



Information Technology Services

Annual Report
Fiscal Year 2016-2017

Appalachian
STATE UNIVERSITY.

Letter from the CIO

This past year has been full of excitement around major campus initiatives, but also marked with the challenges of turnover. Cathy Bates, our CIO, departed from our organization last fall. We will always remember and appreciate the contributions Cathy made as we continue to build on the great tradition of service and technical expertise that has made Appalachian a leader among our peers.

The recruitment for her replacement began in early Spring, and after a nationwide search, I accepted the permanent position, having served as interim during this period. I bring 28 years of Networking and Infrastructure Operations with me, and look forward to bringing my analytical, data driven approach to the job.

The kinds of projects that save money and move the campus forward technologically require a diversity of voices, which includes the input and expertise of members of the campus community from multiple departments. The development of a formal IT Governance process has been underway for the last several years and I want to see it continue to evolve and grow.

This year, I formed a group composed of IT leaders in Information Technology Services to serve as a resource for our Governance groups. This group will provide the technical experience and knowledge to successfully aid our governance committees with their decision making. This group, ITIG, (IT Implementation Group), reviews projects and provides a framework to answer the technical detailed questions our governance groups may have. We are also working to further formalize our use of Project Management to give our governance groups more information about our IT projects in order to help them with prioritization and resource management.

This Annual Report shows in the end, everything we do supports our users; faculty, staff, students, prospective students and applicants, parents, and alumni. I would also like to share with you some of the behind the scenes work that makes all these projects come together for the good of our users.

- **Building a Strong Infrastructure** - The campus made significant investments in key areas of our infrastructure. We started the year with a much needed upgrade to the enterprise storage and backup solution, which will insure the integrity and growth of our institutional data for the next 5-7 years. By December, we had finalized a strategy to move forward with a much needed, \$2.6 million network infrastructure upgrade, that has provided for increased network bandwidth and additional features to support Voice Over IP across campus. In May of this year, we purchased new server equipment and are working to replace most of our servers in the Peacock Hall data center, to provide enhanced performance and handle future growth. This work all together represented a total investment of nearly 4 million dollars in infrastructure upgrades and enhancements.
- **Major Upgrades to our Student and Employee Information system** - Our Enterprise Application team spent a significant amount of energy this year, mapping our course for a migration to BANNER 9. This is a required upgrade from our ERP vendor that will provide enhanced features, application efficiencies, and a more user friendly interface. This is a massive undertaking and will take a committed effort from our applications team to recode ten years worth of customizations during the next year and a half. As we must continue with operational growth for the various areas supported by this team, we have been challenged with the task of balancing efforts for new requests, and committing time to the migration. Completion by December of 2018 is critical to ensure continued support by the vendor.
- **Keeping our Data Safe** - Our Information Security team has worked closely this year with campus to continue the development of standards needed for secure handling of our institutional data. This work includes clearly defining roles, responsibilities and specific requirements needed to provide secure and optimal management of data to support the University mission. This work involves identifying and training these data stewards of their responsibility in protecting our data.

As you can see, it has been an extremely busy and eventful year. I am extraordinarily grateful for the hard work and support of my staff during this time of transition. I am looking forward to the upcoming year and excited to see what we will accomplish as a department and as a campus.

David Hayler



Teaching and Learning

Popularity of APortfolio Continues to Grow

APortfolio is an e-Portfolio provider which gives students an on-line archive of their academic work. After a successful two-year pilot, APortfolio is continuing on a three year implementation track. All First Year Seminar and Expository Writing classes were added this year. Every college including Honors College and University College are participating with APortfolio.

Streamlining the Student Teaching Experience

Partnering with the College of Education, the process of managing student teacher placement was enhanced this year. An automated solution replaces the previous process of manual spreadsheets. This workflow improvement eliminates manual reviews and streamlines the student teaching assignment process. This helps both the student and the assigned school receive information faster and more accurately.

