



2020-2021 ITS Annual Report




Appalachian
STATE UNIVERSITY
Information Technology Services

TABLE OF CONTENTS

Table of Contents

◆ TOC-1.....	1
◆ TOC-2.....	2
◆ TOC-3.....	3

Office of the CIO

◆ Letter from the CIO.....	4
----------------------------	---

Teaching & Learning

◆ Online Learning.....	5
◆ AsULearn Expansion.....	5
◆ Remind.com Implemented to Improve Communication with Students.....	5
◆ New Online Textbook Rental Through App State Bookstore.....	6
◆ Sanford Hall Renovation Network Upgrades.....	6
◆ Wireless Capabilities Improved for Visitors to Our Campus.....	6

Students

◆ Student Changes for Online Learning.....	7
◆ Zoom Telehealth Implementation.....	7
◆ Mediat Updates.....	8
◆ Degree Works Upgrade.....	8
◆ Engage Now Offers Automatic Refresh of Colleges & Majors.....	8
◆ Big Interview Now More Secure.....	9
◆ GrubHub Implemented to Improve Payment for Meals for Students.....	9
◆ Graduate School Assistantship Appointment Forms Now Web Based.....	9

Faculty & Staff

◆ Faculty Emeritus Applications.....	10
◆ New Faculty - Improved Biographical Information Collections.....	10
◆ ChromeRiver Travel Authorizations Automated.....	10
◆ Banner 9 Updates.....	11
◆ Dynamic Forms Implementation for Electronic Forms.....	11
◆ New Ticketing & Fan Interaction System Installed.....	12
◆ VOIP Phone System Additions.....	12
◆ New Forms Created for the Office of Disability Resources.....	13
◆ Updated Website for Information Technology Services.....	13

TABLE OF CONTENTS

IT Security

◆ DUO.....	14
◆ Cybersecurity Training.....	14
◆ Cost Effective Secure File Exchange: FileShare.....	14
◆ Phishing Test.....	15
◆ IT Acquisitions Include Compliance/Risk Assessment for Varied New IT Solutions.....	15
◆ Work From Home Cyber Protection.....	16
◆ Minimum Security Standard.....	16
◆ Upgrade to Database for Additional Security.....	16
◆ Vulnerability Scanning Platform for University Assets.....	17

Infrastructure

◆ Expansion of Disaster Recovery Capabilities.....	18
◆ Hardware Cost Savings.....	18
◆ Data Storage Capabilities Expansion.....	18
◆ Test Environments for High-Profile Systems.....	19
◆ IRAP Data Management Improvement.....	19

IT Governance

◆ IT Policy Work.....	20
◆ IT Standards Development.....	20
◆ Enterprise Services.....	20
◆ Customer Visible Changes.....	21
◆ University Communications.....	21
◆ IT Project Management Improvements.....	22

IT Assessment Efforts

◆ Surveys.....	23
◆ IT Governance Assessment.....	23
◆ Periodic Comprehensive Review.....	23
◆ UNC System Office Assessment.....	23

IT Support

◆ IT Support.....	24
-------------------	----

Looking Forward

◆ Identity & Access Management Solution.....	25
◆ Replacing Classroom Technology.....	25

TABLE OF CONTENTS

Looking Forward (cont.)

◆ Redesign & Consolidate Course Schedule Tool.....	26
◆ HEERF III Funding.....	26
◆ Next Generation Network Backbone & Routing Replacement.....	26
◆ New Security Awareness Platform.....	26
◆ Consolidated & Simplified Faculty Contracting Tools.....	26
◆ Improve Desktop Lifecycle & Establish Standard.....	27
◆ Upgrades to Our Infrastructure.....	27

IT Shout Outs

◆ CIO, David Hayler Retires.....	28
----------------------------------	----

About Us

◆ App State Information Technology Mission.....	29
◆ ITS at a Glance.....	29

OFFICE OF THE CIO



Wow, what a year! I suppose that is stating the obvious. But, as I read through the various accomplishments information technology professionals had this past year - both within central ITS and our colleagues in distributed technology areas - one has to be just awestruck with the numerous accomplishments. Sure, it was challenging and there were many long days that led to folks not having much in the way of a work-life balance. But, we not only survived, we truly thrived. For years, we felt that information technology was critical to the success of the mission of the university. This past year we were given the opportunity to prove that notion - and we did.

We rose to all challenges and worked our tails off to make sure our faculty, staff and students had everything they could possibly need to function well through this terrible pandemic. I know there's still a ways to go to get through this, and as the famous poem states, "miles to go before we sleep."

We have many large projects on the horizon that will continue to take some time and effort on many people's part. This fall alone we will begin an Identity and Access Management project, implement new hardware and software solutions to help our cyber security posture, and do a full external review of IT at Appstate. Knowing that we have an incredibly talented group of professionals across our campus who work hard at whatever comes our way is empowering. I'm proud of the work we have done and will continue to do. Today and everyday, we give our all for Appalachian State. I look forward to a great year ahead of us.

