITY BUILDING OFFICIAL
IT: THIRD-PARTY ACCESS TO UNIVERSITY DATA	UNIVERSITY REGISTRAR
MAINTENANCE RESERVE	UNIVERSITY SCHOLARSHIPS AND FINANCIAL AID*
OFFICE OF THE UNIVERSITY BURSAR	*ENTITY RECEIVES AN ANNUAL AUDIT ON DIFFERENT COMPONENTS OF THEIR OPERATION*

POLICY COMPLIANCE AUDITS

OARC will continue its program of limited scope reviews of senior management areas. These surveys review major aspects of a department's administrative processes using internal control questionnaires and limited testing that provides broad audit coverage ensuring compliance with university policies on campus.

College of Agriculture and Life Sciences
Vice President and Dean for Graduate Education
Vice President for Student Affairs

MANAGEMENT ADVISORY SERVICES

The nature and scope of management advisory service activities, developed through agreement with the client, add value and improve the university's governance, risk management, and control processes without the internal auditor assuming management responsibility.

School of Plant and Environmental Sciences

Youth Protection Activities

ADDITIONAL AUDIT PROJECTS

With additional resources, the following projects would have been included for the fiscal year 2018-19 audit plan. Otherwise, these projects will be considered for inclusion on the fiscal year 2019-20 plan.

College of Natural Resources and Environment (Compliance Review)	Graduate Education
Contract Approval and Delegated Authority	IT: Windows Server Security
Eastern Shore AREC	Licensing and Trademarks
General Data Protection Regulation (GDPR) (Advisory Review)	Parking and Transportation

AUDIT RESOURCES

- **Audit Plan - professional staffing of 11 FTEs**
  - 2 positions held vacant to cover other unfunded expenses
  - Relative seniority for audit staff prioritized when filling positions at the urging of the audit committee

- **Student internship program – hire 2-3 Virginia Tech students**

- **OARC's available resources are allocated as follows:**
  - 52% - completion of audit projects and follow-up
  - 10% - accommodate management requests
  - 11% - conduct investigations into fraud, waste, and abuse allegations
  - 14% - professional development, internal quality improvement, and administration

ENTERPRISE RISK LANDSCAPE

ACADEMIC	CAMPUS CULTURE AND CLIMATE	EXTERNAL ENVIRONMENT	FINANCIAL	RESEARCH	UNIVERSITY OPERATIONS
Faculty & Staff Recruitment & Retention	Leadership & Governance	Legal & Regulatory	Federal & State Funds	Research Compliance	Expanding Physical Footprint
Global Engagement	Athletics	Socio-Political Environment	Tuition Dependency	Competitive Growth	Safety & Security
Evolving Pedagogy & Delivery	Title IX	Partners	Resource Management	Integrity & Conflicts of Interest	IT Security & Operations
Enrollment Management	Diversity & Inclusion	Alumni & Friends	Advancement	Restricted Research	Infrastructure & Facilities
Academic Quality	Student Experience	Accreditation	Endowment Management	Intellectual Property	Disaster Recovery & Business Continuity

REPUTATIONAL / COMPLIANCE

QUESTIONS?

VIRGINIA TECH.

ENTERPRISE RISK MANAGEMENT (ERM)
PROGRAM UPDATE

June 3, 2018

SHARON KUREK
EXECUTIVE DIRECTOR OF AUDIT, RISK, AND COMPLIANCE

VIRGINIA TECH

ERM TIMELINE

BOV

| CHARGE & ERM OVERVIEW SEPTEMBER 2017 | ERM FRAMEWORK NOVEMBER 2017 | KEY RISKS IDENTIFIED MARCH 2018 | OVERVIEW OF KEY RISKS JUNE 2018 | OVERVIEW OF KEY RISKS AUGUST 2018 |

MGT

BENCHMARKING WITH PEERS & FRAMEWORK DEVELOPMENT

FACILITATING ERM FRAMEWORK IMPLEMENTATION RESULTING IN KEY

ASSIGNMENT OF RISK OWNERSHIP ANALYSIS OF CURRENT PROCESSES DEVELOPMENT OF RISK MITIGATION PLAN PERIODIC REPORTING TO OARC & ERM COMMITTEES

