



Audit & Compliance Committee

October 2021

October 7, 2021

8:30 am

Videoconference & Boardroom, McNamara Alumni Center

AUD - OCT 2021

1. Cybersecurity Maturity Model Certification (CMMC) Program

Docket Item Summary - 3

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2. Internal Audit Update

Docket Item Summary - 23

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BOARD OF REGENTS DOCKET ITEM SUMMARY

Audit and Compliance

October 7, 2021

AGENDA ITEM: Cybersecurity Maturity Model Certification (CMMC) Program

Review

Review + Action

Action

Discussion

This is a report required by Board policy.

PRESENTERS: Michael Oakes, Interim Vice President for Research
Patrick Briscoe, Export Controls Officer, Sponsored Projects Administration

PURPOSE & KEY POINTS

The purpose of this item is to discuss the emerging research data security requirements posed by research sponsors and the University's preparedness to address those requirements.

Board of Regents Policy: *Openness in Research* establishes the University's commitment to academic open inquiry in the research enterprise. However, some research sponsors are increasingly issuing awards with restrictions, including elevated security standards. The University must be prepared to meet those standards to continue to conduct controlled research. The most consequential emerging set of requirements is the Cybersecurity Maturity Model Certification (CMMC) program, which the Department of Defense has begun to implement, and other federal agencies might use as a model for their own security standards in the future.



UNIVERSITY OF MINNESOTA
Driven to DiscoverSM

Cybersecurity Maturity Model Certification (CMMC) Program

October 7, 2021

Michael Oakes, Interim Vice President for Research
Patrick Briscoe, Export Controls Officer

Agenda

- The issue
- Impact on UMN
- UMN Plans
- Questions

The Issue

The issue?

- Regents' Openness in Research policy supports academic freedom and open inquiry

“Absent compelling reasons, the University shall not accept restrictions on participation in University research or on the dissemination of the results of University research.”

- DoD contracts increasingly require more restrictions and IT security

DoD's CMMC

- Cybersecurity Maturity Model Certification (CMMC) Program
- A novel, labor-intensive cybersecurity framework
- Goals of CMMC
 - Improve Defense Industrial Base (DIB) cybersecurity
 - Increase DoD confidence in DIB cybersecurity by requiring 3rd party certification to be eligible for corresponding DoD contracts

Timeline

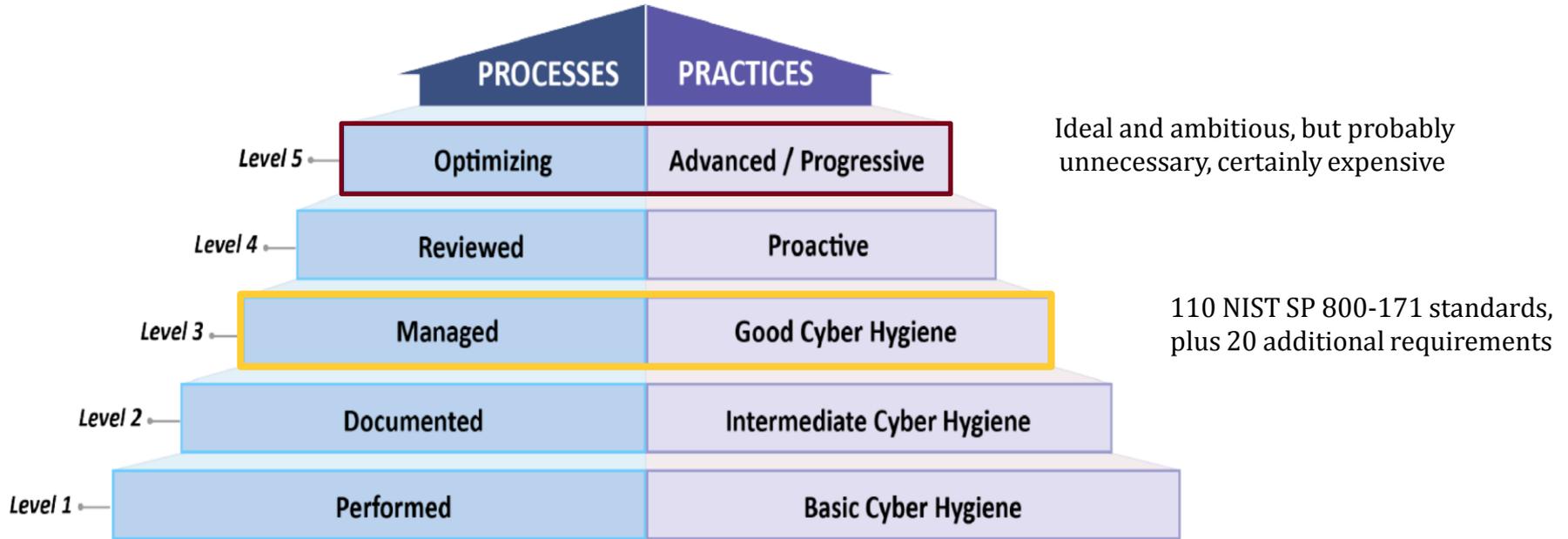
- **Early 2020:** DoD announces CMMC standards & draft process
- **September 29, 2020:** DoD publishes interim CMMC regulation, which is effective **November 20, 2020**
- Currently in five-year, phased implementation

Requirements

- CMMC requirements determined on case-by-case basis
- Core operating concepts:
 - Offeror certification must correspond to solicitation's security level
 - Security levels range from 1 to 5
 - Certification must be issued by a credentialed, external evaluator



CMMC Levels



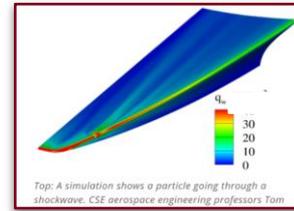
Impact on UMN

Impact on UMN

- Some other universities are better prepared for CMMC-covered research due to more robust data segmentation and security postures
- Intended scope of CMMC program on DoD contracts for non-publishable
 - Controlled Unclassified Information (CUI)
 - Covered Defense Information (CDI)
 - Federal Contract Information (FCI)

Impact on UMN

- DoD-funded University research areas more likely to see contractually-imposed **dissemination and security restrictions** in coming years:
 - Aerospace, hypersonics
 - Quantum computing
 - AI and robotics
 - Biotechnology
 - Advanced microprocessors
 - Others



Fundamental Research

- **Fundamental Research** is basic and applied research in science and engineering, the results of which ordinarily are published and shared broadly within the scientific community, as distinguished from proprietary research, the results of which ordinarily are restricted for trade secret, national security, or similar reasons
- It is unclear if DoD-sponsored **fundamental research** contracts will be covered by CMMC
- **Inclusion of fundamental research**, even Level 1, would entail substantial UMN operational changes & expenses

Consequences of inaction?

- Failure to meet necessary CMMC certification will make UMN ineligible for corresponding DoD research opportunities
 - Industry partners have expressed interest in restricted/secure collaboration
- Inaction will result is a **loss of opportunities** to competing peers

The University's Plans

What has been done so far?

- Pre-CMMC, department level implementation of *NIST SP 800-171* in rare cases of restricted research in CSE and CBS
- **Highly Restricted Data Standing Committee** to develop strategic, centralized response, perspective, and recommendations
 - *CampusGuard* finishing IT security gap assessment of Blackwell environment/system in the Minnesota Supercomputing Institute
 - Outside expert review in coming weeks

What needs to be done? (part 1)

- **Assessment** to determine optimal resource allocation to CMMC (in progress)
- **Discussion** of Openness in Research policy for better alignment with peer institutions doing restricted research (forthcoming)

What needs to be done? (part 2)

- Detailed **gap analysis** on UMN readiness to comply with applicable CMMC requirements
- **Cost-benefit analysis** to develop right-sized alternatives for leadership
 - Costs include not only infrastructure (space and IT hardware/software), but also supporting personnel, processes, governance, training, and other administrative efforts

Other considerations



- DoD implementation challenges
 - Shortage of credentialed certifiers
 - Costs, especially to smaller DIB organizations
 - Related concerns from Congress
 - Five-year implementation uncertain
- Other agencies, such as the Department of Homeland Security and Department of Education, considering a CMMC-type approach too

Questions?



BOARD OF REGENTS DOCKET ITEM SUMMARY

Audit & Compliance

October 7, 2021

AGENDA ITEM: Internal Audit Update

Review

Review + Action

Action

Discussion

This is a report required by Board policy.

PRESENTERS: Kelly Kuhns, Interim Chief Auditor

PURPOSE & KEY POINTS

The purpose of this item is to discuss Internal Audit activities, results, and observations to help the committee fulfill its fiduciary responsibilities.

- Since the last follow-up, at the June 2021 meeting, 36% of the outstanding recommendations rated as “essential” were resolved by University departments. This is slightly less than the expected implementation rate of 40%. In addition, 76% of the outstanding items are past due. All outstanding “essential” recommendations were resolved for six audits.
- An updated control evaluation chart is included for each audit to show progress made on remediation of “essential” items.
- Nine audit reports containing 45 recommendations rated as “essential” were issued in the last four months.

Other summary information important to the oversight of the internal audit function is also included.

BACKGROUND INFORMATION

This report is prepared three times per year and is presented to the committee in conformance with Board of Regents Policy: *Board Operations and Agenda Guidelines*.

Internal Audit Update

University of Minnesota Regents Audit and Compliance Committee
October 7, 2021

This report includes:

- Audit Observations/Information/Status of Critical Measures/Other Items
- Status of “Essential” Recommendations & Bar Charts Showing Progress Made
- Audit Activity Report
- Audit Reports Issued Since June 2021
- SNAP Review Summary

Details for any of the items in this report are available on request. Individual reports were sent to the President, Provost, Vice Presidents, and Chancellors about these internal audit issues.

Audit Observations/Information

Status of Critical Measures

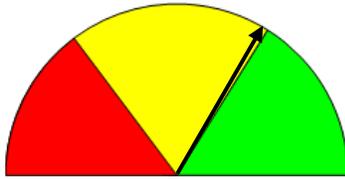
As part of our on-going efforts to provide the Audit and Compliance Committee with critical information in as concise a format as possible, we have developed the following charts to present a quick overview of work performed by the Office of Internal Audit.

The first chart, “Essential Recommendation Implementation,” provides our overall assessment of the success University departments had during the last period in implementing our essential recommendations. Readings in the yellow or red indicate implementation percentages less than, or significantly less than, our expected University-wide rate of 40%. Detailed information on this topic, both institution-wide and for each individual unit, is contained in the next section of this Update Report.