Best,

Tom

TEACHING & LEARNING

Online Learning



During this period of online learning, ITS continued to meet the demand for options for remote learning:

- ITS **expanded the number of remote computer labs** available through our uDesk platform and we continue to work to improve this offering with **enhanced performance** and **expanded support for new classes**.
- For faculty who wanted to teach remotely from the classroom, **over 200 cameras and microphones were installed** and **professional development sessions were provided** to faculty on how to use these in their classrooms.

AsULearn Expansion

The resources available for AsULearn were expanded to meet the increased demand for Online Courses. These resources include **additional data storage capabilities** that gives AsULearn the **capacity to keep 25 months of data** before moving the data to a backup repository.



Remind.com Implemented to Improve Communication with Students



One of the challenges faculty have had during this shift to mostly online and hybrid instruction is communication with students. Many faculty have surmised that students do not read their email. With Remind.com, **faculty can send messages to students via text or through the Remind app on their phone or other devices**. The service is **integrated with AsULearn**, or faculty may use the service

through the Remind.com website or through the Remind app. Remind.com has proven to be instrumental in meeting students where they are with their communication preferences.

TEACHING & LEARNING

New Online Textbook Rental Through App State Bookstore

The new online textbook rental was made available for Summer Sessions 2021 and will continue for future semesters. ITS worked with the Bookstore and the Center for Academic Excellence so students can review their textbooks and course materials for all classes they are enrolled in. If a textbook is available digitally, students will be able to access it on the first day of class. **Students can access content anytime, anywhere — including 100% offline access.** Physical textbooks of titles that do not have a digital version will also be provided as part of the textbook rental program.



This **contact-less process for distributing textbooks will provide cost savings and greater flexibility for faculty who will no longer need to commit to a book for 2 years.** Students will have a **flat predictable cost** for textbook materials, which is not dependent on the classes they take.

Sanford Hall Renovation Network Upgrades



The Sanford Hall Renovation will house the Department of English and will feature improved classrooms and larger offices, as well as more common areas and collaborative workspace for students. **ITS provided wired and wireless configurations for this new improved space for campus.**

Wireless Capabilities Improved for Visitors to Our Campus

Eduroam is a service specifically for higher education institutions and is based on the **most secure encryption and authentication standards available.** This system allows our faculty, staff and students travelling to other campuses, to have an **easy to configure wireless experience** regardless of their location.



ITS plans to expand this service over the coming year to enable Eduroam for visitors visiting our Campus.

STUDENTS

Student Changes for Online Learning



- Quickly made schedule changes
- Created Daily Health Checks Website: healthcheck.appstate.edu
- Added Course drop forgiveness
- Changed Grades to Pass/No Credit selection
- Moved existing schedules online
- Enabled the Academic standing rule application
- Enabled Repeat Forgiveness
- Commencement attendance collection
- CARES Act funding application
- Created a Secure Submission & Review System for High-Risk Faculty and Staff to Request Accommodations Due to COVID-19

Zoom Telehealth Implementation

Zoom Telehealth provides our campus health providers with a video conference solution that is secure and HIPPA compliant. Zoom Telehealth became especially critical due to the COVID-19 restrictions. A process was developed this year to designate users and areas that needed Zoom Telehealth as well as training and support for these users.

Areas that benefited from this secure Zoom option are:

- Communications Disorders
- Counseling and Psychological Services Center
- Counseling for Faculty and Staff
- Healthy Aging and Adult Health
- Interprofessional Clinic
- Music Therapy
- Nutrition Services
- Psychology Clinic
- Social Work Consultations
- Student Health



STUDENTS

Medicat Updates

Medicat provides a **secure database for health, counseling, sports med**, etc., and links to our students information in Banner. This year the infrastructure housing Medicat was evaluated and upgraded and includes on premises and cloud solutions.

The amount a student is charged by Student Health Services was also streamlined from a primarily manual process. Billing information is collected from three different locations and insurance is being billed more efficiently. Student Accounts receive these charges at the end of each day.



Degree Works Upgrade



Degree Works is a popular advising and degree audit tool that helps students and their advisors successfully navigate curriculum requirements. Degree Works was upgraded this year for more **improved features, better security, and federal compliance requirements.**

Engage Now Offers Automatic Refresh of Colleges & Majors

Engage (previously AppSync) is a system that provides a one-stop connection to leadership opportunities at Appalachian State. Every member of our campus has access to Engage and students can explore clubs, organizations, departments and programs. This year an automatic refresh was implemented so that college and major groups are accurately refreshed as changes in college/major

occur. Our Academic Communication Liaisons can now access accurate membership in their college/department with organization membership updated as major changes occur.



STUDENTS

Big Interview Now More Secure



Big Interview is a free training system provided by Career Development that helps prepare students more effectively for a job interview. ITS made this **system more secure** by having our students sign into Big Interview with their **Appalachian State username and password**.

