

IT Strategy and Audit Preparation Update



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BOT Business Affairs Committee Presentation
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Technology Strategy Update

- Banner and Ancillary Software
- Infrastructure
- Education and Research
- Staffing and Reorganization
- IT Audit Preparation

Banner and Ancillary Software

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New Web Sites

- Launched in December
 - > www.ncat.edu
 - > hub.ncat.edu
 - > Online directory
 - > New search engine
- Initial issues
 - > Broken links
 - > Missing content
- Next steps
 - > Reaffirm and clarify vision and role of www.ncat.edu
 - > Develop guidelines
 - Required content
 - Engaging content and format
 - Content for [www](http://www.ncat.edu) vs. [hub](http://hub.ncat.edu)
 - > Assess needs for additional content
 - > Prioritize and implement

Banner and Ancillary Applications

- Banner Self Service
 - > Multifactor Authentication
 - > Go live in March
- InfoEd
 - > Banner integration in progress
 - > RAMSeS data conversion issues
 - > On track for initial summer 2020 launch
- EverFI
 - > Pending policy direction
- Banner Financial Aid Upgrades
- NextGen Workflow
 - > Change of major
 - > Change of grade
 - > Course add/drop
 - > First workflow launching in February
- Banner Document Management Audit
- Banner-Tevera Integration

Blackboard Upgrades

- Hierarchy
 - > In production
 - > Chairs validating results
 - > Training materials under development
- Ally
 - > Developing rollout and training plan with Distance Education
- SaaS
 - > Completed December 2019
- Ultra
 - > In planning
 - > Potential cutover in summer 2020
- Banner-Blackboard Interface
 - > Delayed due to SaaS deployment
 - > Expected cutover February 2020

Data Analytics

- Predictive Analytics
 - > Retention and graduation models on track for April 2020 deployment
- System Office Data Marts
 - > Sharing responsibilities with OSPIE, HR and ITS
 - > HR Data Mart closed on time 3 out of 4 months in fall semester
 - > Student Data Mart closed on time in 2019
 - > Financial Data Mart kick off in February 2020
- AVC Data Governance and Business Intelligence will serve as interim Director of Analytics for OSPIE

Data Analytics (cont'd)

- Process Assessment
 - > Tuition waiver, early college students, residency codes
- Transfer Articulation
 - > Begin in February 2020
- Banner Data Remediation Efforts
 - > Birth date
 - > CIP codes
 - > Campus telephone numbers

Software Acquisition and Implementation

- Expanding Current Review and Prioritization Processes
 - > Improve initial review and resource assessments
 - > Leverage existing applications
 - > Coordinate acquisition with implementation resources
- Partnering with Academic Affairs and Business & Finance
- Researching current practices

Infrastructure

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Apartment Complex Networking

- FY19 Apartment Complexes
 - > Initial Internet access in place
 - > Initial Wireless networking in place
 - > Permanent room cabling in progress
- FY20 Additional Acquisitions
 - > Initial assessment completed
 - > Planning fiber connections and in room access
- Wireless Access Points Evaluation
 - > Expand existing Cisco wireless?
 - > Implement Extreme wireless?
- Fiber Connections to Buildings
 - > Under review with consultant

Infrastructure Projects

- Craig Hall Renovation
 - > Nearly complete
 - > Water pressure issue with sprinklers
- Multifactor Authentication (MFA)
 - > Banner Self Service in March
- Azure Password Reset
 - > On hold pending Authentication Standard
- Windows Server 2008 Retirement
 - > Complete in February 2020
- Active Directory Level
 - > In planning
- Ransomware Defense
 - > AD Group Policy remediation
 - > AD enterprise rollout
 - > SCCM remediation & antivirus
 - > Launching in March

