

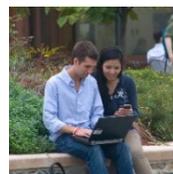
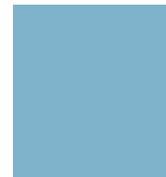


OFFICE of
INFORMATION
TECHNOLOGY

CONNECTING PEOPLE & TECHNOLOGY

MOVING FORWARD TOGETHER

YEAR IN REVIEW: 2019 – 2020



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VICE PRESIDENT & CHIEF INFORMATION OFFICER'S MESSAGE



2020 has been such a challenging year for all of us. The AU community has really come together during these times and I am very proud of how the professionals in the Office of Information Technology have excelled over the past year. In this Annual Report, you will find highlights of some of our key accomplishments which would not have been possible without close collaboration with our partners across campus. These accomplishments show the depth and breadth of services that the Office of Information Technology provides to the university and the rapid pace of change that we support. The report also provides some insight to our organizational performance based on key performance indicators and survey feedback. The Office of Information Technology will continue to enhance, scale and secure our technology platforms this upcoming year and is looking forward to delivering more collaborative successes.

Steve Munson

Vice President & Chief Information Officer

OUR MISSION

Connect people and technology to empower excellence at AU

OUR VISION

Lead organizational transformation with innovative technology

OUR VALUES

PUTTING AU'S VALUES INTO ACTION

- **INTEGRITY:** Do the right thing, even when no one is watching
- **EXCELLENCE:** Aim high and exceed customer/service expectations
- **HUMAN DIGNITY:** Acknowledge the whole person
- **COMMUNITY:** Collaborate openly
- **DIVERSITY, EQUITY, ACCESSIBILITY & INCLUSIVE EXCELLENCE:** Build solutions for everyone
- **FREE INQUIRY & SEEKING TRUTH:** Seek facts, appreciate civil discourse, be curious, and continue learning
- **IMPACT:** Realize business value through future-focused solutions and innovative technology



ORGANIZATIONAL OVERVIEW

Transparency and inclusion—in decision-making, planning, budgeting, and day-to-day operations—run throughout the work in OIT. The organization comprises multiple teams that collaborate to provide services in three functional areas.

ENTERPRISE SYSTEMS & SERVICES

Enterprise Systems and Services improves the way AU conducts business with technology solutions that meet the needs of diverse constituencies. The planning and delivery team works with campus partners and OIT stakeholders to deliver key technology initiatives aligned with university priorities. Solutions engineering evaluates, designs, develops, implements, and maintains enterprise technologies and applications in support of the needs of the University—responsible for web and mobile platforms, and provides technical oversight and enterprise architecture leadership over all IT platforms, including enterprise resource planning (ERP), web content management systems (CMS), enterprise collaboration and productivity tools, service management and operations management, and integration platforms. Business intelligence and reporting services help mature the university's data and analytical reporting capabilities, while web and emerging technologies support innovative digital and mobile tools. The network operations and enterprise infrastructure teams jointly administer the university's technology infrastructure, striving for reliability, availability, and stability of services on which the campus depends.

INFORMATION SECURITY

Information Security supports AU's executive leadership and the community by evaluating the university's digital information assets for sources of risk throughout the IT planning, implementation, management, and ongoing operational phases. The group translates discovered risks into business terms to help stakeholders determine whether to accept, defer, mitigate, or transfer those risks. Additionally, the team is responsible for cyber incident response, delivering a security awareness program, compliance, audit, and crafting and enforcing policy and standards.

IT CUSTOMER SERVICE

IT Customer Service employs industry-standard best practices for service management, change management, and performance measurement. This front-facing group constantly seeks to provide the highest quality of customer service to the AU community. Customer Service strives to manage end-user expectations, train the community on the latest technology, troubleshoot all IT-related issues, and equip faculty and staff with secure, reliable workstations.