The second chart, entitled “Resources Spent on Planned Assurance Work,” is our assessment on the amount of time we have been able to devote to planned audit work. This assessment includes our progress on completion of Tier 1 and Tier 2 audits on the FY 2022 audit plan, as well as any audits that were substituted for Tier 2 audits to address higher priority needs. There have been no audit substitutions to date. Readings less than green could be influenced by a variety of factors (e.g., insufficient staff resources; increased time spent on non-scheduled audits or investigations).

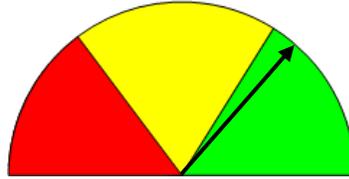
The final chart, “Time Spent on Non-Scheduled Audit Activities,” provides a status report on the amount of time consumed by investigative activities, special projects and other management requests. We estimate a budget for this type of work, and the chart will indicate whether we expect that budget to be sufficient. Continued readings in the yellow or red may result in seeking Audit and Compliance Committee approval for modifying the Annual Audit Plan.

Essential Recommendation Implementation



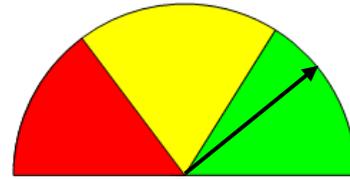
Implementation rates were 36% for the period; slightly less than our expected rate of 40%.

Resources Spent on Planned Assurance Work



Time spent on assurance audit work is in alignment with what is expected and budgeted for the year to date.

Time Spent on Non-Scheduled Audit Activities



Time spent on investigations, special projects and management requests is less than expected and budgeted for the year to date.

Other items:

- Chief Auditor Gail Klatt retired after 27 years of dedicated service to the University on October 1st; Audit Manager, Kelly Kuhns, was named by the Committee as Interim Chief Auditor effective October 2nd.
- Office of Internal Audit hired one Information Technology Auditor. This position had been vacant due to the hiring pause.
- All Office of Internal Audit staff transitioned to working remotely in March 2020 due to the COVID-19 pandemic. Currently, we are utilizing a hybrid approach with some staff reporting to the office periodically and/or conducting audit work in-person as needed. Audit work continues relatively smoothly because of the ongoing prompt and helpful assistance of University personnel.

Status of Essential Recommendations

■ Past Due
 ■ On-Schedule
 ■ Complete

Current Period
 Total Recommendations **66** % Completed **36%**
 Completed Recommendations **24** % of Open Recs Past Due **76%**

Past Completion Rates
 Feb 2021 **27%**
 June 2021 **40%**

Report#	Audit Name	Open Recs - Past Due	Number of Essential Recs (Report)	Status (Follow-up Period)	
1913	Residency Determination FY19	0	4	Completed	■ 1
1919	UMD Fine Arts, School of FY19	1	7	Partially Implemented	■ 1
1924	Veterinary Medicine, College of FY19	0	4	Completed	■ 1
1926	Weisman Art Museum FY19	1	9	Partially Implemented	■ 1
2003	UMD Stores FY20	0	4	Completed	■ 1
2007	Facilities Management District Operations FY20	4	6	Completed	■ 1
				Not Implemented	■ 2
				Partially Implemented	■ 2
2009	Psychiatry & Behavioral Sciences Research FY20	1	2	Not Implemented	■ 1
2010	Disaster Recovery of Information Systems FY20	4	9	Completed	■ 2
				Partially Implemented	■ 4
2011	Emergency Management & COOP FY20	3	6	Partially Implemented	■ 3
2012	Veterinary Diagnostic Laboratory FY20	2	8	Completed	■ 1
				Partially Implemented	■ 2
2020	Public Safety IT, Dept of FY20	2	8	Not Implemented	■ 1
				Partially Implemented	■ 2 ■ 1
2026	Lab Medicine and Pathology FY20	1	5	Completed	■ 2
				Partially Implemented	■ 1
2101	Central Job Scheduling FY21	4	7	Completed	■ 1
				Not Implemented	■ 2
				Partially Implemented	■ 2
2106	University Health & Safety FY21	2	10	Completed	■ 2
				Partially Implemented	■ 2
2111	U Market Services FY21	0	9	Completed	■ 3
2112	Baseball & Softball Compliance & Ops FY21	2	2	Partially Implemented	■ 2
2113	UMD Labovitz School of Business & Economics FY21	0	4	Completed	■ 2
2114	Anatomy Bequest Program FY21	1	3	Completed	■ 1
				Partially Implemented	■ 1
2115	Prepaid Debit Card Program FY21	0	2	Completed	■ 1
2116	Business Services' Application Development FY21	2	3	Not Implemented	■ 1
				Partially Implemented	■ 2
2121	CSE Dean's Office & Reporting Centers FY21	0	7	Completed	■ 4
				Partially Implemented	■ 3
2122	Telehealth Security & Compliance FY21	0	4	Completed	■ 1
				Not Implemented	■ 2
				Partially Implemented	■ 1
2123	Board of Regents Internal Reporting FY21	0	1	Partially Implemented	■ 1
2124	Northrop FY21	2	2	Partially Implemented	■ 2

Current Status of Recommendations Rated as "Essential" That Are Over Two Years Old and Are Not Fully Implemented

Audit/ Report Date	Status- Partially Implemented or Not Implemented	Responsible Administrator	Summary of the Issue/Risk Involved	Current Comments From Management
UMN Duluth Fine Arts March 2019 # of Items: 1	Partially Implemented	Jeremy Youde	Tweed management should improve inventory and valuation records for its art collection. Specifically, Tweed should: <ul style="list-style-type: none"> • Complete the in-process physical inventory, including ensuring the records of art in the inventory database are accurate and complete. • Schedule and conduct periodic inventories and appraisals of the art collection. 	<p>The Tweed Museum's efforts to complete a physical inventory have been hindered by staffing and the Covid-19 pandemic. The Covid-19 pandemic created limitations associated with in-person work on campus, which considerably impacted the Tweed's ability to conduct an inventory. To-date, Tweed has physically inventoried approximately 8,000 items of the 10,000 artworks it holds. While the Tweed continues to inventory its collections and is currently working to physically inventory the Nelson gift of Native American objects, an exact timeline for completion cannot be determined until the pandemic has receded and the University provides the Tweed with the necessary resources to complete the project. Tweed and UMN Duluth College of Arts, Humanities, and Social Sciences (CAHSS) leadership remain in ongoing conversations with UMN Duluth administrators to identify funding sources for timely completion of this project.</p> <p>The Tweed's former longtime director retired in June 2019, and the new director started in January 2020, just prior to the start of the pandemic. Since that time, the director has been working to address Tweed's essential audit recommendations, and this item is the only one remaining.</p>
Weisman Art Museum June 2019 # of Items: 1	Partially Implemented	Karen Hanson	WAM should work with the vendor and/or OIT to improve the artwork inventory database's logging capabilities to ensure they are able to obtain all necessary authentication and activity logs including logs of deletion of artwork from the inventory.	Financial and vendor issues have delayed full compliance, but WAM has now completed planning and arrangements to have the necessary software installed. The vendor quote previously received for the audit manager license software did not include the annual hosting fee, which was significant. WAM did not have funds to cover the fee, but, upon WAM's request, the Provost's office has agreed to cover this increased cost. The contract with the audit manager license company must now be approved by the Office of General Counsel, and then the vendor will put WAM in the queue for installation. (The vendor is backlogged 2-3 months.)

Audit/ Report Date	Status- Partially Implemented or Not Implemented	Responsible Administrator	Summary of the Issue/Risk Involved	Current Comments From Management
Facilities Management District Operations Sept. 2019	Partially Implemented	Dave Hutton	<ul style="list-style-type: none"> District Operations (DO) should identify areas to review and trend available data on a more detailed level to analyze the efficiency of its workforce, and benchmark performance. This may include: <ul style="list-style-type: none"> Developing and review labor hour efficiency for individuals in the same district and craft. Analyzing service request data for similar buildings and crew size. <p>When a higher number of custodial service requests are identified, DO should investigate and deploy tactics to reduce the number of repeat or uncleanliness service requests received by that crew.</p> <ul style="list-style-type: none"> Reviewing call center agent schedules and analyzing hours required to meet customer and FM needs. This can be done by utilizing the historical monthly data available on number of calls received, average talk time, number of emails responded to, number of web requests responded to and an estimate of the number of hours spent on other project tasks. DO should consider how Tririga will affect call agent duties as implementation may change agent roles and responsibilities. Requesting a supply closet trend analysis from UMarket or use the data provided by UMarket to complete a trend analysis on which closets are purchasing more supplies compared to other closets. DO should also create an average supply cost per closet to use for tracking. When fluctuations occur, these could be researched to determine appropriateness. 	<ul style="list-style-type: none"> Tririga is live, however, reporting functionality is still under development. Data reporting and analysis is included as a part of the Maintenance Process Project underway, led by the University Services Project Management Office (PMO). Tririga system performance and learning curve issues have slowed progress significantly, however our focus and commitment remain strong. The PMO project completed solution identification and development September 21, 2021. Realistic completion and implementation across the FM Districts will be achieved by June 30, 2022. Internal process standardization and enforcement is a major focus of the Maintenance Process Project underway, led by the University Services Project Management Office (PMO). The Project Charter includes documenting step by step processes and producing user friendly reference guides and training materials to enable standardization of maintenance processes from end to end. The PMO project completed solution identification and development September 21, 2021. Tririga system performance and learning curve issues have slowed progress significantly, however our focus and commitment remain strong. Realistic completion and implementation, including management monitoring and enforcement for compliance across the FM Districts will be achieved by June 30, 2022. Maintenance work tasks are produced in the new Tririga system and are being completed in a timely fashion. Development of reporting functionality prevents comprehensive reporting of completion rates and is in scope of the of the Maintenance Process Project underway, led by the University Services Project Management Office (PMO). The PMO project completed solution identification September 21, 2021. Tririga system performance and learning curve issues have slowed progress significantly, however our focus and commitment remain strong. Realistic completion and implementation, including management monitoring and enforcement across the FM Districts will be achieved by June 30, 2022. The FM Custodial Program Manager has created a Custodial Workload Assessment tool and a documented process that is more comprehensive than existing industry standard tools. More than 100 time study videos have been produced to validate actual work production rates for relevant tasks. Those production rates are then applied across more than 50,000 rooms in UMN Twin Cities campus, resulting in master custodial workloading spreadsheets. Based on the data, we continue to rebalance custodial squads to optimize staffing levels. This process and tool will be used in an ongoing basis to ensure appropriate staffing levels based on service levels as defined in the Maroon Standards. The tool enables real time adjustment recommendations for changes in service levels or as building space is added or subtracted across campus. The tool and the process documents were demonstrated and shared during a meeting with Internal Audit on August 26th. FMDO plans to work with senior management and OIA to review the usage of the tool to optimize staffing levels and potentially accept the risk during the next quarter.
	Not Implemented		<ul style="list-style-type: none"> DO should establish a process for monitoring and enforcing compliance with internal procedures as well as updating procedures that are no longer current. 	
	Not Implemented		<ul style="list-style-type: none"> DO should work towards increasing the timeliness of completing work orders in the system. This may include establishing standards for work order completion. DO should increase oversight, monitoring controls and training to ensure staff are accurately entering work order data. This will provide more accurate data to analyze for timely completion of work orders. 	
	Partially Implemented		<ul style="list-style-type: none"> DO should review and adjust all squad assignments to ensure all buildings are appropriately staffed based on the estimated hours calculated in the Custodial App tool. In addition, custodians working alone should be re-evaluated. 	