ENTERPRISE RISK LANDSCAPE

ACADEMIC	CAMPUS CULTURE AND CLIMATE	EXTERNAL ENVIRONMENT	FINANCIAL	RESEARCH	UNIVERSITY OPERATIONS
Faculty & Staff Recruitment & Retention	Leadership & Governance	Legal & Regulatory	Federal & State Funds	Research Compliance	Expanding Physical Footprint
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Academic Quality	Student Experience	Accreditation	Endowment Management	Intellectual Property	Disaster Recovery & Business Continuity

REPUTATIONAL / COMPLIANCE

ERM TABLETOP EXERCISE

- OARC in conjunction with the Office of Emergency Management developed a scenario and facilitated the initial ERM Tabletop Exercise
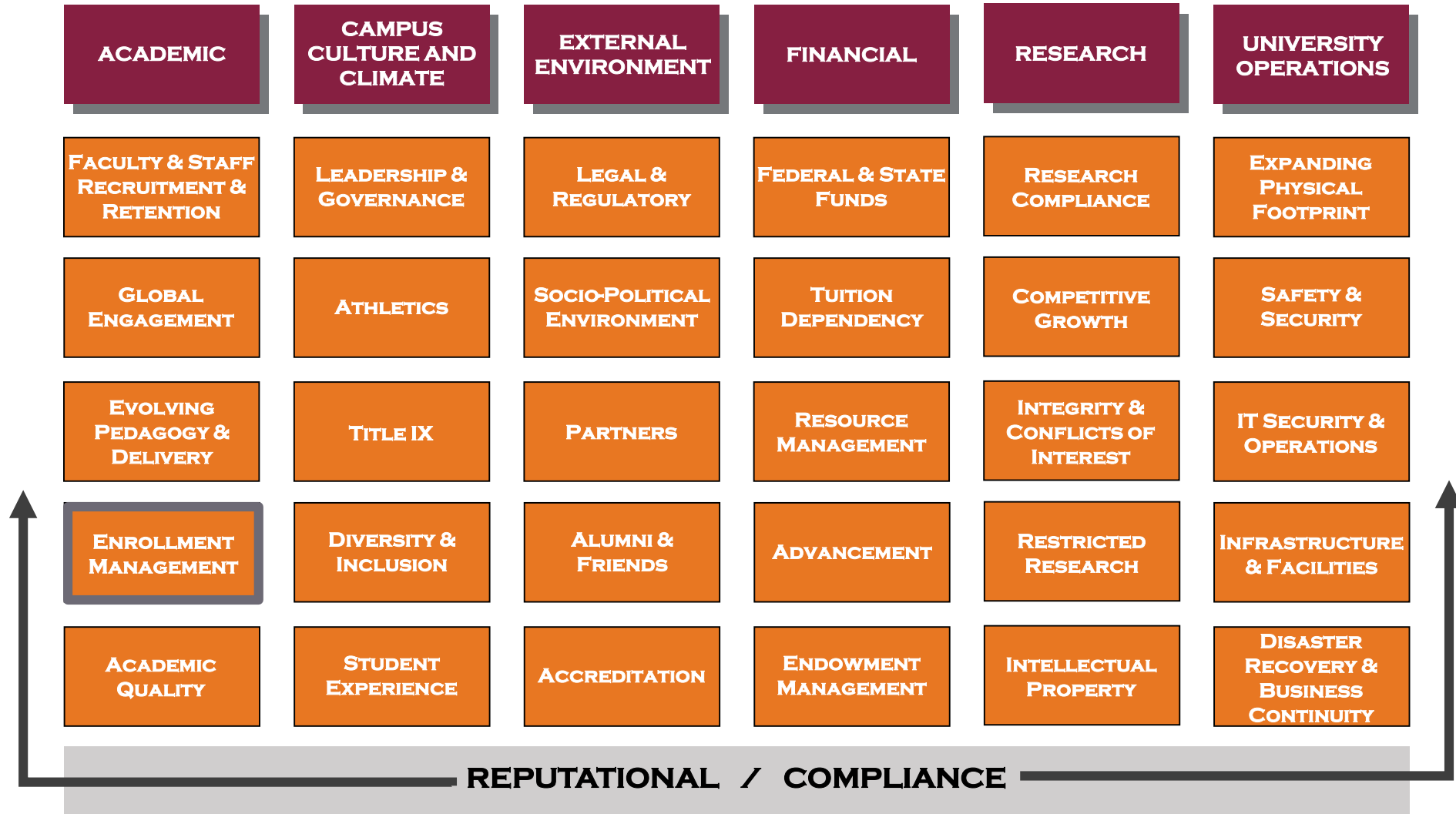
- Strong representation of President's Leadership Team and other SMEs