GrubHub Implemented to Improve Payment for Meals for Students

Greater **convenience and less contact** was provided to students in Fall 2020 with the implementation of GrubHub. Students are able to pay for Campus Dining GrubHub options with their AppCard. ITS worked with Campus Dining to affiliate a student's username and password with the Grubhub app on their mobile device.



Graduate School Assistantship Appointment Forms Now Web Based



Twelve Drupal forms maintained by the Graduate School were replaced by a web based platform to hire Graduate Assistants. This system includes **real time validation, notifications, and status updates** for Graduate School staff along with **DocuSign (e-signature) integration**.

FACULTY & STAFF

Faculty Emeritus Applications

The application for faculty to request emeritus status was made easier this year with a consolidated online application for faculty emeritus across all colleges. This system handles multi-step approval routing and document submission for final Provost approval.



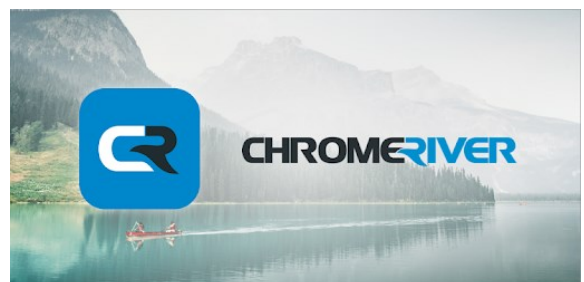
New Faculty - Improved Biographical Information Collection



A paper based process was replaced with a web based form for collecting biographical information for new Faculty employees. This helps reduce manual data entry for Academic Affairs and allows greater data validation up front. This application creates the record in Banner and prevents duplicate records caused by manual entry.

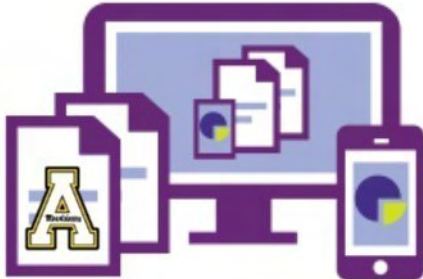
ChromeRiver Travel Authorizations Automated

Business Systems and ITS implemented ChromeRiver for travel authorizations and reimbursements. This includes an automated workflow for approvals and employee reimbursements for travel. Chrome River lets travelers keep track of expenses online, with helpful features such as the ability to store pictures of their receipts.



FACULTY & STAFF

Banner 9 Updates



Banner 9

A multi-year project to upgrade the entire structure of Banner continued this year. This major project provides the adaptation to new technologies and improves the interface for our users.

ITS in conjunction with many areas on campus deployed new and improved applications listed below. These upgrades have included evaluation of the earlier applications and the development of those required in the new technology.

- **Employee Self Service** - The new and improved Employee Self Service provides a more up-to-date interface along with security enhancements such as DUO (2 factor authentication). Employee Self-Service provides new functionality such as "My Teams" and employee photos.
- **Advancement Self Service** - Advancement payroll deduction and constituent search have been converted and upgraded this year. This has improved performance and will allow for future enhancements.
- **Reich College of Education** - The Teacher Education program application and administration was improved by updating the types of field experience functionality and Criminal Background checks.
- **Effort Reporting Application Automated** - Faculty effort reporting automation continued with more applications replacing the paper process in Banner Self Service. Data entry by the Grants Office was eliminated and the administrator is allowed to email participants for Webfocus reporting.

Dynamic Forms Implementation for Electronic Forms

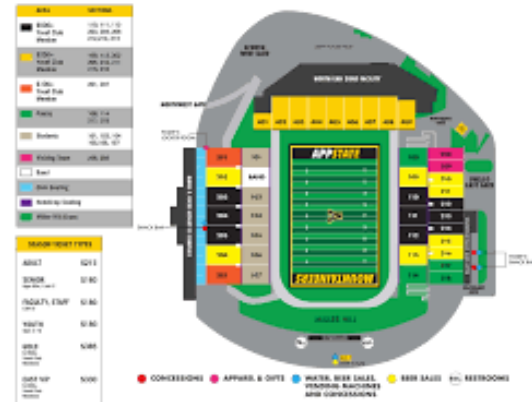
Many paper processes went online during COVID-19, providing an immediate need for interactive electronic forms. By implementing Dynamic Forms these workflows were able to continue providing extra security, allowing integration with Banner and providing multiple electronic signatures when needed.



FACULTY & STAFF

New Ticketing & Fan Interaction System Installed

Working with Athletics and Advancement, ITS installed a new ticketing and fan interaction system. This system includes internal ticketing, fundraising software, and barcode scanners. Communication with Yosef Club members and others regarding ticket sales and fundraising efforts is now simple and effective.