of Items: 4

Audit/ Report Date	Status- Partially Implemented or Not Implemented	Responsible Administrator	Summary of the Issue/Risk Involved	Current Comments From Management
Psychiatry & Behavioral Sciences - Research Sept. 2019	Not Implemented	Sophia Vinogradov	Psychiatry leadership should ensure any changes to the work plan are approved once institutional leadership delineates a specific approval process and approver(s). They should also confirm the appropriateness of the prior changes and the definition of 'management' in this context.	On October 31, 2019, President Gabel charged Vice President for Research Cramer and Vice President for Clinical Affairs Tolar with jointly designing a governance and approval structure for the review and evaluation of proposed major alterations to the original Advancing Human Research Protections (AdvancingHRP) implementation. As part of this delegation of authority structure, Vice Presidents Cramer and Tolar established an AdvancingHRP Assessment Committee to identify and evaluate major alterations to the original implementation and advise University senior leaders about their effects including any potential for increased risk to human research participants, especially those who are most vulnerable. The AdvancingHRP Assessment Committee's work was initially envisioned to begin in early spring 2020; however, the pandemic caused leaders to delay the start of this work until fall 2020. The AdvancingHRP Assessment Committee has met regularly over the last year and anticipates finalizing its work, including recommending a structure to address Recommendation 1, by the close of calendar year 2021.

of Items: 1

Total: 7

Collaborative Assessment Status Update

The next four pages are an update provided by OIT management on steps taken to address risks identified in the June 2020 Identity and Access Management Collaborative Assessment.

Identity and Access Management (IAM) Status Update:

(Provided by Management)

This is the 4th status update to the Identity and Access Management collaborative assessment conducted by Internal Audit and The Office of Information Technology.

The IAM program has continued to evolve and execute on the strategy introduced during the October 2020 update and will continue to adapt our priorities to best serve the University's IT needs.

As discussed during the May 2021 Audit and Compliance Committee update, staffing challenges will continue to slow progress on remediating issues identified in the 17 of the 25 IAM components reviewed. In some cases, the IAM team has adapted to this challenge by implementing a 'Center of Excellence' model such as for system 'de-provisioning' across the University. While this enables progress to continue, it will not be at the pace initially anticipated and, if unchanged, will necessitate the institution's acceptance of the inherent risk associated with some findings.

Below, we have provided a table that outlines several of the accomplishments made on our mitigation plan, as well as a high-level update on our current strategic direction for the IAM program since the May 2021 update. The "Accomplishments" column in the table highlights some of the key steps we have taken related to the identified risk, and the bolded items are ones added since our last update.

Accomplishments:

Category	Accomplishments	Road Map Phase	Risk Level
IAM Strategy	<ul style="list-style-type: none"> -IAM Governance Committee established as a decision making body under authority of EOCC -SAFe methodology successfully implemented to foster collaboration, alignment, and delivering consistent and predictable results -Finalized roadmap and dual-planning the remediation of risks in conjunction with other operational tasks 	IAM Operations/ Onboarding	High
IAM Team Staffing	<ul style="list-style-type: none"> -Senior Director hired -Hiring freeze exception request approved for 3 open positions -Three open positions filled -Operations team need/ask reviewed, 10 positions are still required. -Identified 17 Audit findings that are blocked by staffing needs -Center of Excellence model will be adopted to move service forward while staffing investments are resolved 	IAM Foundational Efforts	High
IAM Policies and Procedures	<ul style="list-style-type: none"> -Completed security gap analysis for all IAM technologies -Plan to remediate all security gaps by the end of FY 22 -RFP to replace identity management system in progress 	IAM Foundational Efforts	Medium
IAM System Classification	<ul style="list-style-type: none"> -SAFe methodology positioned to help create prioritization and visibility of in-progress work -IAM Security Gap Remediation effort in process, will partially remediate finding 	IAM Foundational Efforts	High
Technology Sustainability	<ul style="list-style-type: none"> -New technology implemented for Boynton BAA deprovisioning process automation implemented -Team prioritization shifted to eliminate technical debt and prepare for technology replacements. This is a prerequisite to achieve the resolution of many audit findings -Work to scale the Boynton BAA deprovisioning process to other BAA units is complete 	IAM Foundational Efforts	Low
Criteria for de-provisioning	<ul style="list-style-type: none"> -Ongoing effort with OHR and the Provost's Office to standardize Emeritus definitions in PeopleSoft and the Identity Management system -Completed analysis of our account types -Addressing terminated employees receiving lingering access to all systems in order to receive W2s 	Access Deprovisioning	High

Accomplishments (continued):

Category	Accomplishments	Road Map Phase	Risk Level
IAM Risk Awareness	<ul style="list-style-type: none"> -Completed security gap analysis for all IAM technologies, actively working to remediate all security gaps by the end of FY 22 -Completed roadmap and dual-planning the remediation of risks in conjunction with other operational tasks -Sharing risk findings with IAM Governance to increase awareness and collaboration with business partners 	IAM Operations/ Onboarding	Low
Identity Source Upkeep	<ul style="list-style-type: none"> -Current foundational effort to clearly define existing person and identity types to enable future work efforts in this space 	Modernized Account Types	Low
Role/Group Management	<ul style="list-style-type: none"> -Pilot activities for deprovisioning at the end of employment completed. Technology is now positioned for broader access deprovisioning across the University -Due to IAM Team Staffing Risk (see above), the team now provides access to these resources in a Center of Excellence model for units to leverage as a temporary first step, this launched in July, and is now being communicated broadly. 	Group Based Access Control	High
Access Termination	<ul style="list-style-type: none"> -Pilot activities for deprovisioning at the end of employment completed. Technology is now positioned for broader access deprovisioning across the University -IAM is working to provide access to these resources in a Center of Excellence model for units to leverage as a temporary first step due to IAM Team Staffing Risk (see above) -New technology implemented for Boynton BAA deprovisioning process automation implemented 	Access Deprovisioning	High
<p>**Items in bold are accomplishments since the last update</p>			

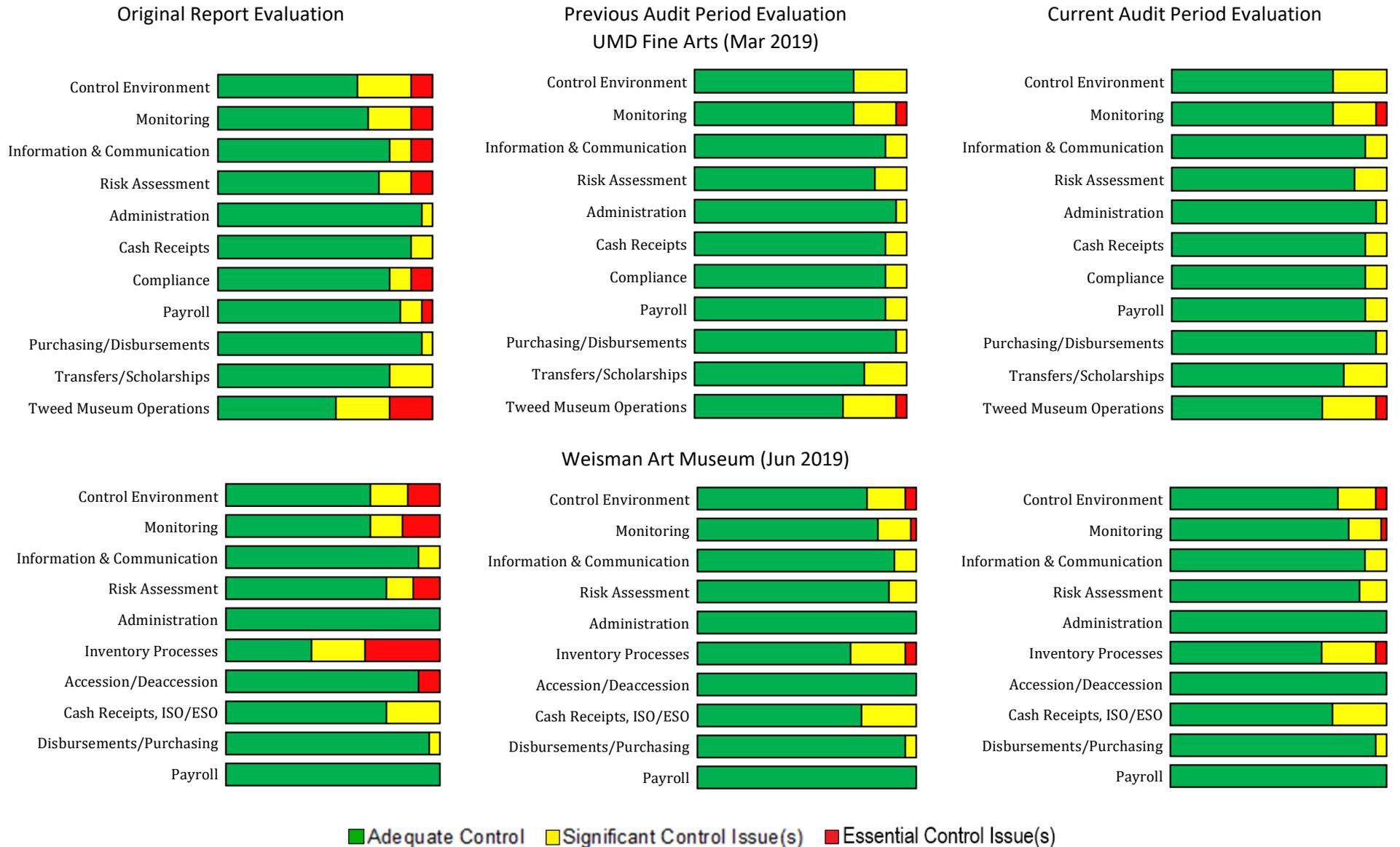
Strategic direction:

The IAM Program is focused on providing value to the University by optimizing the IAM team's capabilities, streamlining its work execution, modernizing its technology, and providing its partners with transparency:

1. **Reduce technical debt:** The IAM program must be responsible for fewer technologies that provide greater value. Supporting legacy systems not only introduces many forms of risk, but it also ties up resources keeping teams from work that would be more valuable to the University.
2. **Focus on high value work:** The IAM program must focus on work that has the most value for the University. The IAM team now decides during quarterly planning which features to focus on and which initiatives to pause or include in the backlog.
3. **Predictable, measurable, and well-managed workloads:** Our workloads need to be well-managed, measurable, and most of all, predictable. Predictable means that we need team members focused on work that comes from approved sources and those sources should be used universally. From those approved sources we will measure how much work is flowing into the teams so that we can plan and react according to changes. Well-managed means that leadership needs to continuously evaluate the conditions the teams are working within to determine how we can best meet the current demands.
4. **SAFe implementation:** The IAM Team is also committed to continuing our Scale Agile Framework (SAFe) journey by establishing and partnering with other teams in OIT to develop a Solution Management plan. Supporting this change in organizing how we work will help IAM to get more work done, provide transparency of our work to our partners, and will help OIT collaborate on large initiatives such as Next Gen Med.
5. **Program Execution:** The conditions the University is currently facing will continue to evolve and with that the IAM Team will also need to change what it works on, how it performs that work, and with whom they will partner. The IAM Team will use its roadmap to help define work, organize the order that work needs to occur, identify impacted stakeholders, and to organize resources so that changes can be efficiently delivered. The IAM Team will collaborate with University Information Security, Office of Internal Audit, Office of Human Resources, Academic Support Resources, and other key stakeholders to review the IAM roadmap, make decisions, and execute on the technology and business process changes needed to resolve the risks identified in the IAM Collaborative Assessment. This is the strategic step where the decisions and changes to processes and technologies will be performed as outlined in the Office of Information Technology's response to the IAM Collaborative Assessment. As those decisions and changes are made, periodic updates will be provided to this committee.

Progress on Implementation of Audit Recommendations

The bar charts shown below are presented to provide pictorial displays of the progress units are making on implementing audit recommendations rated as "essential." The bar chart included in the original report is shown in the left column, along with updated bar charts showing the previous audit period and the current status of the "essential" recommendations only (those bars that have red segments). The chart in the center column displays the status as of June 2021, while the chart on the right represents the current status. Charts are not presented for investigations. Charts for those units having implemented all "essential" recommendations during the current audit period are shown at the end of this report.



Original Report Evaluation

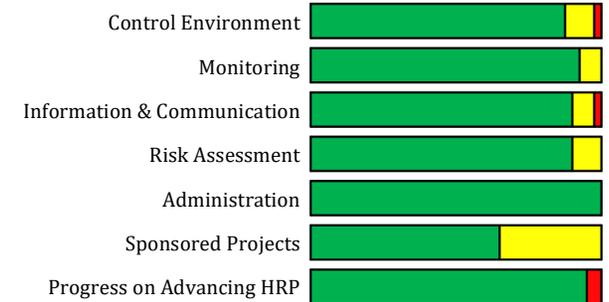
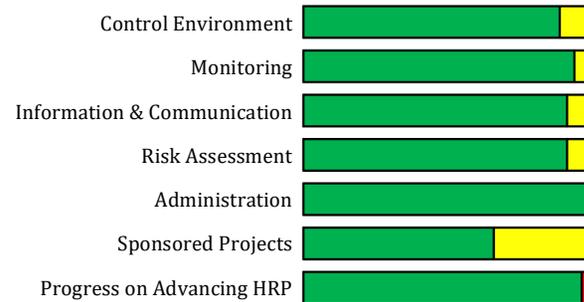
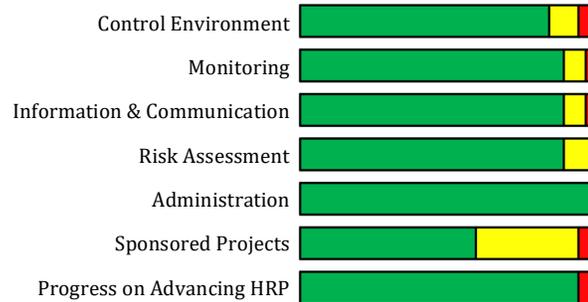
Previous Audit Period Evaluation

Current Audit Period Evaluation

Facilities Management District Operations (Sept 2019)



Psychiatry & Behavioral Sciences - Research (Sept 2019)



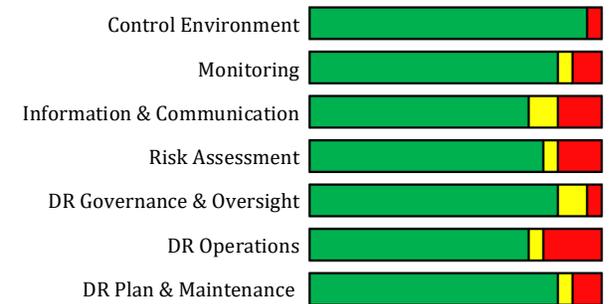
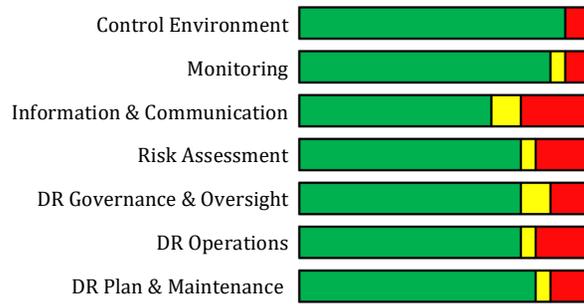
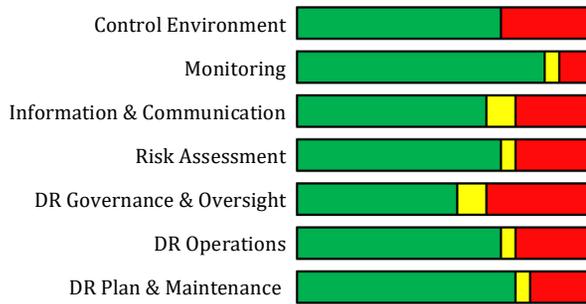
■ Adequate Control ■ Significant Control Issue(s) ■ Essential Control Issue(s)

Original Report Evaluation

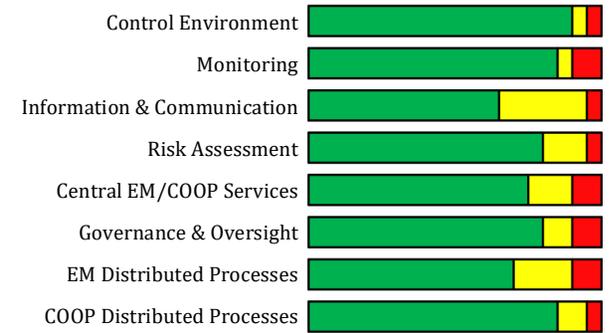
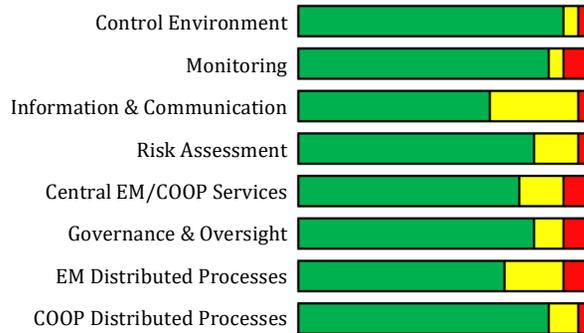
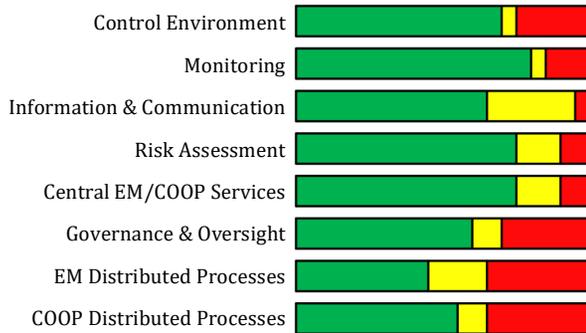
Previous Audit Period Evaluation

Current Audit Period Evaluation

Disaster Recovery of Information Systems (Oct 2019)



Emergency Management and Continuity of Operations (Oct 2019)



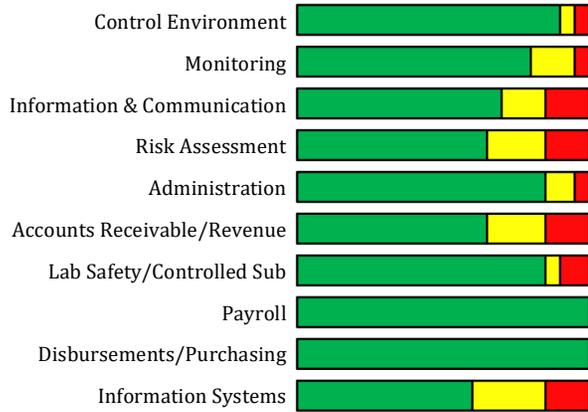
■ Adequate Control ■ Significant Control Issue(s) ■ Essential Control Issue(s)

