



**OPEN SESSION**

**FOR INFORMATION**

1. **Office of Internal Audit – Fiscal Year 2024 Work Plan Update**  
*Dean Weber, Chief Audit Officer*
2. **Office of Internal Audit – External Quality Assurance Review Outcomes**  
*Dean Weber, Chief Audit Officer*
3. **Institutional Integrity & Risk Management – Campus Safety Update**  
*George Battle, Vice Chancellor for Institutional Integrity and Risk Management*
4. **Information Technology Cyber Security Update**  
*Michael Barker, Vice Chancellor for Information Technology and Chief Information Officer*  
*Paul Rivers, Chief Information Security Officer and Assistant Vice Chancellor for Information Security*

\*Some of the business to be conducted is authorized by the N.C. Open Meetings Law to be conducted in closed session.

**AGENDA ITEM**

*Information Item 1*      ***Office of Internal Audit - Fiscal Year 2024 Work Plan Update***

**Situation:**                      Provided as an information item for Committee review is an update on the activities of the Office of Internal Audit through the end of the second quarter of fiscal year 2024.

**Background:**                    The University of North Carolina at Chapel Hill Internal Audit Charter prescribes for the Chief Audit Officer to provide the Board of Trustees with periodic updates on the status of activities of the Office of Internal Audit.

This includes updates on the standing of engagements defined within the organization's risk-based internal audit work plan. The Fiscal Year 2024 Internal Audit Work Plan provides the roadmap for audit engagement activities for the period. Engagement composition is fluid to afford for completion of special project and advisory project requests as they arise. The status of any added engagement activities is also communicated.

Committee updates are intended to address any impact of resource limitations affecting the internal audit plan; recommended adjustments, as necessary, in response to the university's business risks, operations, programs, systems, and controls; communication of significant interim changes to the internal audit plan; and to provide information on internal audit's follow-up on engagement findings and corrective action.

At the end of the second quarter of fiscal year 2024, the OIA attained 40% completion of all defined engagements, with an additional 17% underway; 43% have not yet been initiated. The OIA will focus on completing risk-based audits during the remainder of the fiscal year with no change to the current work plan engagement composition recommended.

**Assessment:**                      N/A

**Action:**                              This item is for information only and does not require a vote by the Committee.

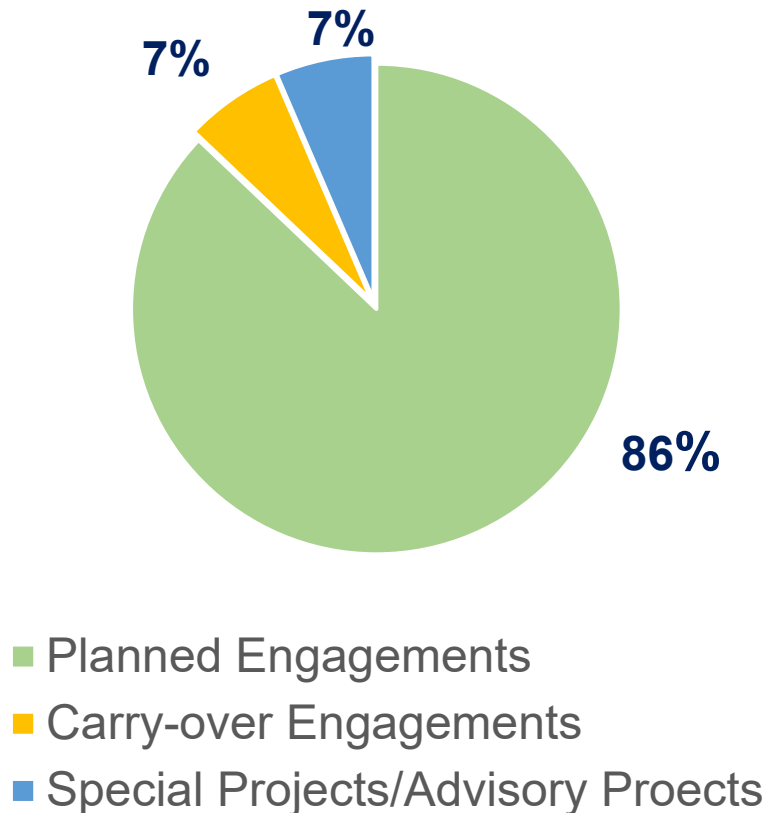
# Office of Internal Audit Fiscal Year 2024 Work Plan Update