VOIP Phone System Additions



A very successful project for our campus was our Voice over IP implementation which allows our faculty and staff to be connected to their office phone anywhere and anytime they need to be. This was especially helpful and contributed to our success working remotely during COVID-19. Two important enhancements were added this year to our VoIP System:

1. Cisco Jabber is a cloud based communication which delivers instant messaging, voice and video calls. By enabling Cisco Jabber without the use of VPN, our faculty and staff can answer their office phone on their mobile phone.
2. ITS also implemented a system to help track all phone numbers, phones, moves, additions, and changes in the VoIP phone system. This additional organization helps the campus keep our VoIP system running strong.

FACULTY & STAFF

New Forms Created for the Office of Disability Resources



New electronic forms were created to help with special accommodations for our campus:

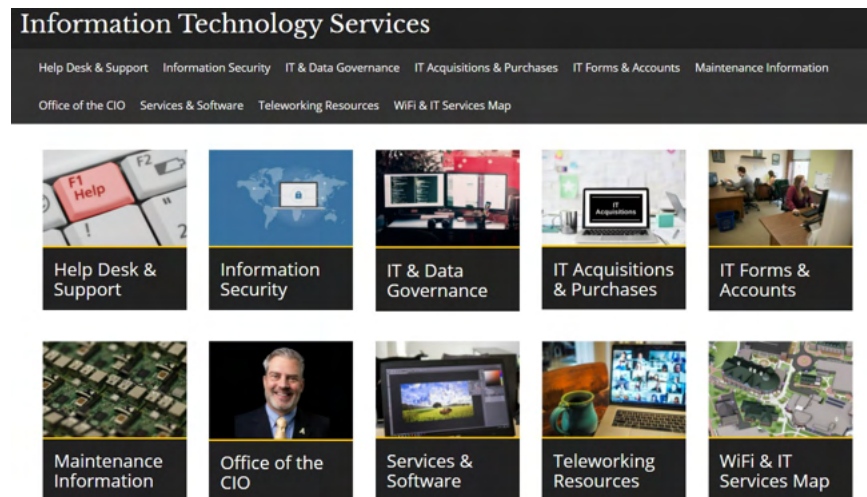
- Student Accommodations request
- Employee Accommodations request
- Additional requests
- A new management interface for the staff of ODR

Updated Website for Information Technology Services

The Information Technology Services website its.appstate.edu has been updated to streamline what services are available and make them easier to access.

Included on our website:

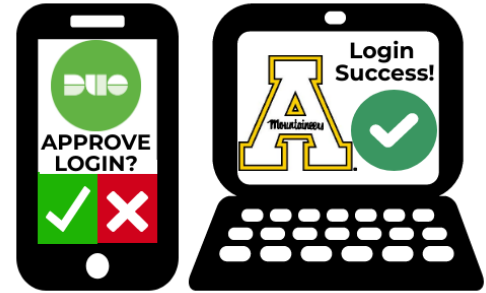
- Help Desk and Support
- Information Security
- IT Data Governance
- IT Acquisitions & Purchases
- IT Forms and Accounts
- Maintenance Schedule
- Office of the CIO
- Services and Software
- Teleworking Resources
- WiFi & IT Services Map



IT SECURITY

DUO

A major multi-year project was completed at the end of 2020. All App State faculty, staff and students are now protected with 2 factor authentication (DUO). 2FA is an industry standard, best practice method for securing accounts. ITS began this project with our staff working in areas with sensitive data. The project was expanded to include all staff, new employees and new students. In the late summer and fall of 2020, all faculty and current students were included. This second layer of security keeps Appalachian more secure for our individual faculty, staff and students and our campus as a whole.



Cybersecurity Training



This year, all of our faculty and staff completed online security training with a **100% completion rate!** In past years, this training was only required for areas that dealt with confidential and sensitive data. The expansion to include all faculty and staff will **help educate our users on what to look for with malicious attacks.** ITS wants to thank all of our faculty and staff for taking the time to complete this training to help keep our campus safer from cyber attacks.

Cost Effective Secure File Exchange: FileShare

ITS rolled out a new cost-effective secure file exchange solution this year called FileShare. This solution allows the Appalachian State University community to share files with colleagues both inside and outside of the University. It is a temporary and secure storage system for sharing files and data. DUO verification adds extra security for this sharing.



IT SECURITY

Phishing Test



Cyber security efforts were expanded this year to include testing some of our users with phishing attempts. The intent with these tests was to assess our shared readiness to spot malicious messages and work together to identify gaps. It also helped our users understand how not to fall for these hostile actions.

The most common email scams are:

- **Phishing** - documents, links, etc. asking you to give your password or other personal information.
 - Never give away your password!
 - Only click on links or open documents from a person you know and trust
 - Verify the email address of the sender
- **Gift Card Scams** - someone you know is out of the office and wanting you to buy gift cards
- **COVID / Current Event Scams** - you have "training" to complete, "COVID relief package", etc.