Original Report Evaluation

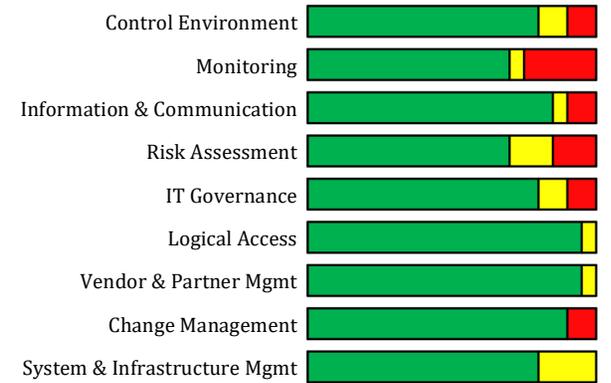
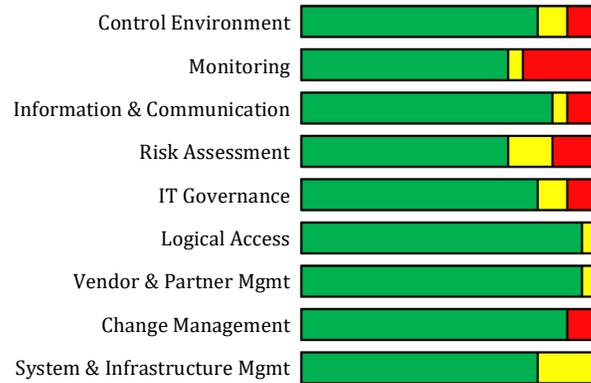
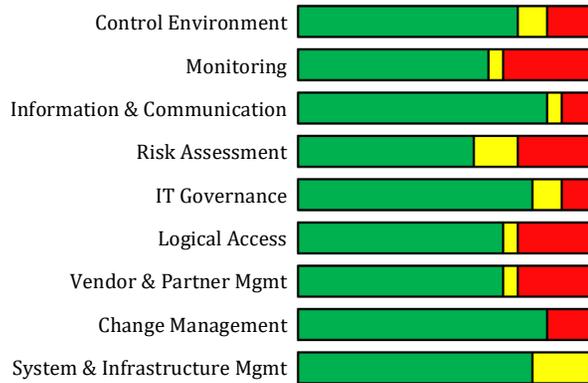
Previous Audit Period Evaluation

Current Audit Period Evaluation

Veterinary Diagnostic Laboratory (Jan 2020)



Dept of Public Safety IT (May 2020)



■ Adequate Control ■ Significant Control Issue(s) ■ Essential Control Issue(s)

Original Report Evaluation

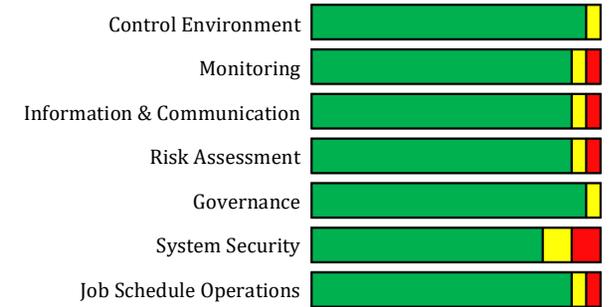
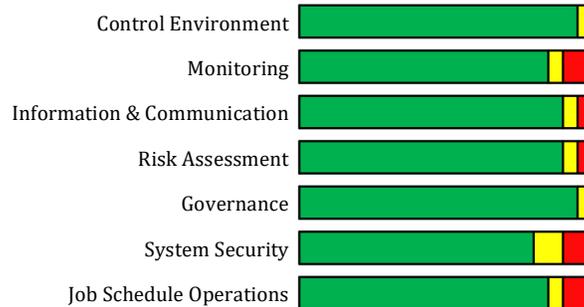
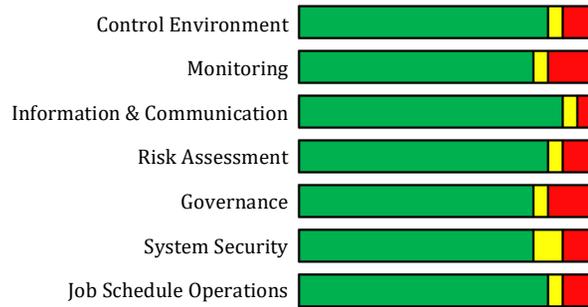
Previous Audit Period Evaluation

Current Audit Period Evaluation

Laboratory Medicine and Pathology (June 2020)



Central Job Scheduling (July 2020)



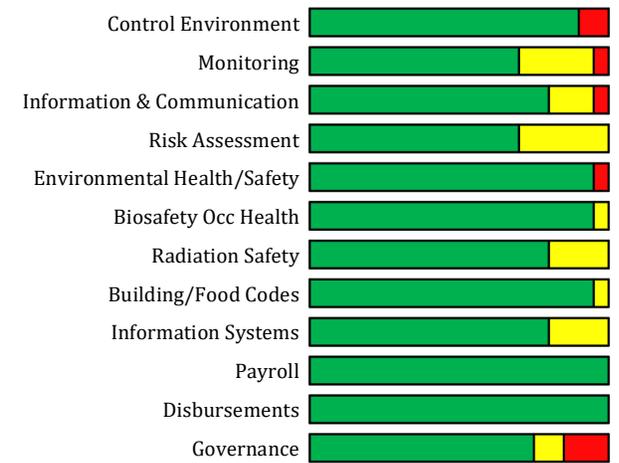
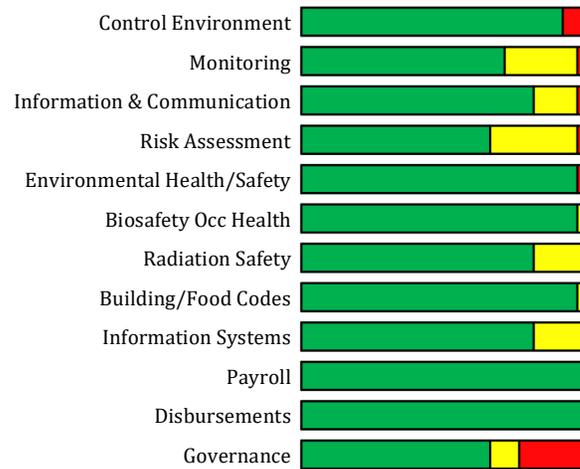
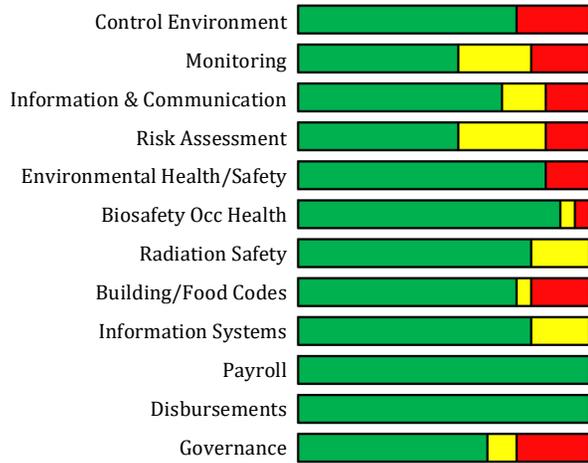
■ Adequate Control ■ Significant Control Issue(s) ■ Essential Control Issue(s)

Original Report Evaluation

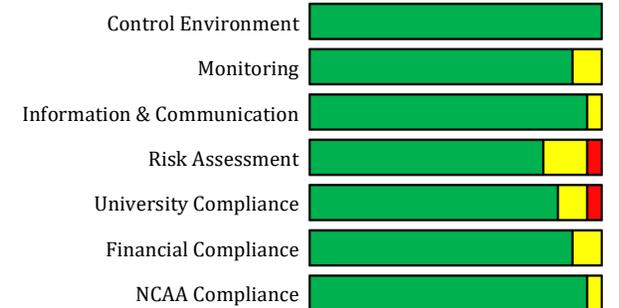
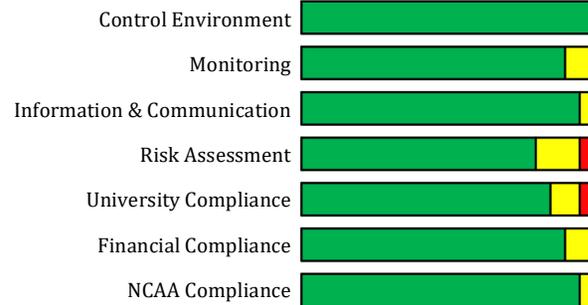
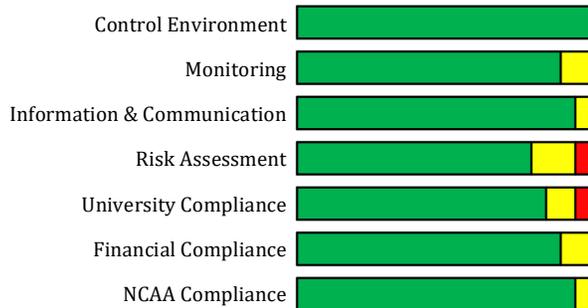
Previous Audit Period Evaluation

Current Audit Period Evaluation

University Health & Safety (Sept 2020)



Baseball and Softball Compliance and Operations (Dec 2020)



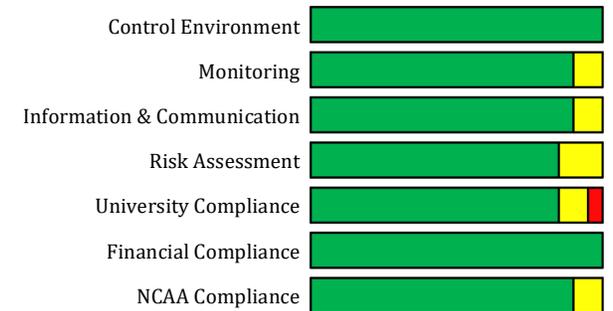
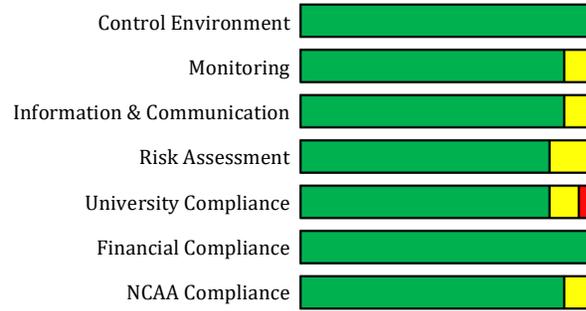
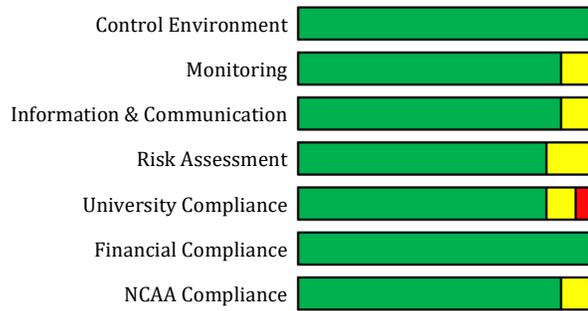
■ Adequate Control ■ Significant Control Issue(s) ■ Essential Control Issue(s)