OIT SENIOR LEADERSHIP TEAM



Steve Munson

Vice President & Chief Information Officer



Laurie Ambach

Senior Director, Planning & Delivery



Francesco de Leo

Senior Director, Solutions Engineering



Terry Fernandez

Senior Director, Customer Services & Support



Sharjil Hasan

Director, Project Management Office



Cathy Hubbs

Chief Information Security Officer



Kirill Lobachyov

Director, Analytics & Business Intelligence



Mohammad Mirzabeigy

Senior Director, Enterprise Infrastructure



Funda Topcuoglu

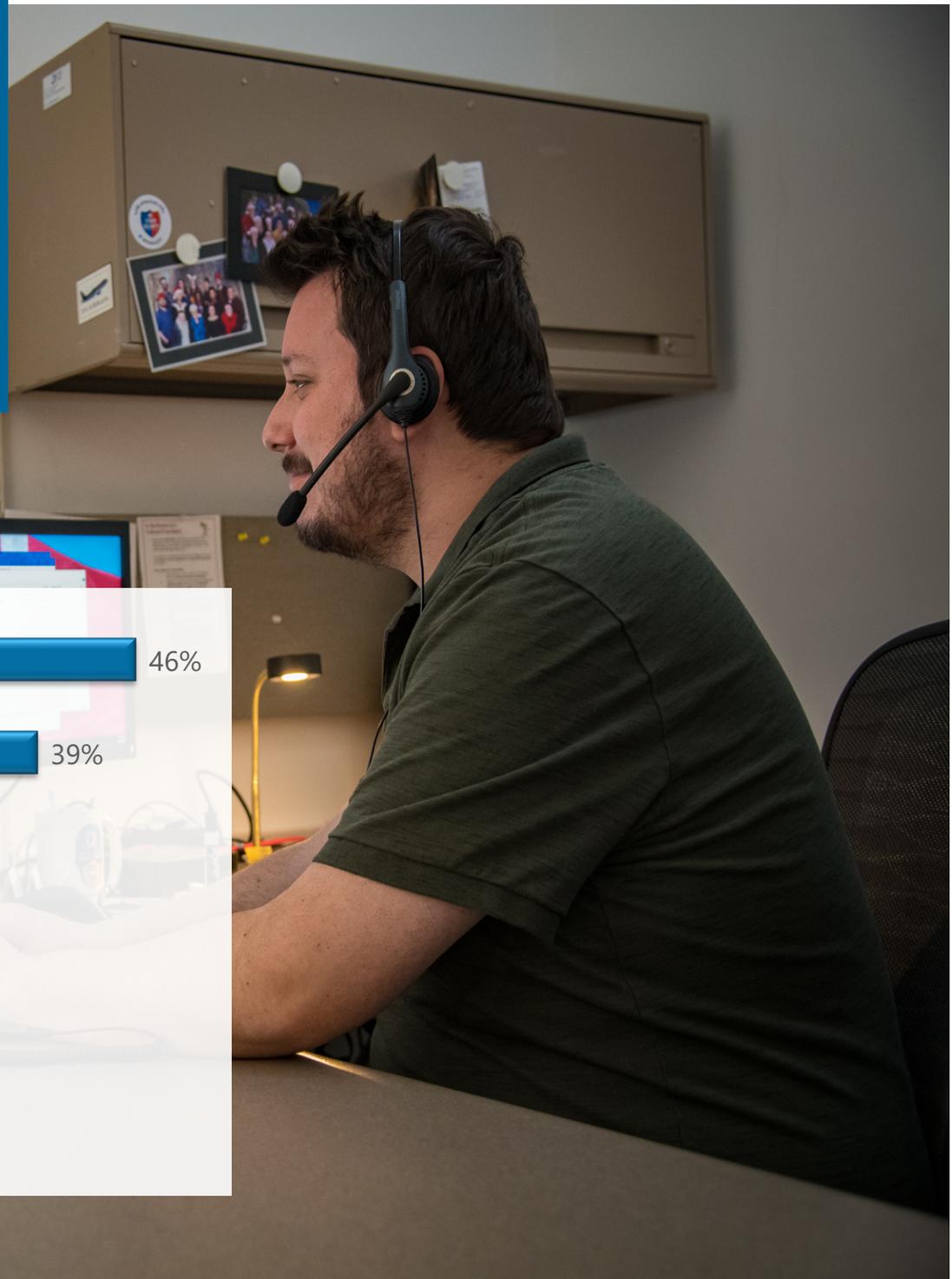
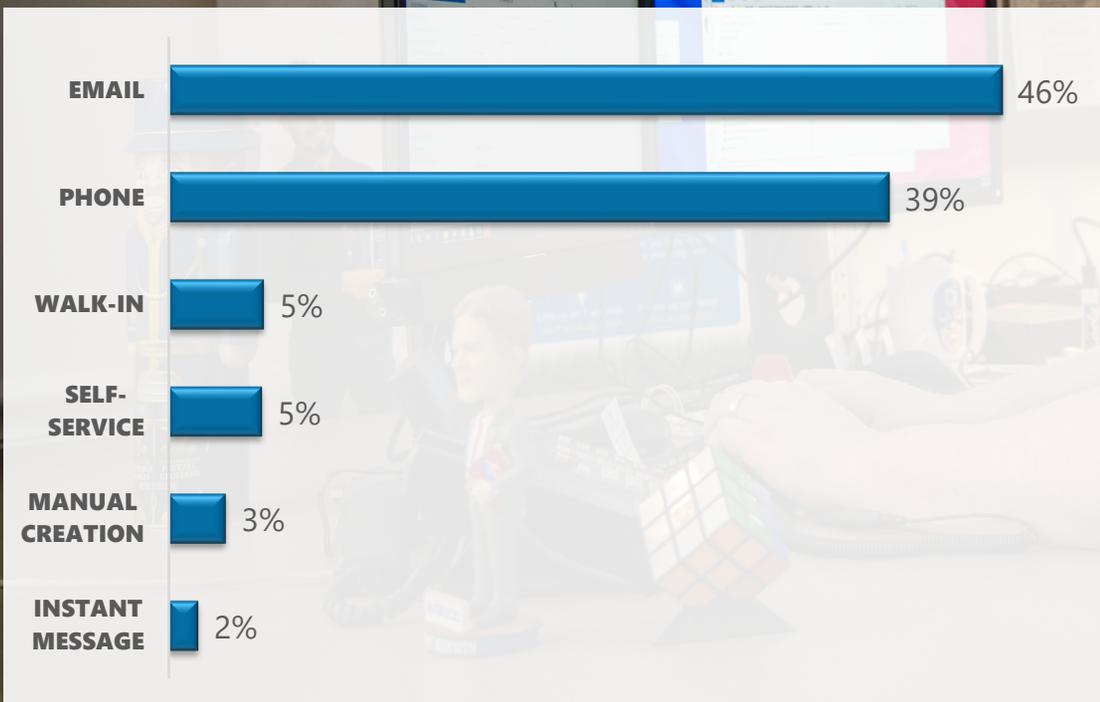
Manager, Budget & Administration