- The scenarios involved evaluation of potential impacts if international student enrollment declined

- Scenarios of 10% and 50% drops were evaluated
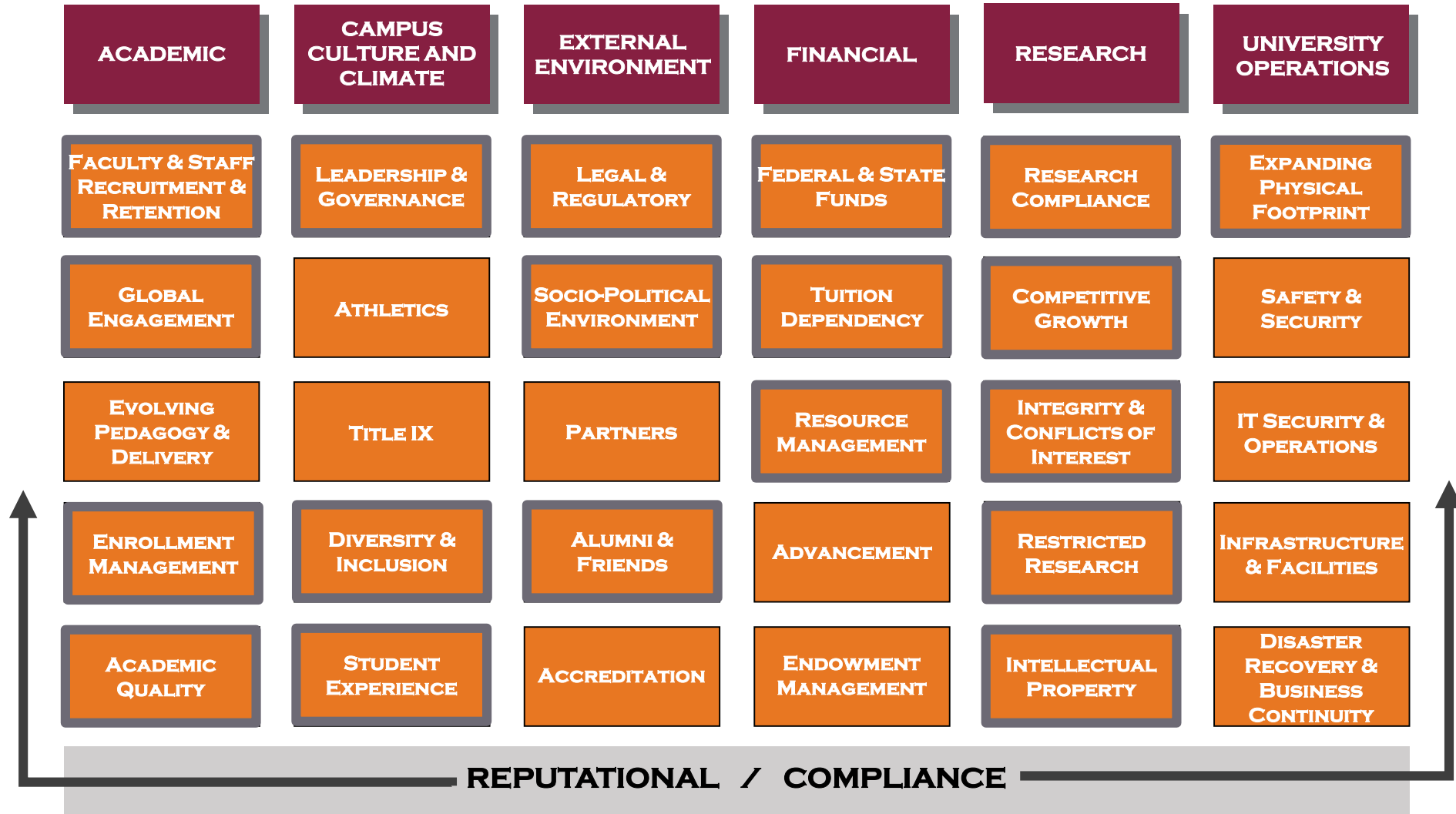
ENTERPRISE RISK LANDSCAPE