Network Access Layer Upgrade

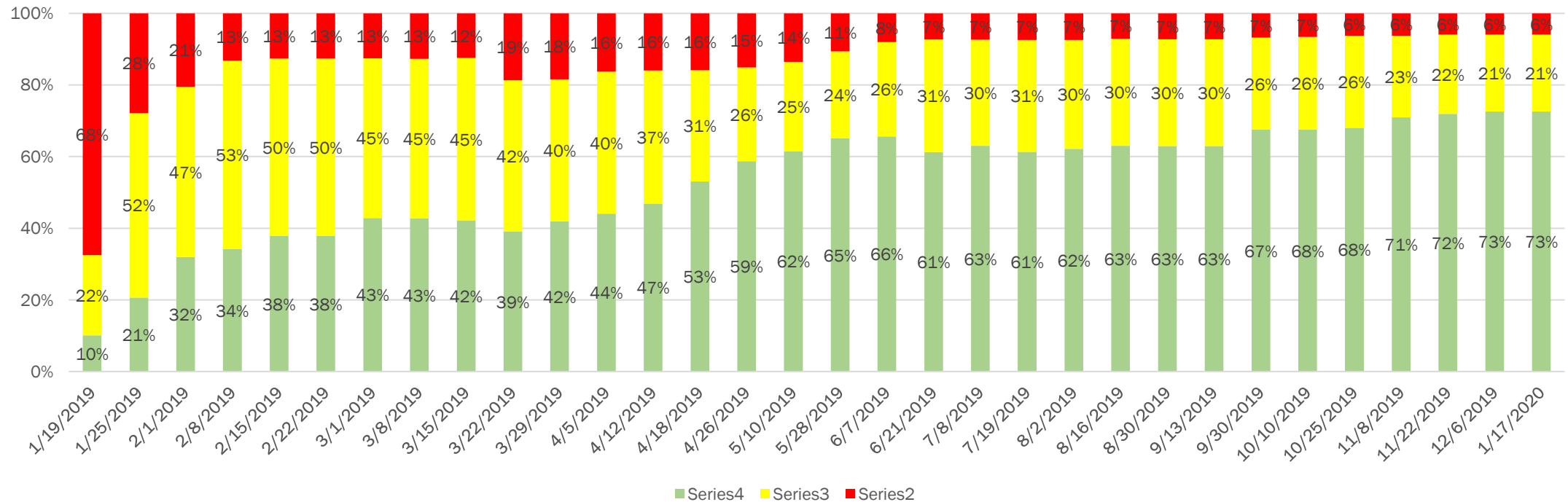
- Phase 1 – Network Management Software
 - > Complete
- Phase 2 – Switch Installation
 - > Complete
- Phase 3 – Network Access Control (NAC) Software
 - > In design
 - > Initial focus is isolation of employees, students and devices
- Wireless Upgrades
 - > Cabling ordered
 - > Evaluating equipment from alternative vendors

Telecommunications Room Remediation

- Issues
 - > Safety
 - > Access control
 - > Temperature
 - > Fire protection
 - > Power management
- Telecommunication Rooms & Enclosures Standard
 - > Draft complete and under review
- Total 210 rooms
- Status
 - > Total – 1,511 issues
 - > Resolved – 1,097 issues (73%)
 - > In progress – 324 issues (21%)
 - Fire Stop – 96 in progress
 - Cabinet Ground – 125 in progress
 - > Not started – 90 issues (6%)

Telecommunications Room Status

Telecommunications Room Remediation Item Status



Education and Research

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Winter Projects

- Classroom/Computer Lab Upgrade Cycle
 - > Resolving lingering issues from Summer 2019
 - > Out of cycle upgrades
 - College of Arts, Humanities, and Social Sciences computer lab (installed)
 - Joint School of Nanoscience and Nanoengineering computer lab (ordered)
 - > Pending
 - Reconcile classroom list and update baseline standard
 - Expand faculty development opportunities
 - Consolidate software license management
- Science DMZ
 - > Governance completed, design and equipment list revised
 - > Equipment ordered

Academic and Client Advisory Committee

- New Governance Committee
 - > Launch in February 2020
- Topics
 - > Google G Suites or Microsoft Office 365?
 - > OneID changes
 - > Computer lab software version control
 - > Student technician program