Upgrade to Windows 10 for Labs and Campus

Keeping Appalachian current with technology is always a priority for Information Technology Services. The migration to Windows 10 for campus is well underway with labs and classroom podiums complete. With the continuing deployment this fall, 60% of the campus is currently Windows 10. If you would like to upgrade your office computer, please enter a support request at support.appstate.edu



Classrooms Continue to be Upgraded to Digital

Continuing our commitment to technology in our classrooms, ITS invested an additional \$150,000 to our Classroom Technology budget to upgrade an additional 60 classrooms from analog to digital beginning this summer. In addition eleven new Digital Smart Classrooms were installed and 10 Apple podium computers refreshed.

70% of faculty respondents to our annual ECAR survey say they are satisfied or very satisfied with classroom technologies; compared to 62% of faculty respondents at our peer schools.

AsULearn News

AsULearn received a major upgrade this year, which will improve accessibility and includes additional enhancements to improve the faculty and student experience. A new support site has been added (asulearnhelp.appstate.edu) to assist faculty and students navigate the new interface. In addition, a new feature request form was created (asulearn.appstate.edu) to give the AsULearn team more direction and input from our users on what the campus would like for AsULearn to do for them.

Working with the College of Business, Learning Technology Services began rolling out a pilot of the AsULearn Global edition. This new edition is similar to our existing AsULearn environment, but is more 'open', allowing our faculty and staff to do more outside the walls of ASU. This pilot was a success and there are plans to grow this service.

New Online Readmission Application Developed

A new application was developed to streamline the process for the readmittance of students who have been away from the university for a year or more. Working with Admissions, ITS implemented the new online CFNC Readmission Application to streamline the admissions process for these returning students and replace the previous paper process.

Student Services



Helping Appalachian Alumni Stay Connected

Appalachian's Goldbook is a way for Appalachian alumni to find and connect with fellow Appalachian alumni, update their contact information, post class notes and manage their communications from Appalachian.

Alumni Affairs and University Advancement use iModules Encompass (Goldbook) as the platform for e-mail communications with alumni and parents, alumni event registration and online giving.

Working with Advancement, ITS integrated the Ellucian Advancement Connector to allow the flow of data from Banner to iModules Encompass.

"Fixed Tuition"

Keeping Tuition Costs from Increasing

The North Carolina General Assembly passed legislation in 2016 that keeps tuition rates consistent for eight consecutive semesters for bachelor degree-seeking freshmen. Working with Student Accounts and the Registrar's office, ITS made the necessary adjustments to ensure that the tuition for our students remain stable during their four years at Appalachian.

New Course Catalog for Students

In an effort to increase efficiency and accuracy, ITS worked with the Registrar's office to implement a new Course Catalog solution that replaced the paper production of the course catalog. This solution includes better mobile accessibility and search options.

Ensuring Transfer Student Success

Working with the Registrar's office and Admissions, ITS implemented a redesigned CFNC application to make the transition easier for students wanting to transfer schools within the 16 campuses of North Carolina. This new application helps students explore course equivalencies, degree programs, and financial aid opportunities.

Zoom - Our New Web Conferencing Tool

This past year, an important decision was made to move away from the legacy web conferencing product (Collaborate). After a successful pilot, the product Zoom was adopted for our campus. The usage over the last year went from approximately 25 active users for Collaborate to 1,746 users using Zoom. Faculty report that Zoom is much easier to use which is shown from the increase of usage! The Zoom service is available at appstate.zoom.us and can be used by faculty, staff and students.

New Look for Appalnet

The login page for AppalNet was replaced this year with an updated landing page. Students continue to have the benefit of accessing campus services from one location, but now with a new mobile-friendly format.

Student Services

Wireless on Sanford Mall

ITS continues to work with the Physical Plant to bring wireless services to the green spaces of Sanford Mall. This project continues to move forward and should be complete during the fall semester. This will enhance our students wireless experience to this popular area of campus.

Certificate Based Wireless Onboarding

Certificate Based Wireless Onboarding for students and faculty/staff personal devices was introduced to campus Fall of 2016. This process introduced a new, simpler way to connect personal devices to wifi on campus. This process is not username and password dependent, so no reconfiguration of the device is needed when a password expiration happens. The Help Desk responded with a concept to create sites that directed users to the appropriate wifi choice based on role (wireless.appstate.edu).