IT Acquisitions Include Compliance/Risk Assessment for Varied New IT Solutions

ITS improved our collaboration efforts by using automation and linked tickets to work with the following areas when reviewing IT Acquisition requests:

- Office of Disability Resources
- Office of Information Security
- The Center for Academic Excellence
- Payment Card Oversight Committee
- University Communications



These linked tickets provide greater clarity to the customer because they can see each step of the process where previously the work was in disparate tickets or emails.

New workflow statuses were created to help with transparency and reporting. A new IT Acquisitions website explains the process of when an IT Acquisition is applicable and when it's not. The website also provides additional resources.

Lastly, Appalachian State is collaborating with NC State University to create and co-chair a system wide vendor risk management for the UNC System.

IT SECURITY

Work From Home Cyber Protection

As our faculty and staff continued working remotely, ITS expanded key infrastructure services, allowing the business of the University to continue without interruption, while remaining secure:

- Pulse Secure VPN was expanded to support 2,500 connections from 150 previously
- uDesk was updated in Fall 2020 and is Appalachian's virtual desktop solution. uDesk provides secure access to specialized services such as Banner, Dashboards, YoMart, etc.
- Zoom meetings (ITS and the Center for Academic Excellence provided continued monitoring to prevent "Zoom bombing" and other security concerns)
- With the recent multi-year Voice over IP project, university employees were able to have voicemail sent to their inbox, or answer their campus lines
- Security Updates were sent as needed to university owned computers



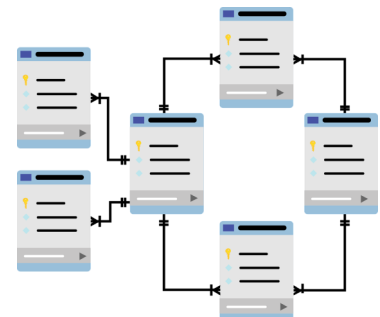
Minimum Security Standard



A new Minimum Security Standard was developed, reviewed and ratified. This Standard clearly defines the specific minimum technical and operational security practices needed to protect different types of University information resources. These security practices are based on the degree of risk that may be realized should these resources be compromised, stolen, degraded, or destroyed.

Upgrade to Database for Additional Security

All of the databases that support Degree Works, Banner and services such as eProcurement, CS Gold, etc. were upgraded this year. These extensive upgrades **extend the support life of the databases, provide extra security benefits and an enhanced feature set.**



IT SECURITY

Vulnerability Scanning Platform for University Assets



A new vulnerability scanning platform was implemented so ITS can scan all internet facing servers on a regular basis. All new servers that are to be placed in network V-LAN with Internet access will be scanned and reviewed before deployment. This will allow our security team to find and address security vulnerabilities across the university IT environments to avoid damaging cyber attacks.

Additional Alerts to Help Prevent Phishing Attacks

With growing cyber threats and increasing ransomware attacks on higher education institutions, an **additional precaution was added to help our campus users identify potential phishing attempts.**

All emails that are external to Appalachian State are now flagged as [External]. This makes it more difficult for phishing attempts to look like they are coming from someone at appstate.edu.



INFRASTRUCTURE

Expansion of Disaster Recovery Capabilities

High availability and disaster recovery capabilities have been expanded for our enterprise databases. This is important because this expansion allows us to have copies and make backups of our Banner and DegreeWorks databases in both on-premise data centers in real time. It also **protects our important production databases in the event of a local disruption that impacts both of our data centers**. An additional layer of protection is provided against certain types of security breaches, including ransomware attacks.



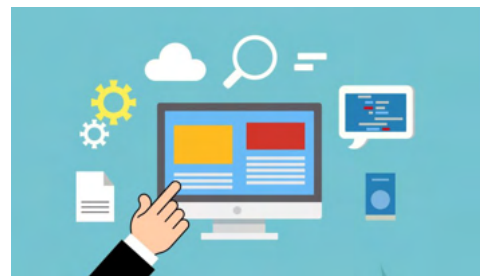
Hardware Cost Savings



Our Oracle databases were migrated this year from expensive proprietary hardware and operating systems to commodity hardware and open source operating systems. This will provide **future savings as well by eliminating maintenance costs and replacement of the hardware**.

Data Storage Capabilities Expansion

ITS expanded the central storage platform this year to support growth in AsULearn, Banner and Campus Storage needs. AsULearn now has the capacity to keep 25 months of data and Banner has the ability to expand as new modules are brought online.



INFRASTRUCTURE

Test Environments for High-Profile Systems



Upgrades, patches and maintenance are frequently required for all systems in IT. ITS now has the ability to apply these changes on a test system instead of immediately in production. This is especially important for systems such as Banner and AsULearn. Areas affected can test these updates and approve them before they are made available for everyone.