Staffing and Reorganization

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ITS Reorganization Status

- Filled
 - > Associate Vice Chancellor for Information Technology and Deputy CIO
 - > Associate Vice Chancellor for Data Governance and Business Intelligence
 - > Director, IT Project Management and Business Operations
 - > Director, Network and System Administration
 - > Director, Enterprise Application Services
- Vacated
 - > Director, Client Technology Services

Organizational Assessment

- Data Collection – Complete
 - > Supervisor and technician interviews
 - > Funding information
 - > Job descriptions
 - > Peer data review
- CIO Panel Review – In Progress
- Draft Report and Recommendations Received

IT Audit Preparation



Audit Preparation

- Identify Risks
 - > Completed 19 Information Security Assessments
- Prioritized Plan to Address Risks
 - > Annual Security Plans FY 19 and FY 20
- Show Progress Towards Addressing Risks
 - > Information Security Plan FY 19 outcomes

Identify Risks – Information Security Assessments

- Based on ISO 27002 International Standard
- Resource Inventory
- Completed 19 Assessments
- Several Processes In Place
 - > Immature
 - > Need documentation
 - > Need additional staff training on processes

Accomplishments to Date

- Policies
 - > Information Security Policy
 - > Acceptable Use Policy
- Governance
 - > Information Security Advisory Committee
 - > Information Security Incident Response Team
 - > Enterprise Applications Governance Committee
 - > Data Governance Workgroup
- Standards
 - > Access Control – approved
 - > Server Security – approved
 - > Data Center – approved
 - > Incident Response – draft
 - > Endpoint Security – draft
 - > Resource Inventory – draft
 - > Risk Management – draft
 - > Telecommunication Rooms – draft
 - > Resource Classification – draft
 - > Change Management – draft
 - > International Travel – draft
 - > Network Device Configuration – draft
 - > Cloud Security – draft
 - > Authentication Management – draft

Accomplishments to Date (cont.)

- Security Projects
 - > Perimeter firewall upgrade
 - > Virtual Private Network (VPN) upgrade
 - > Core fiber loop
 - > Second NC-REN connection
 - > Network switch upgrade
 - > ITS server remediation
- Vulnerability Scanning
 - > In progress
- Multifactor Authentication
 - > Banner Admin Pages
- Remediation Projects
 - > CHHS server
 - > Employee domain
 - > Wendover endpoints
- Penetration Test
- Information Security Policy mapping to ISO 27002, PCI DSS, HIPPA, GLBA and NIST 800-171

In Progress

- Remediation Projects
 - > Campus A/V systems
 - > College AD servers
 - > Windows 2008 servers
- Network Security
 - > Network Access Control (NAC) software
 - > Network device configuration management software
- Security Education
 - > Launched October 30, 2019
- Office 365 Multifactor Authentication
- Information Security Training
- Governance
 - > Executive Security Review Team
 - > Data Governance Workgroup
 - > Academic and Client Advisory Committee
 - > Research Support Workgroup
 - Will grow into Infrastructure Advisory Committee
 - > Network Access Workgroup
 - Will grow into Infrastructure Advisory Committee
- Organizational Assessment
- Information Security Assessment Reviews

Information Security Project Roadmap FY20

- Based on Information Security Assessments during FY19
- Focus on areas of greatest risk
- 21 projects
- Estimated to take 18 months to complete

Information Security Project Roadmap FY20 (cont.)

- Active Directory Enterprise Rollout
- Authentication Standard
- Data Handling Standard
- ESRT Procedures
- Incident Response Standard
- Resource Classification Standard
- Information Security Training Program: All Staff
- Information Security Training Program: Standards
- JAMF Implementation
- Malwarebytes Implementation
- Network Device Configuration Standard
- PCI DSS Assessment
- Penetration Testing FY20
- SCCM Cleanup
- SCCM Implementation
- Server Patch Management Strategy & Documentation
- Information Security Assessment Reviews
- Vulnerability Management Program Implementation
- Windows 10 Migration
- Windows 7 Assessment
- Windows Server 2008 Migration

Next Steps

- Continue Development of Processes
- Continue Current Projects
- Implement FY20 Information Security Plan
- Continue Development Multi-year Roadmap

Questions?