Vacant positions not pictured: Associate Chief Information Officer, Director of Network Operations

PERFORMANCE METRICS

SERVICE DELIVERY & SUPPORT

The OIT Help Desk resolves over 80% of all support requests during the initial contact.



SPOTLIGHT: UNPRECEDENTED TIMES REQUIRE EXTRAORDINARY MEASURES TO SUPPORT AU'S MOVE TO ONLINE TEACHING AND REMOTE WORK

Since American University's announcement that Spring semester classes would be delivered online and AU employees would primarily telework in response to the COVID-19 pandemic, OIT has been focused on supporting the community to work, teach, and learn remotely and online.

From an operational perspective, the infrastructure has remained up and available to support the remote and online experience without any capacity or performance limitations. The success of the infrastructure through these unprecedented times is the result of preparation and planning over the last several years to ensure it was scalable, secure, and designed for high availability.

EXPANDED VIRTUAL PRIVATE NETWORK LICENSES

The first step in our response was to ensure that our systems could support the increased volume of users accessing critical applications using our Virtual Private Network (VPN) service. Licenses were expanded to ensure all students, faculty, and staff that needed to log in regularly would have access, as telework and online teaching created a surge in demand.

Prior to the pandemic, our VPN licensing restricted use of this service to a maximum of 300 concurrent users. OIT purchased and installed additional licenses to allow for the increased volume.



Did you know?

Typical volumes on the VPN service since the community moved to remote work have ranged between 600-700 concurrent users, while pre-COVID-19 volumes were close to 200 concurrent users only.

LAUNCHED ZOOM VIDEO CONFERENCING IN COLLABORATION WITH KEY PARTNERS

An enterprise Zoom license was procured by the University Library and Chief Online Officer for all AU students, faculty, and staff to host virtual meetings and online classes. OIT collaborated with the University Library, Center for Teaching, Research & Learning and the Chief Online Officer to support the roll out of Zoom campus wide.

The popular platform has been a tremendous help to the community. Since its launch, OIT continues to provide training and guidance on best practices to use Zoom safely and securely.

DELIVERED SPECIAL PROJECTS TO SUPPORT ONLINE LEARNING

OIT has also rapidly delivered several projects to support the community such as modifying the Colleague enterprise resource planning system to support Pass/Fail grading options for students and providing analytics from the Blackboard Learning Management System to guide improvements to the online learning experience.



Did you know?

10,190 unique members of the community (students, faculty, or staff) have taken advantage of AU's enterprise Zoom licenses, by either hosting or attending video conferencing meetings.

ADAPTED TO MEET THE CHANGING SUPPORT NEEDS OF THE AU COMMUNITY

During the first two weeks of remote work, OIT developed pointed resources to support remote work on our website (www.american.edu/telework) and conducted twice daily training sessions to share best practices for telework with over 200 staff members in attendance.

- The OIT help desk handled a record volume of user support tickets with roughly 7000 in the first month of the pandemic with a 96% customer satisfaction rate.
- Loaner laptops and specialized equipment were purchased to meet academic needs as student equipment failed or they had insufficient access to required software and hardware to meet course requirements. In the spring, 19 laptops were loaned to students to support online learning.



“OIT swiftly stepped in and supported AU employees by providing Remote Work Seminars to prepare for telework in response to the COVID-19 pandemic. These just-in-time seminars provided employees invaluable, practical, and personalized support to successfully work in a remote environment. It’s amazing how quickly AU adapted to and embraced working remotely.”

GERALYNN FRANCESCHINI, *Executive Director Strategy Implementation, Office of the President*

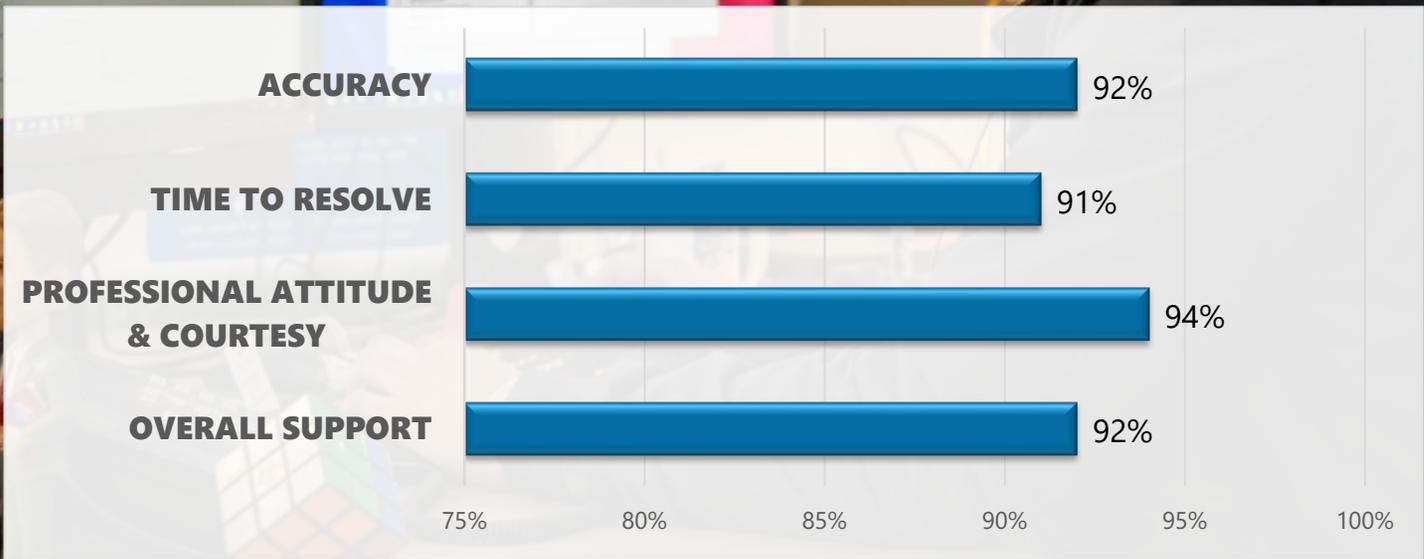
OIT staff identified software made available to students for free during COVID-19 crisis to support their classwork (for example, Adobe Creative Suite).