IRAP Data Management Improvement

Working with IRAP, data that was previously scattered across many departments, stored in different formats and shared manually, was consolidated into a single data source. Now IRAP can directly create and maintain databases with all of the data as needed and when new criteria arise.



IT GOVERNANCE

IT Policy Work

We reviewed all our Information Technology University IT Policies and worked with our IT Governance groups to retire and replace 9 outdated policies with a set of IT Policies to govern Information Technology at Appalachian.



These new and revised IT Policies Include:

- Consistent definitions and clearly articulated roles & responsibilities
- Establish IT oversight and governance groups with further details in IT standards
- Align our policies with UNC System Policies 1400.1 Information Technology Governance, 1400.2 Information Security, and 1400.3 User Identity and Access Control
- Include 3 new IT Policies: Data Governance, IT Infrastructure and Architecture, and Identity and Access Management

IT Standards Development



- Revisions to the Encryption Standard were ratified to clarify some items
- A Minimum Security Standard was developed with a lot of feedback from our IT Implementation Group and was endorsed by the IT Governance Board of Directors.
- A working group drafted an End User Device Supportability Standard that is under project team review

Enterprise Services

Our new IT Governance Policy gives the IT Governance Board of Directors the responsibility for designating Enterprise Services - e.g., IT solutions that support functions critical to the University's mission.

Enterprise IT Services and Applications are generally accessed by more than one University department; are supported by central, distribution and functional IT units; and are described in Appalachian's IT Service Catalog.

The BoD reviewed the Service Catalog to designate Enterprise Services across our service categories:

- Teaching & Learning
- Research
- Administrative and Business
- Communication and Collaboration
- Endpoint Computing
- Infrastructure
- IT Professional Services
- Information Security



IT GOVERNANCE

Customer Visible Changes



The CIO & ITS Leadership charged the IT Implementation Group (ITIG) workgroup to develop a change management process that is agile, lightweight, focuses on the "big changes" and maximizes shared communications. In consultation with the Client Management technical advisory group, the IT Implementation workgroup developed a process that is being tested by ITS.

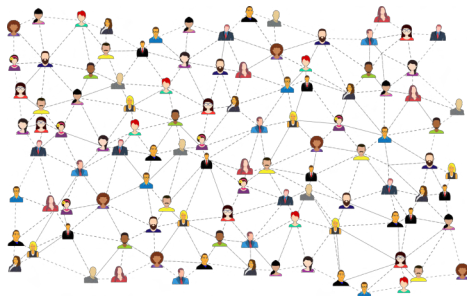
Technical Advisory Groups

We reorganized our Technical Advisory Groups website so that our 17 Technical Advisory Groups are now grouped by the IT Service categories published by Educause. In 2020-21, the IT Gov BoD approved these new Technical Advisory Groups:

- **Academic Technologies:** Review requested academic technology acquisitions
- **Security Oversight Committee & Physical Access Governance Group:** Develop and maintain University Security Camera Policy, Standards and Guidelines, review proposals for security camera equipment, monitor conformance with security camera policy, make recommendations regarding best practices for maintaining and extending University Security Camera systems and any exceptions to the Security Camera Policy, as well as review and approve proposed changes to physical access controls and methods, and governs the CS Gold product
- **HIPAA Governance Group:** Oversee the overall development, implementation, and operationalization of the University HIPAA compliance program



University Communications



We added members representing University Communications (UComm) to the ITIG and IT Governance Board of Directors, and added a UComm component to IT Projects that have a significant campus communication need to improve our coordination with University Communications.

IT GOVERNANCE

IT Project Management Improvements

With guidance from our IT Governance groups, we continue to refine our IT Project management system and IT Project reports. This year we focused on consistency to IT Project approach with ITS Infrastructure Systems, Enterprise Applications, Project Management Governance & Outreach, and Office of Information Security documenting Project Need, Benefit, Approach and Completion criteria for all IT Projects in our IT Project Portfolio in Jira.

Additional improvements:

- We began identifying what Bridge Strategic Plan priorities are supported by the IT Project to clearly link our IT projects to University strategic directions.
- At the request of our IT Implementation Group, we added IT Project Statuses for Seeking Acquisition, and Legal Review.
- To better report on projects In Progress, we added a field for Project Update to include information on what was accomplished in the past 2 weeks, what works is planned for the next 2 weeks and highlight any specific accomplishments and challenges



We are continuing to improve our IT Project throughput. In FY 2020-21, we **created 54 IT Projects** and **completed 50 IT Projects**, compared to FY 2019-20, when we created 50 IT Projects and completed 36 IT Projects.