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***UNIVERSITY of NORTH CAROLINA  
at CHAPEL HILL***

Dean Weber, CIA, CRMA  
Chief Audit Officer  
January 17, 2024

# Office of Internal Audit Fiscal Year 2024 Work Plan Composition



- **Planned Engagements** - The work plan contains 27 new engagements slated for completion
- **Carry-over Engagements** - Four engagements carried forward from FY 2023
- **Special Requests** – Four special/advisory projects have been identified so far, this fiscal year

Presented as of December 31, 2023

# Fiscal Year 2024 Achievements - Through End of the Second Quarter

- Six planned audits, two new special projects, and two new advisory projects were concluded.
- Four planned engagements underway on December 31, 2023, carried forward to FY2024, and have been completed.
- Fifteen planned engagements contained in the FY 2024 work plan were not yet initiated.
- On target at mid-year mark; however, work plan completion has been impacted by hiring difficulties.

Project Source	Total Engagements	Number Concluded	Number Underway	Number Not Initiated	Percent Concluded/Underway
FY2024 Planned Audits	27	6	6	15	44%
Carry-over Audits	4	4			100%
Work Plan Total:	31	10	6	15	52%
FY2024 New Special Projects	2	2	0	0	100%
FY2024 New Advisory Projects	2	2	0	0	100%
	4	4	0	0	100%
Cumulative Total:	35	14	6	15	57%

# Fiscal Year 2024 Work Plan Achievements - Through the End of the Second Quarter

<b><u>2024 Work Plan Engagement</u></b>	<b><u>Status</u></b>	<b><u>Report Issued</u></b>
Automated External Defibrillator Audit	Completed	10/03/23
Athletics Name, Image, Likeness Audit	Completed	10/23/23
UNC Campus Recreation Audit	Completed	10/26/23
Technical Controls for Pcard IT Purchases	Completed	11/30/23
Game Day Stadium Audit	Completed	12/12/23
Undergraduate Student Advising Audit	Completed	12/26/23
Carolina Housing	Draft Report Issued	
The Ackland Museum Audit	Draft Report Issued	
CampDoc Software Implementation Audit	Draft Report Issued	
2U Contract	Fieldwork Concluding	
Grant Award Terms and Conditions Audit	Fieldwork Underway	
Student Financial Aid Award Audit	Fieldwork Planning	

<b><u>Carry-over Engagement</u></b>	<b><u>Status</u></b>	<b><u>Report Issued</u></b>
READDI, Inc. Associated Entity Audit	Completed	7/26/23
Fixed Asset Inventory Audit	Completed	7/27/23
Student Well-Being Risk Assessment	Completed	8/12/23
Network Routers Configuration Audit	Completed	9/12/23

# Fiscal Year 2024 Special & Advisory Projects -Through the Second Quarter



<u>Advisory Project Engagement</u>	<u>Report Issued</u>
Jean Monnet Agreed Upon Procedures	11/09/23
UNC Innovation University of Florida Audit	12/05/23

<u>Special Project Engagement</u>	<u>Report Issued</u>
Facebook Marketplace Sales	8/17/23
External Quality Assurance Review	12/01/23

# Office of Internal Audit

## Management Corrective Actions

- The OIA maintains a formal tracking and reporting process to periodically assess the disposition of management responses in reply to all completed internal audit engagements.
- The following chart summarizes the fiscal year 2024 activity on 12/31/2023.

Fiscal Year 2024 Activity	
New Recommendations Added	19
Recommendations Verified as Resolved	22
Total Recommendations Yet to be Verified	32

*NOTE:* Of the 32 recommendations to verify the implementation of management response, 26 are open with the designated implementation date yet to occur. Six recommendations are past due based on the date identified by management in their response to the report's findings.