ACADEMIC	CAMPUS CULTURE AND CLIMATE	EXTERNAL ENVIRONMENT	FINANCIAL	RESEARCH	UNIVERSITY OPERATIONS
Faculty & Staff Recruitment & Retention	Leadership & Governance	Legal & Regulatory	Federal & State Funds	Research Compliance	Expanding Physical Footprint
Global Engagement	Athletics	Socio-Political Environment	Tuition Dependency	Competitive Growth	Safety & Security
Evolving Pedagogy & Delivery	Title IX	Partners	Resource Management	Integrity & Conflicts of Interest	IT Security & Operations
Enrollment Management	Diversity & Inclusion	Alumni & Friends	Advancement	Restricted Research	Infrastructure & Facilities
Academic Quality	Student Experience	Accreditation	Endowment Management	Intellectual Property	Disaster Recovery & Business Continuity

REPUTATIONAL / COMPLIANCE

ERM TABLETOP EXERCISE – CONT.
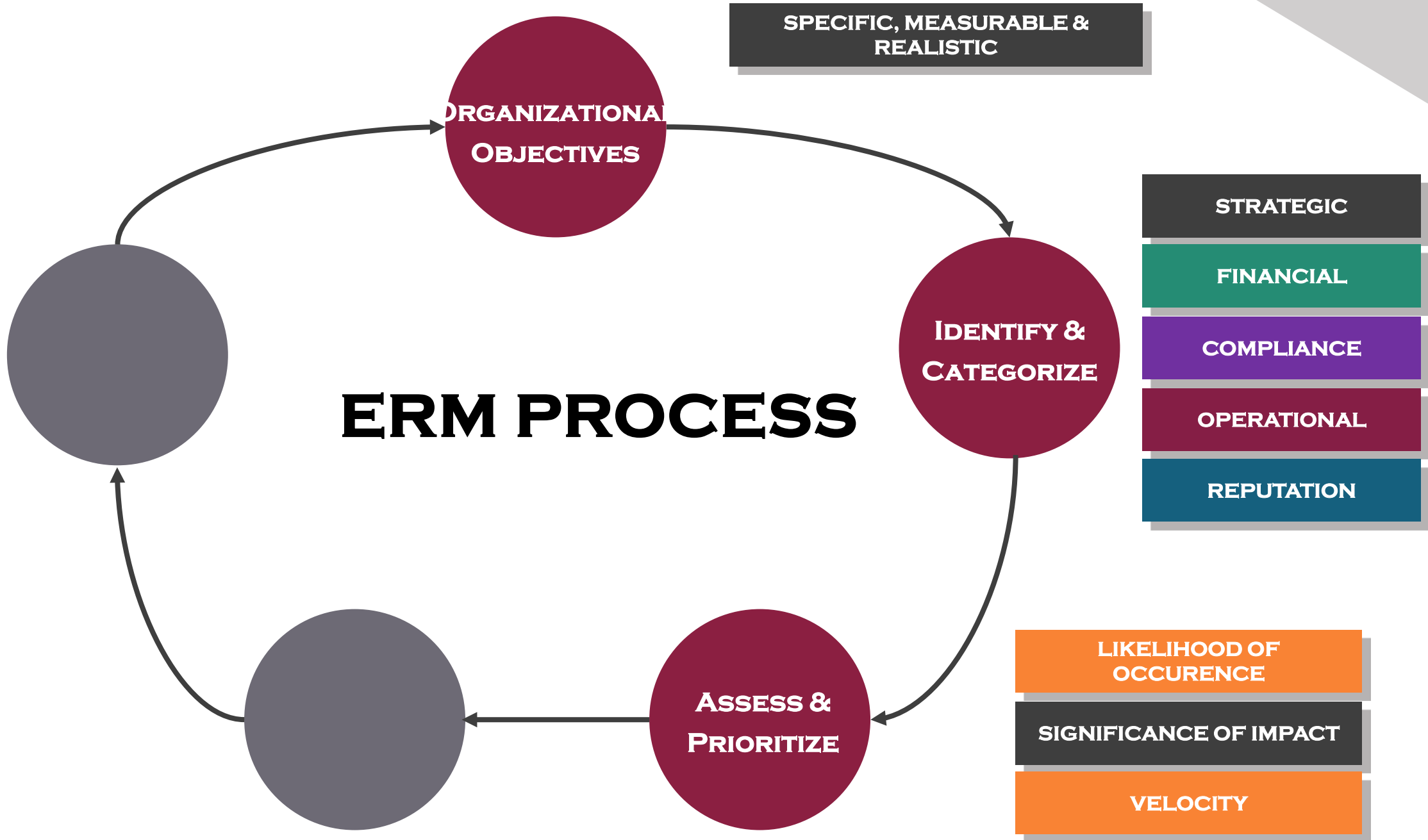
- Impacts to various strategic efforts were noted, including:
  - Impact to student experience and Global Land Grant aspirations
  - Continuity of research
  - Diversity and inclusion initiatives
  - Housing vacancies
  - Local economy and community interactions
  - Recruiting and retention
  - Budgetary reliance on out-of-state student enrollment