Centralized Residency for North Carolina Undergraduate Students

ITS worked with UNC-General Assembly, CFI (College Foundation Inc), the Registrar's Office and Admissions to integrate our online application and admittance process with the new North Carolina Residency Determination System.

Students Can Now Pay Their Tuition with eChecks

Partnering with Student Accounts, ITS implemented an eCheck solution this spring where tuition can be paid by check online. A convenience fee for all debit and credit card transactions was also included to offset the costs of processing credit cards by the University.

85% of student respondents say that their overall technology experience is Good or Excellent. This is an increase over last year's 83% favorable rating. Our peer schools received a 76% favorable rating.



Students can Apply for Financial Aid Earlier in the Calendar Year

The federal guidelines for completing the FASFA reports (Free Application for Federal Student Aid) changed this year allowing the prior years tax return to be used. Working with Financial Aid and Admissions, ITS implemented modifications to allow the prior years tax return to be used. This allows students more time to maximize the amount of aid in which they may qualify.

Help Desk

Our Help Desk had a busy year with over 15,000 calls and 6,000 email questions. On an average month, they also respond to 125 chat request. The ITS Help Desk supports faculty, staff, students, applicants, new students, parents, alumni and retirees!

Faculty and Staff Services

New Google University Calendar

A new calendar for the University has been created in collaboration with the Office of the Chancellor and University Communications. Consolidating different departmental calendars into one aggregate University calendar gives a one-stop place to find University events. Go to events.appstate.edu for the new University Calendar.

Implementing New Security Technologies to Protect Confidential Data

ITS is partnering with many campus units to conduct risk assessments and directed technical security testing to help ensure that security issues are identified and managed to reduce risk to University confidential data.

Handling data has been a top priority this year with clearly defined roles, and responsibilities of our staff to provide secure management of our University data. Protecting University personal computers, laptops and tablets from the risk of theft/loss of unencrypted University data is an important part of protecting our data as well.

Affordable Care Act Reporting

Working with Human Resources, ITS developed a process to provide the necessary information from Banner to satisfy IRS requirements for Affordable Care Act reporting.



Voice Over IP Telephone Service for Campus

The conversion of the University's campus phone system to a "Voice Over Internet Protocol" (VOIP) based system is on schedule with half of the phone lines converted before the Fall 2017 Semester! The conversion will allow all of campus to use the same phone system, which will save the University money, as well as improve our communication efficiency. As part of this project, campus edge network switches have been purchased to upgrade network connectivity to gigabit speeds. These switches have all been deployed to upgrade campus buildings.

Responding To Cyber Attacks

Over the course of this past year, ITS has fended off numerous cyber attacks against the University through our security monitoring and response process. These included attacks focused on our faculty/staff and student populations, as well as mounting defenses in advance of some of the major attacks seen in the news. On an average day, our security team defends and mitigates against approximately 30,000 attacks on university servers.

Digital Measures

Digital Measures is a faculty assessment tool that records research, publication and service activity and is used by many departments. A re-engagement process was completed in Spring 2016, and Phase II began this past academic year. A new faculty-comprised committee was formed to serve as consultants and oversight to the faculty activities database. This year, there was a concentration on report development. Several reports were created, including two annual report templates which conform to different points systems within the respective departments (Chemistry and Psychology). Other reports focused on aiding the College of Business in its upcoming AACSB accreditation.

Faculty and Staff Services

Major Upgrade to Banner 9

Upgrading to Banner 9 is a requirement from our vendor Ellucian and is a comprehensive project for all of campus. This upgrade replaces the entire structure of Banner to adapt to new technology and will improve the interface for our users, as well as provide additional functionality and increase flexibility. We are making good progress and are on schedule for this major project.

Over 32,000 Faculty Evaluations were completed by students during the 2016-2017 Academic School Year.

Analytics

This past year, Appalachian Analytics usage has increased with access to Admissions, Registration and Student Accounts data in the warehouse. Analytics was enhanced with the addition of Class Utilization, Degree Conferral, Orientation and Student Conduct data for improved data analysis and reporting.