# Other Items of Interest

## Fiscal Year 2024 Work Plan Outlook

- Ahead of the prior year's planned engagement completion rate (52% vs 44%)
- Decrease in special and advisory project requests from the prior year (4 vs 14)
- Staffing struggles – currently fully staffed at 8 FTE as of December 2023
- Focus on the attained completion of planned engagements by June 30, 2024
- Unfulfilled engagements will be reevaluated based on risk for carryover to the FY2025 Work Plan

## 2023 Professional Development

- Institute of Internal Audit Standards require obtaining continuing professional education training
- The OIA budgets 40 hours per auditor within the Annual Work Plan for external staff training with all team members attaining the required training in 2023

## 2023 Annual Comprehensive Financial Report

- As defined in the Audit Committee Charter, an update on the university's completed Annual Comprehensive Financial Report will be provided in the Budget, Finance, and Infrastructure Committee Meeting

# Questions/Comments

**AGENDA ITEM**

*Information Item 2*      ***Office of Internal Audit - External Quality Assurance Review Outcomes***

**Situation:**      Provided as an information item for Committee review is the result of a recently completed external quality assurance review (QAR) of the Office of Internal Audit.

**Background:**      A QAR, completed by a qualified, independent assessor or assessment team from outside the organization, is required to be completed every 5 years. A QAR was completed for the Office of Internal Audit at the University of North Carolina at Chapel Hill in December 2023. The prior review occurred in December 2018.

The independent assessment encompassed an evaluation of the department's conformance to The Institute of Internal Auditors' International Standards for the Professional Practice of Internal Auditing (Standards) and Code of Ethics. Additionally, an assessment of internal audit's effectiveness in carrying out its mission (as outlined in the charter) was performed.

Assessment outcomes were provided in a December 13, 2023, written report to the Audit, Compliance, and Risk Management Committee Chairperson, the Chancellor, and the Chief Audit Officer. The report provided the opinion that the UNC Internal Audit Function "Generally Conforms" to the Standards.

Generally Conforms means the OIA has a charter, policies, and processes that are judged to be in conformance with the Standards and the Code of Ethics. The rating of Generally Conforms is the highest rating attainable.

**Assessment:**      N/A

**Action:**      This item is for information only and does not require a vote by the Committee.

# Office of Internal Audit External Quality Assurance Review Outcomes

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***UNIVERSITY of NORTH CAROLINA  
at CHAPEL HILL***

Dean Weber, CIA, CRMA  
Chief Audit Officer  
January 17, 2024

# IIA Standards and QAR Scope

- The Institute of Internal Auditors' (IIA) *International Standards for the Professional Practice of Internal Auditing (Standards)* prescribes internal audit functions to be externally assessed once every 5 years. Prior review completed in 2018.
- The independent Quality Assessment Review (QAR) encompassed the evaluation of the department's conformance to the *Standards* and Code of Ethics.
- Additionally, an assessment of internal audit's effectiveness in carrying out its mission (as outlined in the charter) is evaluated.

## Project Scope and Methodology

- Review period spanned fiscal year 2023 engagement activity
- Encompassed preliminary information review and a 4-day onsite visit in December 2023
- Interviews with select University leadership and audit chair
- Discussions with Chief Audit Officer and departmental staff
- Review of charters, organizational charts, departmental policies/procedures, risk assessments and audit plans

# International Professional Practice Framework

The *IIA Standards*, together with *The Code of Ethics*, encompass all mandatory elements of the International Professional Practices Framework.

**The IIA Standards comprise two main categories:**

- **Attribute Standards** address attributes of organizations and individuals performing internal auditing and comprise **19** requirements.
- **Performance Standards** describe the nature of internal auditing and provide quality criteria against which the performance of these services is measured and comprise **33** requirements.

# QAR Outcomes

## Assessment Rating Scores

- *Generally Conforms* – highest rating
- *Partially Conforms* – conforms but needs improvement
- *Does Not Conform* – fails to meet the requirement

## Office of Internal Audit Assessment Results

Based on procedures performed, an opinion was issued on December 13, 2023, that the UNC-Chapel Hill Internal Audit Office ***Generally Conforms*** with the Code of Ethics and all defined *Standards*.

# QAR Outcomes - Strengths

**The assessment team identified three successful internal audit practices employed by the Office of Internal Audit, comprising:**

**Trusted Advisor** – The OIA has made substantial investments in customer communications and fosters an image of reliability and trustworthiness.

**Organizational Independence** – reporting to the chancellor and a board committee with evidence of both taking an active role in support of audit work.

**Use of Automated Tools** – deployment of two software solutions supporting audit efforts (IDEA and Nessus).



# QAR Outcomes – Improvement Opportunity

**Two improvement opportunities were presented by the review team with action to be taken by the Chief Audit Officer:**

## **Continue Automation Efforts (Standard 2340)**

Consider increasing the number of licenses for both IDEA and Nessus to more than one, affording auditor cross-training on the applications.