- For the month of March, OIT saw a 200% increase in knowledge base articles (which provide training and support guidance), as compared to the same time last year, and OIT developed online training videos viewership rose by almost 600% with over 2300 views in the month.
- Our capacity to provide remote support was doubled by buying additional licenses of the software that enables the Help Desk to remotely control a workstation, so staff within the Network Operations Center and campus technical partners could take advantage of the tool.

PERFORMANCE METRICS

SERVICE DELIVERY & SUPPORT

59,356 support requests, excluding those for our technical support partners, with an average resolution time of 12.5 business hours for the Help Desk and 22.5 business hours for requests escalated to other OIT groups



LINKAGE TO THE OIT ROADMAP

Published last year, our ambitious roadmap, *Driving Change: Connecting People and Technology*, charts our course and vision for the remaining duration of the plan.

This document presents highlights of major accomplishments for the past year, with initiatives aligned under four strategic objectives:

- 1 Deliver technology that transforms the University with focus on agility, availability, efficiency, and being user-centered
- 2 Enable community innovation leveraging our strong secure core
- 3 Enable transformation and operational excellence through project and change leadership
- 4 Foster an inclusive learning organization & maximize individual's potential



STRATEGIC GOALS & ACCOMPLISHMENTS

① - DELIVER TECHNOLOGY THAT TRANSFORMS THE UNIVERSITY WITH FOCUS ON AGILITY, AVAILABILITY, EFFICIENCY, & BEING USER-CENTERED

IMPLEMENTING INTEGRATIONS TO MODERNIZE HR PROCESSES

The Human Resources (HR) and Payroll departments have several systems that provide automation for various services they deliver; however these services lack full scale integration, often resulting in duplicate data entry that is prone to errors, increased processing times, and potential service gaps, the root cause of which takes time to determine.

Automated integrations have now been implemented between the new employee pre-boarding system, Equifax, and the HR module within AU's enterprise resource planning system, Colleague, to facilitate employee pre-boarding seamlessly. Additionally, integrations between Colleague and JDXpert, a job architecture and position description system, allowed for a streamlined process for creating and updating job descriptions.

These automations eliminate the need for duplicate manual data entry by HR and Payroll staff, reduce human data entry errors, and reduce the time it

takes for fulfilling business functions such as completing employee pre-boarding and managing job descriptions.

In the areas of hiring, changing positions, and terminations—three basic, but time intensive manual HR processes, OIT defined automated processes after completing comprehensive research and analysis, while also integrating the Payroll components of these actions as well, resulting in greater collaboration and smoother hand offs between the two departments.

It has been imperative to find modern solutions to replace several legacy HR and Payroll systems that they no longer meet their needs or are not supported by the vendor. Two systems have already been replaced for managing wage garnishments and tracking and reporting on 403(b) contributions made by the staff and faculty.



Did you know?

The goal of this modernization effort was to reduce hand-offs between staff and departments by 40% and improve the time to fulfill requests by at least 40%. While further modernization efforts are underway, the team is well on its way to achieving these efficiencies with the additional benefit of reducing human data entry errors.