The analytics team created new dashboards to assist the administrators in the various colleges who depend on the ability to report data from various perspectives. These dashboards and reports have substantially improved data access which will help with informed decisions to improve student success and retention rates.

Future functionality for analytics include Predictive analysis and forecasting of trends for student success.

Over 4000 tests were scored by our Test Scoring Area during the last year.

Migration of Websites to Drupal 7

Migrating the campus websites to Drupal 7 continues to be a major project for the Web Services Office.

This year 66 existing sites were moved to Drupal 7, with an additional 18 new sites built. There are 413 websites currently using Drupal, with over a thousand campus participants in Drupal training.



WebCheckout - Better Asset Tracking

ITS, partnering with the College of Education and various other departments implemented the WebCheckout service this year.

WebCheckout will help Appalachian with a centralized asset management program that tracks the circulation of resources such as laptops, cameras and other equipment available for loan to faculty, staff and students. There are plans to grow and expand this program over the coming year to include even more departments and equipment on campus.

Improving YoMart Efficiency

Business Systems and ITS created a Direct Pay Form to allow campus users to create and route a direct pay request in YoMart. A pilot is beginning this fall. This new form will replace the current paper pay form.

Faculty and Staff Services



New Security Newsletter and Security Online Training

The Office of Information Security has created a monthly newsletter with general tips for better IT security, recent scam attempts, preventing identity theft, cybercrime and more.

Go to announce.appstate.edu to join the Office of Information Security group, or visit security.appstate.edu. Online security awareness training is available to all faculty and staff at security.appstate.edu/securing-the-human

Improving Efficiency for the Office of International Education and Development

This year a workflow solution was created to prevent double-entry for our student applications. A software solution (Terra Dotta) is used by OIED to help maintain federal report compliance. A Banner interface was developed that provides more efficiency and reduces the chances for errors.

Compliance Needs for Athletics

ITS worked with Athletics this year to create an interface with Banner and a software solution called JumpForward. This solution centralizes recruiting, reporting and compliance for our Athletic Departments and includes tracking compliance inside and outside athletics scholarships.

Improved Efficiencies for Fund Reconciliation

Working with Business Affairs, ITS updated the paper-based process for fund reconciliation. All reconciliations are now logged in a Banner table. Non-compliant funds are easier to identify and correct. This saves time and paper resources!

Google Groups Replace Old Technology

Google Groups have been expanded this year as we transition from the previous mass email listserv systems. Google Groups give the owners more control and flexibility of the memberships than provided with listservs.

WebFocus Reports Easier to Access

WebFocus was upgraded this year to version 8.0. This upgrade combines hundreds of dashboards into a single portal. WebFocus users now have one place to access all of their reports!

84% of faculty respondents to our annual ECAR survey say their overall technology experience is Good or Excellent.

Our peers schools only received a 68% favorable rating!

Looking Forward



New Enrollment Management Recruitment Solution

Admissions, Distance Education and the Graduate School selected Slate as our comprehensive customer relationship management (CRM) solution. This solution will become the central portal for student recruitment, Admission applications and onboarding of new students. ITS is working with these areas for a smooth transition.

New Electronic Document Management System

The purchase of our current EDMS solution by another vendor spearheaded ITS's decision to review other Electronic Document Management System offerings available. A needs assessment was developed and vendor presentations are complete. Plans are currently underway to choose a vendor and begin the conversion of all electronic documents.

Google Team Drive

Google Team Drives are shared spaces where departments or teams can easily store, search and access files from any device. The files in Team Drive belong to the team instead of an individual, so if a member leaves, the files stay where they are, so the group can continue to share the information. Team Drive has tremendous potential to supplement our ustor storage needs and ultimately save money by leveraging cloud services for shared storage.

New Time Clock System

Student Development spearheaded an initiative to replace their current time clock system with a consolidated campus wide solution for tracking student workers hours across campus. Ultimately this solution could provide efficiencies in timekeeping, facilitate compliance and reduce the administrative burden of approving timesheets.

Improving Digital Signage Experience

ITS is working with University Communication Liaisons to improve the process of using Digital Signage across campus. Expanded training and procedures are being developed to help departments advertise upcoming events in their areas through Digital Signage.



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