ERM TABLETOP EXERCISE – CONT.

- The exercise resulted in robust dialogue and emergence of takeaway objectives including:

  - In-depth financial analysis is needed to better understand monetary impact of enrollment trends

  - Exploration of diversifying international student recruitment efforts

  - Analysis of academic and research programs with high concentrations of international populations

  - Exploration of strategies for enhanced international brand awareness

ERM PROCESS

Organizational Objectives

SPECIFIC, MEASURABLE & REALISTIC

Identify & Categorize

STRATEGIC

FINANCIAL

COMPLIANCE

OPERATIONAL

REPUTATION

Assess & Prioritize

LIKELIHOOD OF OCCURENCE

SIGNIFICANCE OF IMPACT

VELOCITY

ERM NEXT STEPS

- Organizational Objectives
- Identify & Categorize
- Assess & Prioritize
- Manage & Monitor
- Reporting & Awareness

TIMELY

TRANSPARENT

RISK OWNERSHIP

BUSINESS PROCESSES

INTERNAL / EXTERNAL REVIEW & ANALYSIS

QUESTIONS?

INSTITUTIONAL COMPLIANCE PROGRAM (ICP)
UPDATE

JUNE 3, 2018

Sharon Kurek
Executive Director of Audit, Risk, and Compliance

8 ELEMENTS OF AN EFFECTIVE COMPLIANCE PROGRAM

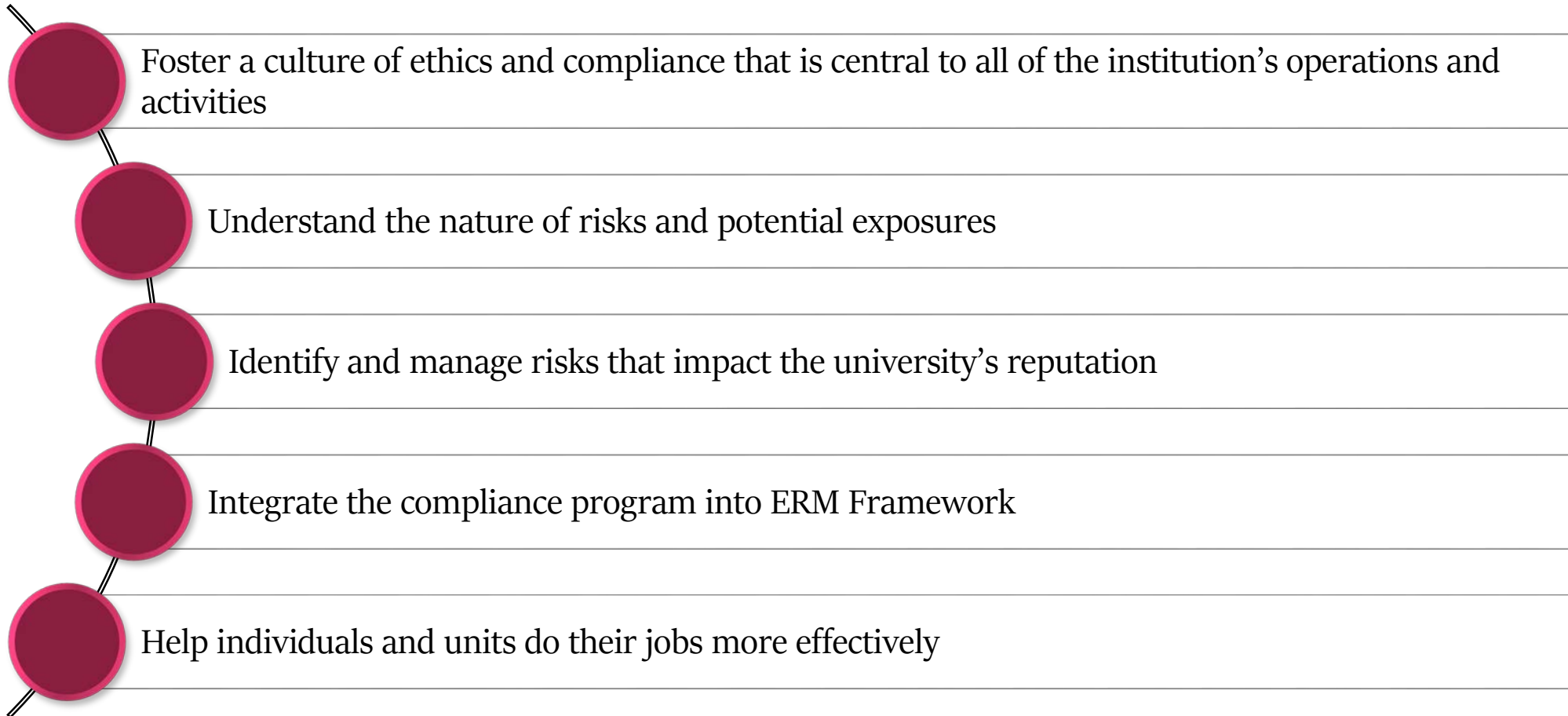| High-level personnel exercising oversight	Written policies and procedures	Training and Education	Lines of Communication
Well publicized disciplinary guidelines	Internal compliance monitoring	Response to detected offenses	Perform periodic compliance risk assessments