## **Enhance Employee Guidance (Standard 2040)**

The department's procedural manual could be enhanced to provide a greater level of guidance related to steps for completing consulting engagements, the process for communicating auditor conflicts of interest, and the process for dealing with identified omissions and errors in reports (post-issuance).

# Achievements from Prior QAR

## Significant Improvement from the 2018 Assessment where:

- Two Attribute Standards were rated as **Partially Conforms**.
- Six Performance Standards were rated as **Partially Conforms** and one as **Does not Conform**.
- Three **institutional** improvement opportunities supporting internal audit were identified.
- Seven **internal audit** opportunities to strengthen operations were identified.

Notable improvements are the result of the continued support of the Chancellor and the Audit, Compliance, and Risk Management Committee along with the work of the department's talented team of internal audit professionals.

# Questions/Comments



**AGENDA ITEM**

*Information Item 3*

***Institutional Integrity & Risk Management – Campus Safety Update***

**Situation:** Provided as an information item to the Committee is an update on the institution's information technology security program. Information will be presented in both open and closed sessions.

**Background:** Institutional Integrity and Risk Management provides regular updates to the Committee on activities and happenings related to campus safety.

**Assessment:** N/A

**Action:** This item is for information only and does not require a vote by the Committee.

# Campus Safety Update

UNC Board of Trustees Audit, Compliance, and Risk Management Committee

January 17, 2024



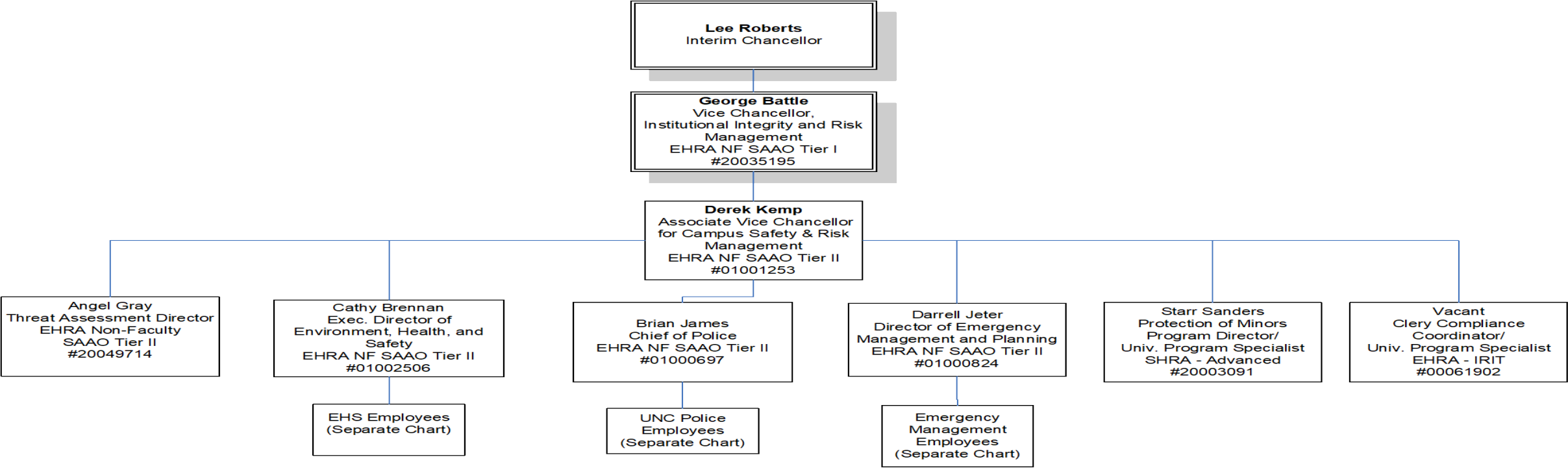
INSTITUTIONAL INTEGRITY  
AND RISK MANAGEMENT

# Campus Safety & Risk Management



## Campus Safety & Risk Management

January 2024





- **After-Action Review (AAR) – August 28, 2023 Shooting**
  - Formally launched on December 15<sup>th</sup>, and contracted CNA Corporation, an independent nonprofit specializing in research and analysis to conduct the review.
  - Additional activity in December 2023 –
    - The University released the [August 28<sup>th</sup> Incident Feedback Executive Summary](#).
    - The University launched the [August 28<sup>th</sup> Campus Shooting](#) webpage, providing a centralized and accessible hub for information, updates, and resources pertinent to the post-incident review.