Original Report Evaluation

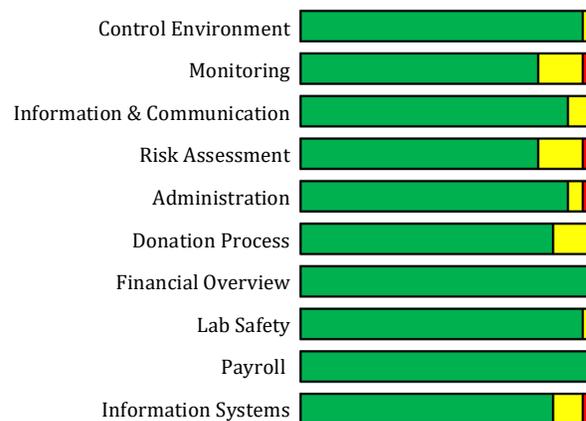
Previous Audit Period Evaluation

Current Audit Period Evaluation

Baseball and Softball Compliance and Operations - Support Unit (Dec 2020)



Anatomy Bequest Program (Dec 2020)



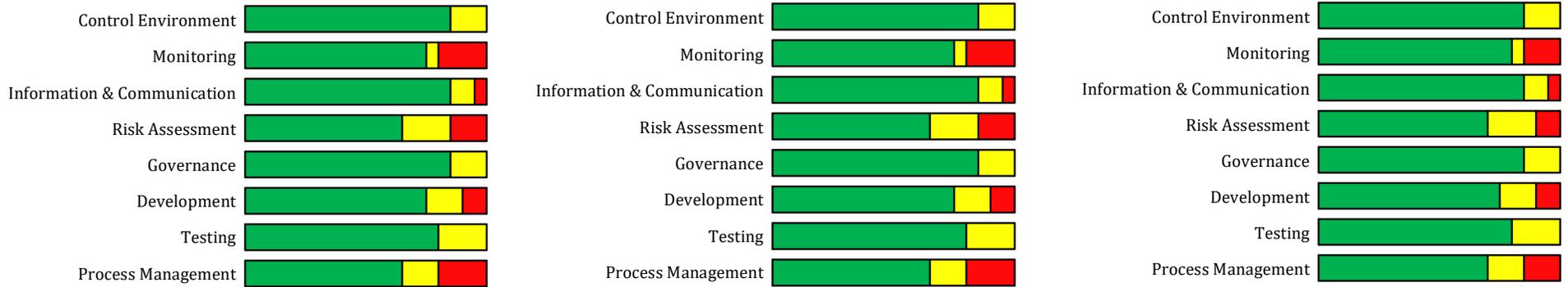
■ Adequate Control ■ Significant Control Issue(s) ■ Essential Control Issue(s)

Original Report Evaluation

Previous Audit Period Evaluation

Current Audit Period Evaluation

OIT Business Services' Application Development (Dec 2020)



CSENG Dean's Office and Reporting Centers (Mar 2021)



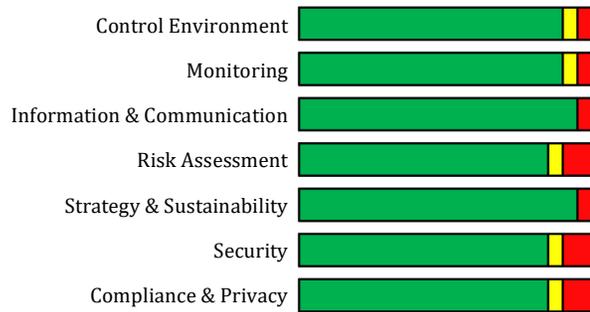
■ Adequate Control
 ■ Significant Control Issue(s)
 ■ Essential Control Issue(s)

Original Report Evaluation

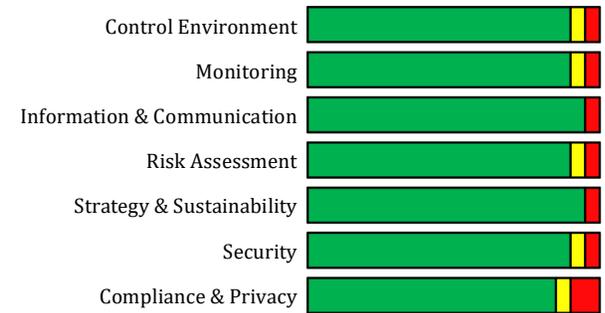
Previous Audit Period Evaluation

Current Audit Period Evaluation

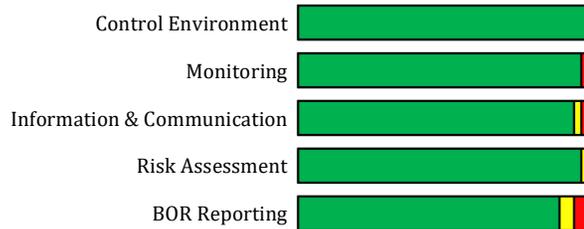
Telehealth Security and Compliance (Mar 2021)



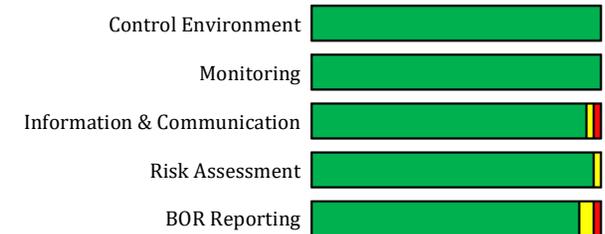
NO PREVIOUS
CONTROL EVALUATION
CHART



Board of Regents Internal Reporting (Apr 2021)



NO PREVIOUS
CONTROL EVALUATION
CHART

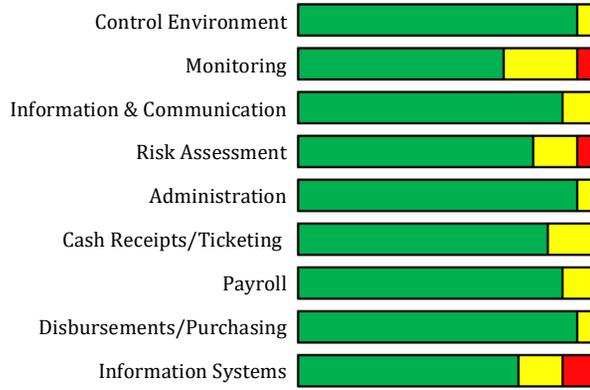


■ Adequate Control ■ Significant Control Issue(s) ■ Essential Control Issue(s)

Original Report Evaluation

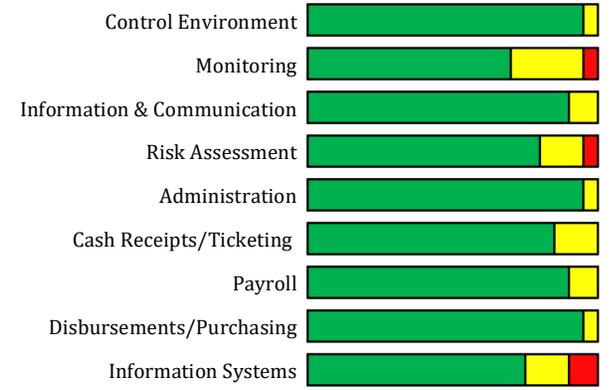
Previous Audit Period Evaluation

Current Audit Period Evaluation



Northrop (Apr 2021)

NO PREVIOUS
CONTROL EVALUATION
CHART



■ Adequate Control ■ Significant Control Issue(s) ■ Essential Control Issue(s)

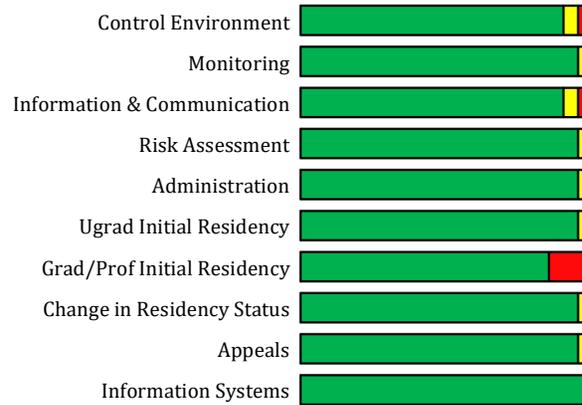
Fully Implemented "Essential" Recommendations During the Past Audit Period

Original Report Evaluation

Previous Audit Period Evaluation

Current Audit Period Evaluation

Residency Determination (Jan 2019)



College of Veterinary Medicine (May 2019)



■ Adequate Control
 ■ Significant Control Issue(s)
 ■ Essential Control Issue(s)

Original Report Evaluation

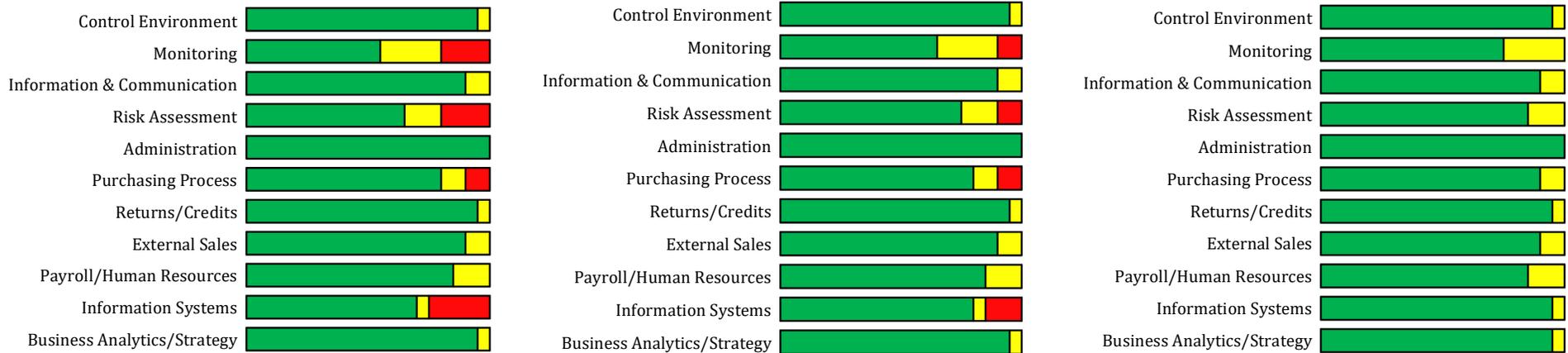
Previous Audit Period Evaluation

Current Audit Period Evaluation

UMD Stores (Including Print Shop and U Card Office) (Aug 2019)



U Market Services (Dec 2020)