Beyond the numbers, we work to ensure that IT Projects align with University needs by meeting with key groups to confirm their IT project priorities and desired capabilities:

- Quarterly with Academic Affairs, Business Affairs and Student Affairs IT Project prioritization groups for their area's projects,
- Monthly with ITS leadership for ITS Sponsored Projects
- Monthly with the IT Board of Directors for University Sponsored IT Projects
- Monthly with the IT Implementation Group for a high-level review of all IT Projects
- Quarterly with the IT Executive Council for a high level-review of all IT Projects

IT ASSESSMENT EFFORTS

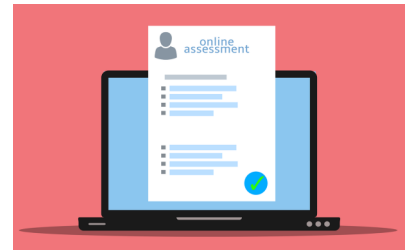
Surveys



ITS participated in the Educause Fall 2020 Student Survey which focused on Connectivity, Experiences Learning with Technology, and Digital Instruction Materials and published our benchmark report. While we had a small sample size of 468 students, we applaud our faculty and instructional technologists - 85% of our respondents Agreed or Strongly Agreed that the instructor uses technology effectively for course instruction, compared to only 80% of all MA peer institution respondents.

IT Governance Assessment

In addition to our annual Retrospectives with the Board of Directors and the ITIG, we also conducted a survey of our ITIG, BoD and IT Executive Council to assess IT Governance & develop our 2021-22 Action Plan. Given the UNC System Office definition of IT Governance, our IT Governance members rated IT Governance as a 4 on a 5-point scale where 1 = Very Ineffective and 5 = Very Effective.



Periodic Comprehensive Review



ITS completed our Periodic Comprehensive Review examining our mission, goals, outcomes, resources, activities, strengths and areas for improvement. Following a self-study, an external reviewer conducted an assessment with input from the IT Governance Board of Directors and numerous campus stakeholders, and ITS developed a continuous improvement plan that includes many of the planned improvements mentioned above.

UNC System Office Assessment

App State ITS successfully completed the UNC System Office assessments of our UNC IT Policy Compliance and UNC 1400.3 Identity & Access management Compliance.



IT SUPPORT

The primary mission of IT Support Services is to provide computing service, support, and consultation to the faculty, staff, and students of Appalachian State University.

- The Help Desk answered **16,000 phone calls** & resolved **3,450 support tickets**
- The Technology Support Center answered **5,100 calls** & resolved **3,320 support tickets**
- The Desktop Support Specialists resolved **4,600 support tickets**
- IT Support has **met or exceeded all Service Level Agreement**



IT Support Services continues to manage the computer refresh plan for Academic Affairs, with approximately 450 laptops being purchased and distributed to faculty and staff, and another 360 computers being purchased and replaced in computer labs across campus.



LOOKING FORWARD

Identity & Access Management Solution



Identity and Access management (IAM) is a framework of policies and technologies to ensure the right users have the appropriate access to technology resources. This year, ITS worked with Moran Technology Consulting for a recommendation for improving practices that were grown organically over the years and became difficult to maintain and adapt to Appalachian State's evolving needs. Investing in IAM can have a significant impact on the university as a whole:

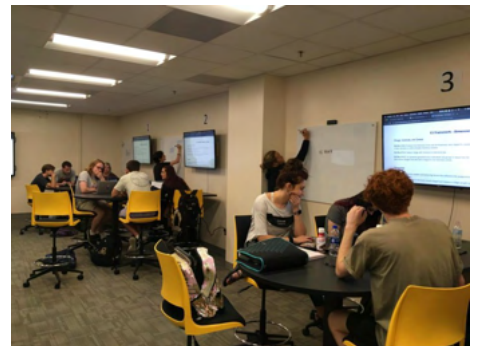
- **Bolster increase enrollment**, academic excellence and student success by support remote teaching/learning and improving the overall student and faculty experience
- **Improve operational efficiency and flexibility** by leveraging workflow automation and reducing manual effort
- **Reduce operational risk** by improving IT security and compliance posture and simplifying the infrastructure and technologies.
- **Empower research and academic collaboration** by providing flexible and efficient means of sharing and accessing data and research tools.

In the coming year, ITS plans to establish an IAM Governance committee and begin the implementation of a modern Identity and Governance Administration (IGA) to replace current customizations and allow skilled IT staff to spend less time on operations/maintenance and more time on transformative activities.

Replacing Classroom Technology

While new technologies are emerging, our campus classroom technology is aging. To keep up with new and innovative technologies, there are several areas in which we plan to improve our existing, aging technology.

- Replace Older Media Managers, which are 8-9 years old
- Add better Audio Systems/Microphones for high usage classrooms
- Refresh 1st generation laser projectors, with new laser projectors
- Refresh Apple Podium Computers with New Remote Operating System
- Replace aging Apple Podium Computers to PC
- Provide Technologies to North Carolina Center for Engineering Technologies (NCCET), which includes 5 Classrooms, as well as a Video Conference Room
- Wey Hall Renovation: Refresh 25 Classrooms with updated Technology
- Edwin Duncan Renovation: Refresh 20 Classrooms with updated Technology
- Create 18 Active Learning Classrooms, including both Technology & Furniture



LOOKING FORWARD

Redesign & Consolidate Course Schedule Tool

ITS is developing one comprehensive system that is being used by App State Online, Summer Sessions, the Graduate School and the Registrar's office to improve the management of course adds and deletes with the Dean of the College's workflow.