- **After-Action Review (AAR) – August 28, 2023 Shooting**

- Phases

1. Pre-planning and Data Collection: collection & review of pre-planning documents, policies, procedures, training, operations plan, and communications related to the incident to inform the interview process and findings for the final AAR.
2. [CURRENT PHASE] AAR Process: data analysis, interviews, and small group discussions with a cross-section of students, staff, and faculty as well as offices, agencies, and other affected parties from across the University and the surrounding community.
3. AAR Report Generation: development of a preliminary after-action report that will focus on findings and recommendations for improvement based on best practices.
4. AAR Closeout: finalize report and present findings to the university's leadership.



# Emergency Management & Planning



- **Emergency Operations Plan**

- Released in July 2023, this newly revised document serves as the University's comprehensive, all-hazards plan to guide campus emergency and disaster response and recovery.
- 50+ Campus Emergency Management Officials trained on the plan and their respective roles/responsibilities in June & July 2023

- **Accessibility**

- In July 2023, Campus Safety conducted an Emergency Evacuation Drill testing local capabilities to evacuate people with disabilities from campus residence halls and academic building.
- In October 2023, in partnership with Facilities Services, we launched a new Elevator Outage Notification feature in the Carolina Ready Mobile Safety App



- **Water Testing**

- Developed a formalized program of periodic testing to include lead and other applicable water quality testing parameters
- Purchased advanced water testing equipment to aid in testing
- Budget request for fiscal year 2024 to 2025 for new EHS Professional position to oversee program



- **Automated External Defibrillator Program**
  - October 2023 internal audit identified program improvements
  - EHS developed master plan guidance document to outline path forward
  - November 2023 submitted budget request for one-time funding for purchase of 300 new AEDs and supplies (cabinets, batteries and pads)
  - Implementing formal electronic inventory and inspection process using existing fire extinguisher tracking program
  - Budget request for fiscal year 2024 to 2025 for reoccurring maintenance funding to be used for additional AEDs, replacements and/or supplies
  - Will develop AED training video in addition to already established in-person CPR/AED training course



- **Active Shooter Preparedness**

- Firearms Range Day – focused on drills and firing sequences related to “Active Shooter” response.
- Rapid Deployment Training and Refresher - exercise completed over the Summer 2023 utilizing an empty academic building to simulate an active shooter situation, done in partnership with UNC Hospital Police.
- Twenty-three (23) building security surveys have been completed across campus since August
- Fifty-four (54) Active Shooter trainings have been held across campus since August
- Ongoing conversation with all law enforcement agencies who responded to the August 2023 shooting, looking for more opportunities to conduct joint training on campus



- **Ongoing Review/Improvement Efforts**

- Reviewing camera access and locations on campus to ensure coverage and quick retrieval of video. UNCPD is currently working with Facilities and IT to achieve this goal.
- Reviewing additional security technology that can be deployed to promote a safer campus
- Ongoing training with campus partners
- Enhancing relationships with campus partners to analyze potential threats to the campus community
- Constantly reviewing deployment strategy to ensure officers are in the right places at the right times
- Maintaining partnership with the N.C. SBI Information Sharing and Analysis Center (ISAAC)



**[campussafety.unc.edu](https://campussafety.unc.edu)**



## Contact

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**AGENDA ITEM**

*Information Item 4*      ***Information Security Program Update***

**Situation:** Provided as an information item to the Committee is an update on the institution's information technology security program. Information will be presented in both open and closed sessions.

**Background:** The Audit, Compliance, and Risk Management Committee Charter details the Committee, supporting Chapters 1400.1 and 1400.2 of the UNC Policy Manual, is to receive periodic updates from a designated senior officer with information security responsibility. This individual shall present a report to the Committee, at least annually, on the institution's information security program and information technology security controls.