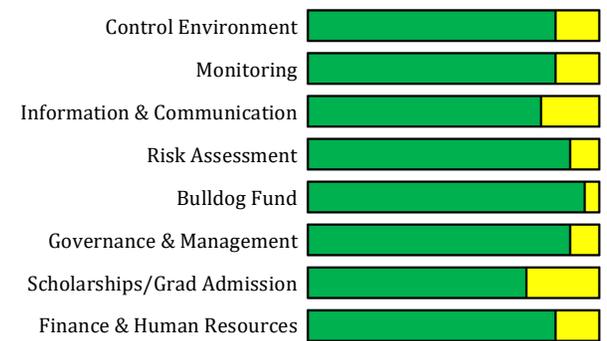
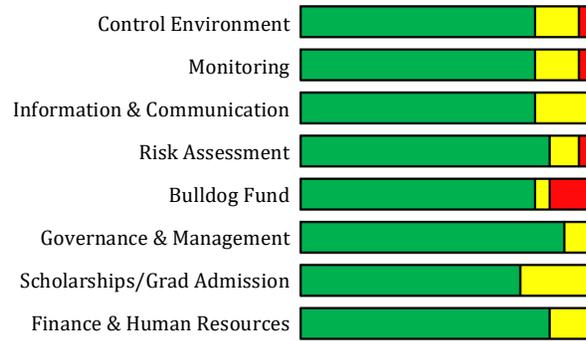
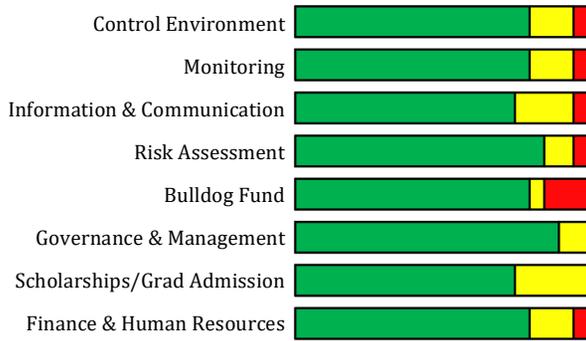
■ Adequate Control
 ■ Significant Control Issue(s)
 ■ Essential Control Issue(s)

Original Report Evaluation

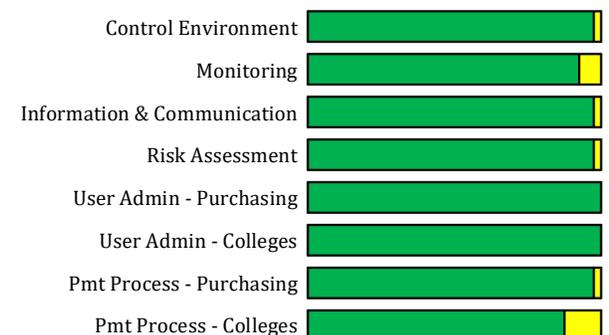
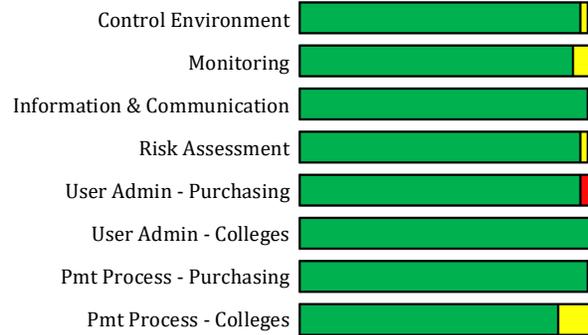
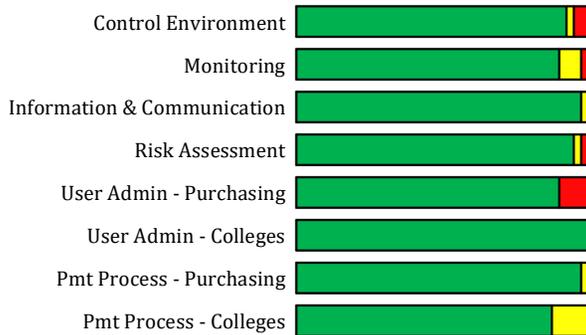
Previous Audit Period Evaluation

Current Audit Period Evaluation

UMN Duluth Labovitz School of Business and Economics (Dec 2020)



Prepaid Debit Card Program (Dec 2020)



■ Adequate Control ■ Significant Control Issue(s) ■ Essential Control Issue(s)

Audit Activity Report

Scheduled Audits

Completed Audits Of:

- UMN Duluth Human Resources
- VP for Research Transition Review
- Graduate School
- UMN Morris Chancellor Transition Review
- OIT Service Desk and Device Management
- NCAA Eligibility Documents
- School of Dentistry
- Scholarship Funding, Metrics and Outcomes
- Canvas and Unizin

Began/Continued Audits Of:

- Employee Immigration (Collaborative Assessment)
 - Academic and Research Misconduct
 - Minnesota State COVID-19 Testing Contract
 - Minnesota Partnership for Biotechnology and Medical Genomics
 - School of Public Health (Health Policy & Management)
 - Emergency Fund Activity
 - UM Duluth Health Services
 - Energy Management
- Completed three “SNAP Reviews” on the following topics: Travel Card Unallowable Expenses; Chrome River Delegations; and Annual Performance Evaluations.

Investigations

- Performed investigative work on one issue in accordance with the University Policy on Reporting and Addressing Concerns of Misconduct.

Special Projects

- Provided consulting services related to University payroll exception testing.
- Provided technology consulting in several areas including high risk data storage, identity and access management, information security and compliance.

Other Audit Activities

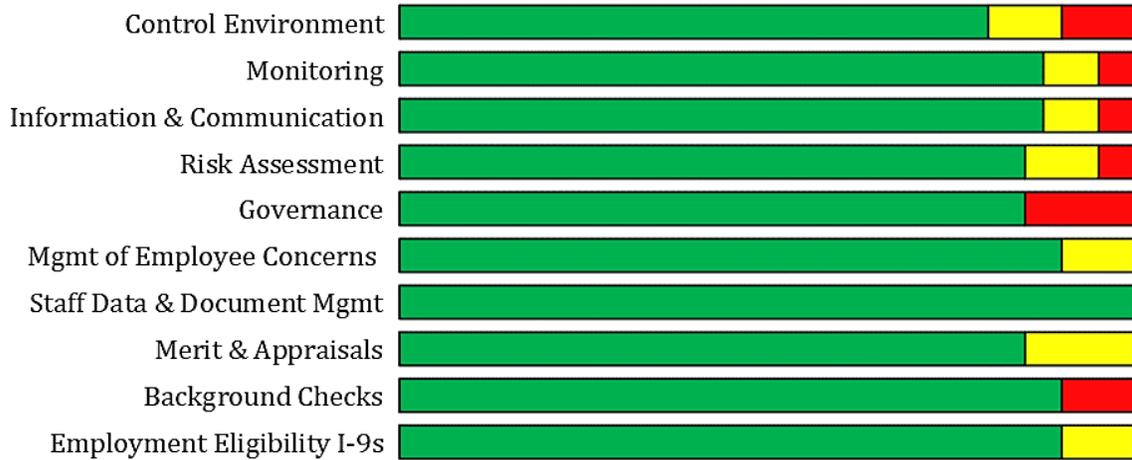
Participated in the following:

- President’s Cabinet
- Senior Leadership Group
- President’s Policy Committee
- Policy Advisory Committee
- Board of Regents Policy Committee
- Executive Compliance Oversight Committee
- Institutional Conflict of Interest Committee
- IT Leadership Committees

- HRPP Advisory Committee
- Research Compliance Committee
- Research Cyberinfrastructure Champions
- Highly Restricted Readiness Workgroup
- Enterprise Architecture Group
- College of Veterinary Medicine - Finance Search Committee
- Diversity Community of Practice
- PEAK Advisory Council
- BioMADE Governance Committee
- University of Minnesota Foundation Audit Committee
- Fairview Health Systems Audit Committee
- Metropolitan Council Audit Committee
- Association of College and University Auditors (ACUA) Committee on Athletics

Audit Reports Issued Since June 2021

UMN Duluth Department of Human Resources



Report #	2127	Issue Date	Aug-21
# of Essential Recs.	4	Total # of Recs.	10
Overall Assessment	Good	Adequacy of MAP	See below

The UMN Duluth Department of Human Resources (UMD HR) is the centralized HR department responsible for supporting various HR functions on the Duluth campus. UMD HR is sufficiently managing the HR processes performed within UMD HR and is addressing most major internal risks. UMD HR has also worked to improve efficiency and consistency by centralizing some HR processes; however, additional review of the distribution of HR functions throughout UMN Duluth is warranted. There are many employees who perform various, and sometimes duplicative, HR/payroll functions. Additional consolidation and/or more clearly established division of duties could improve efficiency and reduce risk. A reassessment of the division of duties could be completed as part of the PEAK initiative. In addition, some UMD HR processes require additional oversight, documentation, and monitoring. This includes for processing background checks, handling merit increases, and ensuring employee appraisals are performed.

Management has provided a plan that responds to all recommendations in this report. Some timelines for remediation are long. Several of the responses indicate either an acceptance of risk, and/or responsibility being redirected to the VP of HR to address as part of the broader PEAK initiative.

VP for Research Transition Review

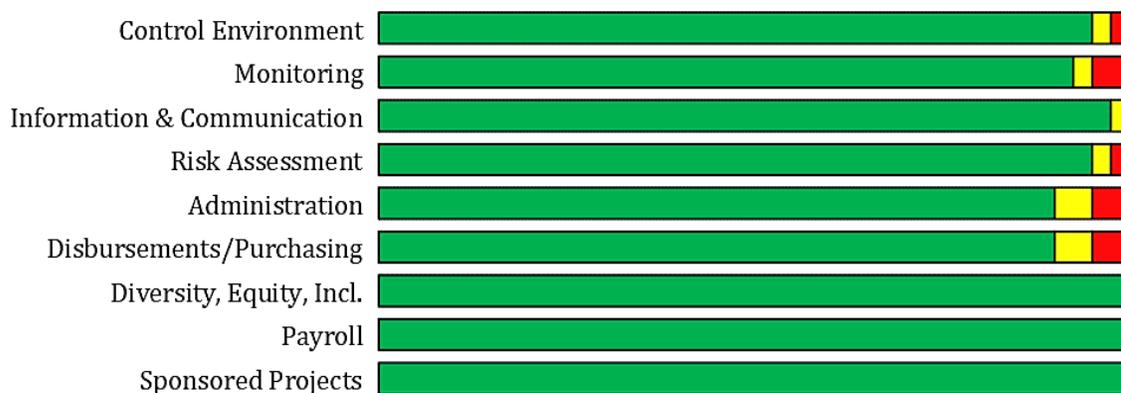
Due to the audit not resulting in any issues considered either “essential” or “significant” a control evaluation chart was not developed for this report.