COMPLIANCE PROGRAM BENEFITS: A Coordinated Effort

Foster a culture of ethics and compliance that is central to all of the institution's operations and activities

Understand the nature of risks and potential exposures

Identify and manage risks that impact the university's reputation

Integrate the compliance program into ERM Framework

Help individuals and units do their jobs more effectively

INSTITUTIONAL COMPLIANCE PROGRAM (ICP)

- Leverage existing structures (including internal audit, enterprise risk management (ERM), hotline administration, legal counsel, and the policy office) to support compliance efforts

- Office of Audit, Risk, and Compliance to coordinate the ICP by being a resource and serving as a catalyst for the achievement of university best practices in compliance-related subject matter areas

COMPLIANCE FRAMEWORK
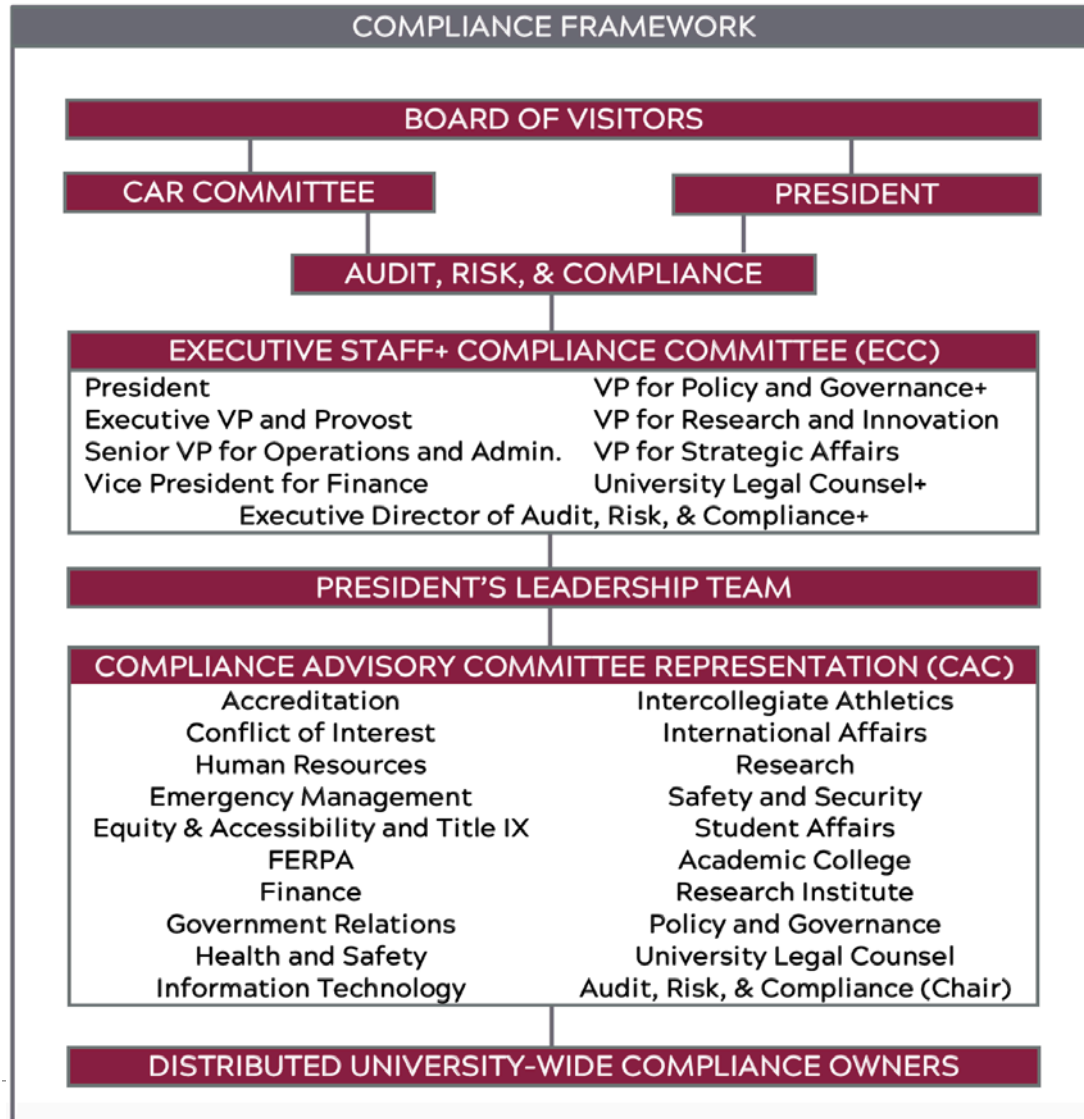
STATISTICS

- CAC – 20 Members

- 56 Distributed Compliance Owners

- 298 Regulations Initially Identified by OARC

ICP – Executive Compliance Committee (ECC)

- Promotes excellence in our compliance efforts to assure compliance with legal, regulatory, and ethical responsibilities

- Approves the university's compliance priorities and has oversight responsibility for the university's compliance efforts, including fulfillment of these priorities

- Serves as the primary point of contact for the administration on organizational compliance matters with the Compliance, Audit, and Risk Committee of the Board of Visitors

ICP - Compliance Advisory Committee (CAC)

- The CAC will provide compliance leadership in the university's academic and administrative units and ensure effective communication and collaboration among those responsible for compliance by:

  - Fostering communication across campus on issues related to compliance

  - Maintaining a university compliance matrix

  - Reviewing the results of the compliance risk assessment and proposing university priorities

  - Ensuring the development and implementation of corrective action plans as developed by responsible parties and approved by senior management

  - Reporting results to the ECC, including progress on plans and risks being assumed

ICP - OARC

- While the OARC does not own any discrete compliance subject matter area, it will assist in promoting a culture of compliance and ethical behavior by:

  - Developing a compliance matrix of applicable regulations and authoritative guidance with responsible parties

  - Implementing the compliance risk assessment process as a component of the ERM Program

  - Facilitating the university compliance and ethics hotline

  - Assisting the compliance committees in their various duties

  - Providing assistance in responding to external reviews and investigations

Common Higher Education Compliance Areas

- Access/Disability Services
- Accreditation
- Athletics
- Conflicts of Interest
- Discrimination / Harassment
- Donors and Gifts
- Emergency Preparedness
- Environmental Health & Safety
- Export Control
- FERPA / Education Records
- Financial Aid

- Fiscal Management
- Global Operations
- HIPAA Privacy and Security
- Human / Animal Subjects
- Human Resources / Equal Opportunity
- Immigration
- Intellectual Property /Technology Licensing
- Research Administration
- Safety / Security
- Scientific Misconduct
- Tax Compliance

QUESTIONS?