STRATEGIC GOALS & ACCOMPLISHMENTS

① - DELIVER TECHNOLOGY THAT TRANSFORMS THE UNIVERSITY WITH FOCUS ON AGILITY, AVAILABILITY, EFFICIENCY, & BEING USER-CENTERED

MIGRATING AU WORKSTATIONS FROM WINDOWS 7 TO 10

Working toward Microsoft Corporation's long announced deadline to end support for Windows 7 as of January 14, 2020, the OIT kicked off a project to identify and address all AU-owned workstations running the older operating system. It was important to address all workstations prior to the end of support, as Microsoft would cease to release operating system updates or security patches or offer support beyond that date.

The IT customer services team, in collaboration with our technical support partners in the business and academic units, either upgraded all AU-owned workstations to utilize Windows 10, or if eligible for a lifecycle replacement after four years of use, replaced them with a brand new workstation running

the latest operating system. In the end, over 800 workstations were replaced in this seven-month period, with several hundred more having the operating system upgraded through a process known as reimaging.

AU was able to leverage the **My Assets** page on the **Help & Services** portal at <https://help.american.edu> to allow faculty and staff to review the workstations assigned to them to identify those impacted. This led individuals to offer updates regarding the current assignment and disposition of workstations, resulting in a more accurate asset inventory.



Did you know?

Between June 2019 and January 2020, OIT replaced 517 workstations with lifecycle replacements, redeployed 151 used workstations, and acquired 145 new additional workstations.

STRATEGIC GOALS & ACCOMPLISHMENTS

① - DELIVER TECHNOLOGY THAT TRANSFORMS THE UNIVERSITY WITH FOCUS ON AGILITY, AVAILABILITY, EFFICIENCY, & BEING USER-CENTERED

LAUNCHING ADVISING SYSTEM FOR WASHINGTON COLLEGE OF LAW

In August 2020, OIT completed the CRM Advise implementation for the Washington College of Law (WCL), who approaches advising very holistically with multiple offices working to help students navigate law school and beyond. CRM Advise provides a central platform to share information and manage communications in ways that are both coordinated and efficient. In addition to traditional advising, CRM Advise will be particularly useful for the Office of Academic Excellence which focuses on early intervention and moving students towards academic success and passing the Bar Exam.

During the project, ten automated alerts were created in CRM Advise to

notify staff when a student may need support in areas of academic performance and progress. Additionally, two automated communication plans were developed to provide students with important and timely information over the course of each semester.

The automated import capabilities of CRM Advise are well-suited to bring in data from the Office of Career & Professional Development and the learning management system to add to the depth of information available within a single system. For long term planning, CRM Advise will be used to capture student activities and affinity groups for future alumni engagement.



“Deciding to launch CRM Advise campus wide in six months was always going to be an ambitious project. Add to this a worldwide pandemic and remote work, and the project had all the potential to be completely derailed. Thanks to OIT, our project stayed focused, on track, and launched just in time for the Fall semester. Given the unprecedented times with all WCL classes and student services delivered remotely, this product could not come at a better time. We have every confidence that the work that OIT has done to prepare the product for launch will help us to serve our students more efficiently.”

HILARY LAPPIN, *Acting Registrar*, Washington College of Law

STRATEGIC GOALS & ACCOMPLISHMENTS

① - DELIVER TECHNOLOGY THAT TRANSFORMS THE UNIVERSITY WITH FOCUS ON AGILITY, AVAILABILITY, EFFICIENCY, & BEING USER-CENTERED

RELOCATING AU'S BUSINESS CONTINUITY DATA CENTER

OIT's Roadmap, published in 2019, included an analysis of opportunities for us to reduce expenses. Initial analysis showed that if OIT were to plan to move AU's second data center, which is used as our business continuity site, from CoreSite to Atlantic Metro in Reston, Virginia, \$300,000 would be saved annually due to a decrease in needed floor space, equipment, racks, and power consumption, in addition to a lower network connectivity cost.