Report #	2128	Issue Date	Jun-21
# of Essential Recs.	0	Total # of Recs.	0
Overall Assessments:	Good	Adequacy of MAP	NA

From the results of the audit work performed, we believe the activities of the former Vice President reflect a prudent use of University resources and thoroughness in the necessary administrative functions required for a smooth transition for the interim Vice President. Interviews with core staff members, as well as a review of HR and financial data noted no inappropriate new/increased deferred compensation agreements or spending. Administratively, all expense reports, absences, performance appraisals, and Reports of External Professional Activities submissions of direct reports have been completed and approved. Most staff members interviewed expressed that the transition was exceptionally professional and smooth.

■ Adequate Control
 ■ Significant Control Issue(s)
 ■ Critical Control Issue(s)

Graduate School



Report #	2201	Issue Date	Jul-21
# of Essential Recs.	2	Total # of Recs.	4
Overall Assessments:	Good	Adequacy of MAP	Satisfactory

The Graduate School helps facilitate masters and doctoral degrees for more than 130 research-based graduate programs between the Twin Cities and Duluth campuses. They are responsible for the approximately 7,000 students enrolled in masters and PhD degree research programs. From the results of the audit work performed, we believe the Graduate School has developed a control environment and a system of internal control that addresses most major business and compliance risks. Results of the employee survey indicate that employees share an exceptionally positive view of management and support staff. The audit resulted in two issues considered “essential” to minimizing existing operational and compliance risks including establishing reconciliation processes for credit card activity and implementation of proper approval processes for charter rentals with appropriate liability insurance. Two other recommendations, rated significant, are intended to assist the Graduate School in their efforts to improve procedures and controls in the management of disbursements and information systems.

UMN Morris Chancellor Transition Review

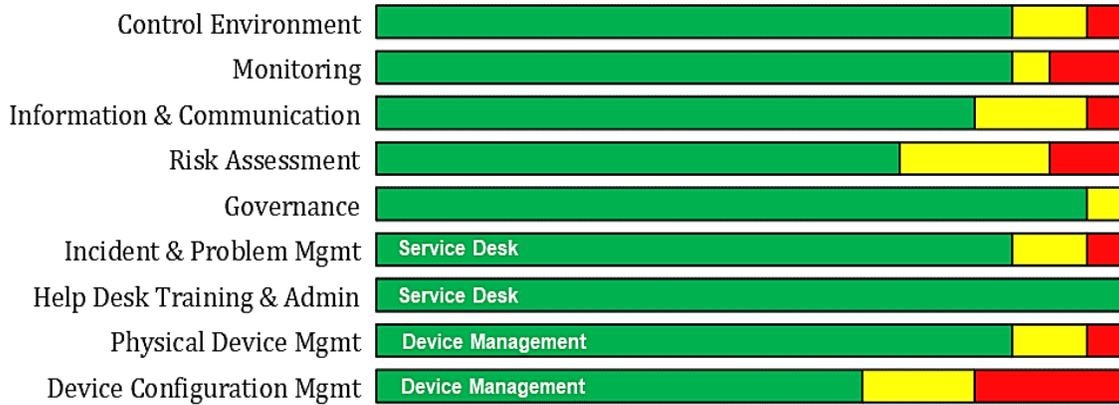
Due to the audit not resulting in any issues considered either “essential” or “significant” a control evaluation chart was not developed for this report.

Report #	2202	Issue Date	Jul-21
# of Essential Recs.	0	Total # of Recs.	0
Overall Assessment	Good	Adequacy of MAP	NA

From the results of the audit work performed, we believe the activities of the former Chancellor reflect a prudent use of University resources and thoroughness in the necessary administrative functions required for a smooth transition for the Acting Chancellor. Interviews with core staff members, as well as a review of HR and financial data noted no inappropriate new/increased deferred compensation agreements or spending. Administratively, all expense reports, absences and Reports of External Professional Activities submissions of direct reports have been completed and approved.

The only issue we identified is that performance appraisals for the former Chancellor's direct reports have not been completed since 2019. The Acting Chancellor for UMN Morris has been informed and acknowledges this needs to be addressed.

OIT Service Desk and Device Management



Report #	2203	Issue Date	Aug-21
# of Essential Recs.	7	Total # of Recs.	17
Overall Assessments: Service Desk = Good		Adequacy of MAP	Satisfactory
	Device Management = Adequate		

OIT User Support is responsible for OIT's technology Service Desk and central device management, referred to as Computer and Device Support (CDS). OIT User Support provides all Service Desk and CDS services as a common good funded through University cost pools. OIT User Support's Service Desk has developed an overall strong control environment and system of internal controls to address most risks. However, there are a few areas of risk and non-compliance that should be addressed including improving incident prioritization practices, ensuring root cause analysis is consistently conducted, and consistently handling and documenting lost or stolen devices.

CDS has developed an adequate control environment and system of internal controls to address most risks associated with device management. There are an array of robust controls, practices and processes that help mitigate overall device security risks including the use of systems that automatically update and patch devices remotely. Despite these many positive aspects, there are some controls for device management that need improvement given the high-level of inherent risk. Areas for improvement include additional management of local administrator accounts to devices, improving device inventories, monitoring of high-risk activities, and access management.

NCAA Eligibility Documents

Due to the audit not resulting in any issues considered either "essential" or "significant" a control evaluation chart was not developed for this report.

Report #	2204	Issue Date	Sep-21
# of Essential Recs.	0	Total # of Recs.	0
Overall Assessments:	Good	Adequacy of MAP	NA

The University of Minnesota Gopher Athletics program consisted of 25 different sports and approximately 760 student-athletes during the 2020-2021 academic year. The Gopher Athletics program is subject to the rules and regulations of several associations and conferences. The Office of Athletic Compliance (OAC) serves the University by helping to educate student-athletes and athletics staff about these rules and regulations. The OAC also enforces the rules and regulations and self-reports violations. From the results of the audit work performed, we believe the OAC sufficiently completed eligibility documents during FY21 across all sports. The testing of 75 student-athletes from 25 University sports and the testing of Certified Eligibility Lists and Squad Lists for each of these sports revealed that OAC's processes are effective for ensuring the student-athletes and teams completed the required eligibility documents. This is especially notable as COVID-19 forced major changes to the athletic seasons and compliance processes, which required the OAC to adapt and adjust rapidly to changing compliance requirements.

■ Adequate Control
 ■ Significant Control Issue(s)
 ■ Critical Control Issue(s)

School of Dentistry



Report #	2205	Issue Date	Sep-21
# of Essential Recs.	27	Total # of Recs.	46
Overall Assessment:	Needs Improvement	Adequacy of MAP	Satisfactory

The SOD has had many leadership and organizational changes since our last audit in 2016. There have been two interim deans, with the most recent permanent dean named in June 2021. Other leadership changes since our last audit include the CFO, Controller, Interim Clinical Affairs Associate Dean, as well as several other interim departmental dean and director changes. From the results of the audit work performed, we believe clinical financial management and IT coordination and oversight warrant improvement to ensure appropriate internal controls are in place, risks are mitigated, monitoring is enhanced and efficiencies are obtained. Items needing clinical financial management attention include: improving separation of duties, reducing aging accounts receivable, enhancing system reconciliations, assigning unallocated revenue properly, and creating additional data analytics for monitoring. IT improvements needed include: improving IT oversight over some high-risk systems, enhancing logging and monitoring processes, strengthening vendor oversight and contract management, and improving authentication and access management controls. SOD IT and finance oversight is fragmented due to the organization's structure and multiple Electronic Medical Record (EMR) systems, which has led to many of the issues identified in the report.

Scholarship Funding, Metrics and Outcomes

Due to the audit not resulting in any issues considered either "essential" or "significant" a control evaluation chart was not developed for this report.

Report #	2206	Issue Date	Sep-21
# of Essential Recs.	0	Total # of Recs.	0
Overall Assessment:	Good	Adequacy of MAP	NA

Managing the effective use of scholarship funds is an important recruiting and retention tool to be used by the University and contributes to minimizing the financial burden of attendance. The U Promise scholarship started in the fall of 2005 to guarantee need-based aid for Pell eligible Minnesota resident undergraduates, and expanded to families with income less than \$125,000. No issues were noted in the audit; from the results of the work performed, it appears that the U Promise scholarship is successful in attracting and retaining Minnesota students, persistence and graduation rates are comparable with those recipients of other scholarships, it appears to attract more first-generation students and increases diversity.

■ Adequate Control
 ■ Significant Control Issue(s)
 ■ Critical Control Issue(s)

Canvas and Unizin



Report #	2207	Issue Date	Sep-21
# of Essential Recs.	5	Total # of Recs.	16
Overall Assessment	Good	Adequacy of MAP	Satisfactory

Canvas is a software as a service (SaaS) learning management system (LMS), which provides virtual learning materials and activities. The University partnered with a number of other research institutions to collectively select Canvas as the learning platform through a procurement process conducted by Unizin. Unizin is a consortium of higher-ed institutions established to address technological challenges and develop digital teaching and learning capabilities for members in a collaborative manner. Canvas has an overall strong control environment and is well-managed. These positive aspects enabled the University to quickly pivot to virtual course modality during the COVID pandemic, and according to OIT's 2020 IT Governance survey 77% of users are satisfied or very satisfied with the service. Despite the many positives, there are some processes that require further improvements to ensure adequate oversight and minimize risks. Areas for improvement include: codifying and enhancing involvement from the Provost Office and faculty in governance; improving user activity monitoring; expanding oversight and security of vendor managed learning tools integrated with Canvas; and enhancing management of user access and privileged accounts. The inherent risk associated with University's participation in Unizin is currently low. However, oversight will need to be enhanced going forward to ensure the use of Unizin aligns with the University's long-term vision and risks are managed as its use is expanded.

SNAP Review Summary

SNAP reviews are highly focused reviews conducted on a single University process or activity. These reviews are designed to be completed quickly, and often leverage data analytics to minimize unit disruptions. They are intended to provide prompt results to business process owners so that potential problems can be addressed prior to formal audit reviews. The following is a summary of the SNAP reviews we conducted this reporting period.

Travel Card Unallowable Expenses

Chrome River is software used by the University to process and route travel and expense related activity. We obtained Chrome River expense reports from CY2020 and judgmentally selected a sample of expense reports with unallowable expenses for review to determine whether employees paid the University in full either through billing or payroll deduction.

Chrome River Delegations

We reviewed expense approval delegations within Chrome River that deviated from the assigned one-up approvals in PeopleSoft Human Resources Management System (HRMS).

Annual Performance Evaluation

We reviewed whether faculty/staff annual performance reviews were actively being recorded in PeopleSoft HRMS in alignment with the Office of Human Resources Performance Evaluation Policy.