HEERF III Funding

ITS plans to use the funds from the Higher Education Emergency Relief Fund act to improve our cybersecurity infrastructure. With unified cybersecurity tools, we will realize additional efficiencies to improve email security, and complete our next generation firewall to protect against malware and give us needed licenses for cloud scanning.

Next Generation Network Backbone & Routing Replacement

Our existing Backbone and Routing Network is approaching end of life and has been in service since 2012. A new Software Defined Network (SDN) will increase our backbone throughput by 2.5 times and allow for increased flexibility and functionality for end users and eventual simplification of onboarding and management.

New Security Awareness Platform

Security Awareness Training is a yearly requirement from our Cyber Security Insurance Provider. ITS plans to find a solution that is more tailored to Higher Education and the users of Appalachian.

Consolidated & Simplified Faculty Contracting Tools

Faculty contracting is currently handled by several contracting tools which were developed independently of each other. Banner has a module (FLAC - Faculty Load and Compensation) which bridges the gap between Banner modules to deliver a comprehensive path to assigning and compensating faculty workload.

LOOKING FORWARD

Improve Desktop Lifecycle & Establish Standard

ITS is working on a recommendation of an IT Lifecycle standard and processes for campus (e.g., computers, laptops, tablets, and phones) to ensure a consistent computing University experience and develop an Academic Affairs annual refresh system.

Upgrades to our Infrastructure

- **Core Firewall Replacement** -The External Firewall was replaced in FY 2020-2021, ITS will replace the Internal Firewall this year. The Internal Firewall replacement will provide additional Malware protection that we have never had at the firewall level.
- **Data Center Switches Replacement** - Several of our Nexus Data Center Switches will reach end of support on 11-30-21. These will be replaced in Fall 2021.
- **Server Refresh** - Parts of our Remote Data Center server hardware that has been in service for approximately 7 years will be replaced.
- **Storage Maintenance Renewal** - Our central storage platform pre-bought maintenance will be renewed.
- **F5 Load Balancer Maintenance Renewal** - Maintenance for our F5 Load Balancer is crucial because these load balancers front AsULearn, Banner, and other critical services. The F5 balances the load of these services and helps maintain service availability.



ITS SHOUT OUTS

Individuals in the ITS department have received numerous Staff Shout Outs throughout 2020-2021. Not only did individuals receive Staff Shout Outs, but the entire ITS Department received a Staff Shout Out for all of the hard work and dedication put into helping campus during the period of remote work, teaching and learning.

- Entire ITS Department
- Kinney Baughman
- Ryan Belt
- Michael Bennett
- Max Bilson
- Leanna Brown
- Justin Cervero
- Mike Childers
- Didier Clouzeau
- Wayne Fee
- Jason Funderburk
- Jason Grubb
- Jerry Hampton
- David Hinshaw
- Virgie Mahala
- Terry Melton
- Martin Moore
- Danny Moorhead
- Jonathan Morefield
- Chad Morgan
- Jason Nichols
- Tung Ong
- Michael Overbay
- Alex Palma
- Travis Phillips
- Misty Pitts
- Brent Pope
- Rob Robertson
- Gina Slagle
- Julie Taubman
- Jeff Tickle
- Tom Van Gilder
- Joubert Visser
- Miranda Warren
- Daniel West

CIO, David Hayler Retires



David began his time at App State as a student, and for the next 32 years, he loyally served in a variety of IT positions, culminating in his time as CIO. David Hayler served as interim CIO from 2010-2012 and again in 2016. He was named Associate Vice Chancellor and CIO in the spring of 2017 bringing over 28 years of Networking and Infrastructure Operations with him. ITS wants to thank David Hayler for the many years he served our campus and the many changes he oversaw during his tenure.

ABOUT US

App State Information Technology Mission

At Appalachian State University, technology, our Institutional data, and our human potential must be viewed as an asset, valued for its ability to transform the educational landscape of our students and enhance the effectiveness of our faculty and staff.

Achieving this goal is central to our purpose and can only be reached by developing a culture in which people are valued for managing resources and consistently making decisions in ways that are aligned with, and measured against the organization's core values.

Information Technology Services is committed to delivering on this value proposition by providing a technology enterprise that embraces these values in support of the academic and business missions of the Institution.

ITS at a Glance

Employees:

- 99 Full time Employees

Locations:

- Anne Belk Hall
- Broyhill Music Center
- Garwood Hall
- Greenway Office Park
- I.G. Greer
- Leon Levine Hall
- Peacock Hall
- Reich College of Education Building
- Remote Data Center
- University Hall