**Assessment:** N/A

**Action:** This item is for information only and does not require a vote by the Committee.



INFORMATION  
TECHNOLOGY SERVICES

# CYBERSECURITY UPDATE

January 2024



## MIKE BARKER

VICE CHANCELLOR FOR INFORMATION  
TECHNOLOGY  
AND CHIEF INFORMATION OFFICER

## PAUL RIVERS

ASSISTANT VICE CHANCELLOR  
CHIEF INFORMATION SECURITY OFFICER AND HIPAA  
SECURITY OFFICER





## Cybersecurity program mission

1. **Coordinate** the institutional response to cyber threats
2. **Protect** the institution from harm by reducing the rate and impact of cyber events
3. **Report** the status of managing the institution's cyber risk

## Annual reporting objectives

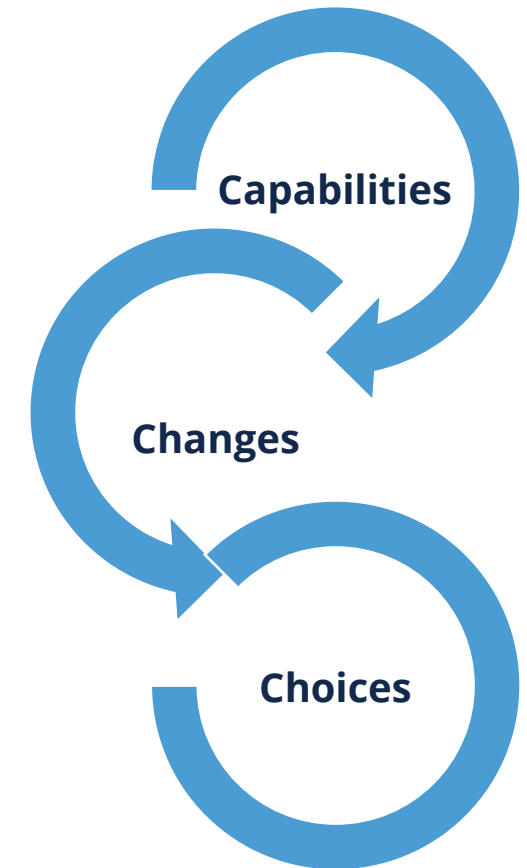
1. **Capabilities** – Summarize the effectiveness of the Carolina security program
2. **Changes** – Identify significant cybersecurity threat landscape changes
3. **Choices** – Outline the institution's response to the changing threat landscape

## Annual reporting format

- Concise written document of 4-6 pages with supporting appendices
- Organize the document according to the above reporting objectives
- Provide the document in advance of January meetings

## January 2024 emphasis

1. Understand the current state
2. Propose a target state
3. Specify what is now underway to close any identified gaps



## Today's Discussion

1. Recap of the May 2023 cybersecurity discussion
2. Outline of the UNC-CH security strategy
3. Work now in progress for calendar year 2024

The cybersecurity program must adapt to the mission and dynamics of the organization it serves.

Security-relevant dynamics of a top-tier research institution:

- Limited opportunity for broad economies of scale, necessitating local technology delivery; and
- Highly risk-differentiated uses of a broad range of technology.

## National Institute of Standards & Technology Cybersecurity Framework (NIST CSF)

1. **Identify:** How do we know what security actions are required in each context?
  2. **Protect:** What controls do we put in place to prevent attacks on technology and data?
  3. **Detect:** How will we know if data or technology is under attack or even compromised?
  4. **Respond:** How can we ensure a timely response to attacks, to limit damage?
  5. **Recover:** Once the attack is over, how can we quickly return to normal operations?
- Most **Protect** work is distributed for the reasons already summarized.
  - Many of the capabilities under **Identify**, **Detect**, and **Respond** can be enhanced and operated at scale for the entire organization.

# To offset the distributed reality of Protect at UNC-CH, we must strengthen our centralized capabilities in Identify, Detect, and Respond.

## Identify

1. Clearly defined and measured roles and responsibilities
2. Fully documented standards
3. Expand training and communications

## Detect and Respond

1. Increased visibility (to networks, identities, end-user devices, high-risk systems)
2. Additional security sensors to expand range of attacks identified
3. Use of “big data” techniques to identify and increase the automation and speed of response

Protect controls will be centralized when doing so is more effective, more efficient, and does not introduce significant overhead on units compared to alternative means of addressing threats.

## Highlights of work now underway for calendar year 2024:

**HIPAA Compliance:** Org-wide structural and technical Security Risk Assessment

**Microsoft:** Comprehensive security review of the M365 ecosystems

**Endpoint Security:** Strengthen the endpoint detection and response monitoring system

**Policy base:** Substantive revisions to UNC-CH security policies and standards

**Training:** Expand security training and communication program

**Research:** Launch new research security compliance program

**Vulnerabilities:** Deliver more efficient and targeted vulnerability management program



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