In early summer of 2019, OIT began negotiations with Atlantic Metro, and after multiple site visits, infrastructure requirements assessment, and proposal, the contract was signed with Atlantic Metro. It took several months for the two teams to complete physical planning, site preparation, and network connectivity.

In November of 2019, new network equipment was installed and the existing servers, storage devices, and security were relocated from CoreSite to Atlantic Metro. Thanks to thorough preparation and planning, the entire relocation was accomplished within a couple of days without any major service interruption.

The new business continuity site has two new 10 gigabits per second diverse connections from the main campus and the data center at 4200 Wisconsin Avenue to Atlantic Metro, in addition to an upgraded 5 gigabits per second Internet link and a new Internet router.



Did you know?

The new business continuity site not only provided OIT substantial cost savings of \$300,000 annually, but also a more robust and sizable environment to provide redundancy for IT services and rapid service recovery in the event of a disaster at the primary data center.

STRATEGIC GOALS & ACCOMPLISHMENTS

① - DELIVER TECHNOLOGY THAT TRANSFORMS THE UNIVERSITY WITH FOCUS ON AGILITY, AVAILABILITY, EFFICIENCY, & BEING USER-CENTERED

ACCOMMODATING AU'S FISCAL YEAR-END CHANGE

For fiscal year 2020, American University is required to comply with new revenue recognition standards implemented by the Financial Accounting Standards Board. The implementation of this standard will dramatically affect the University's revenue recognition for spring semesters. Going forward, this change will ensure comparability to peer universities and alignment with the federal financial year end.

This effort entailed modifying the legacy fiscal year configuration in the university's enterprise resource planning system, Colleague, so that from this point forward the fiscal years will follow the July 1 through June 30 start and end dates. Due to limitations regarding the fiscal year configuration settings in Colleague, once a change is made to update the fiscal year data structure, all previous data, including historical data, will likewise be formatted in the new start and end year configuration.

IMPACTS OF THESE CHANGES

- All previous fiscal years up to 2019, will continue to report on the May 1 – April 30 pattern.
- Fiscal year 2020 will have 14 months in the Colleague PROD environment.
- Fiscal year 2019 will start on May 1, 2019 and end on June 30, 2020.
- Future fiscal years going forward will be July 1 – June 30.

Subsequent to the fiscal year configuration and FY19 closeout activities being completed, the Office of Finance & Treasurer has been provided access to the data structure in the previous fiscal year configuration. To fulfill this requirement, OIT implemented an interim solution, which is a "read-only" clone of the Colleague production environment data up to FY19.

STRATEGIC GOALS & ACCOMPLISHMENTS

① - DELIVER TECHNOLOGY THAT TRANSFORMS THE UNIVERSITY WITH FOCUS ON AGILITY, AVAILABILITY, EFFICIENCY, & BEING USER-CENTERED

INTRODUCING FINANCIAL AID SELF-SERVICE

In March of 2020, the Financial Aid offices on both main campus and WCL worked together with OIT to go live with financial aid self-service within the EagleService system. This effort came about for two reasons:

- Ellucian is discontinuing support for the legacy software housing our financial aid hub.
- AU's financial aid offices wanted to provide a more streamlined experience for students.

In the new Financial Aid Self-Service, students can request, review, and either accept or reject their awards. We were able to launch Financial Aid Self-

Service in tandem with the first all-electronic admissions letter push for undergraduates. Starting with just new undergraduate admitted students, Financial Aid Self-Service was gradually rolled out to the entire new and existing student populations.

This effort required coordination and testing across several offices, as well as time and patience from our student testers. OIT plans to improve on the look and function of Financial Aid Self-Service as it grows, and our usage matures.

STRATEGIC GOALS & ACCOMPLISHMENTS

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MIGRATING THE HOUSING SYSTEM TO THE CLOUD

Housing is one of the most critical components of the undergraduate student experience. Maintaining this process each year requires a significant collaboration between the Office of Campus Life and OIT. The decision to move our housing system, StarRez, to the cloud represented a shift in focus for AU with the goal of reducing time spent maintaining the system and redirecting that energy to modernizing the housing process

In early Spring 2019, Housing & Residence Life, University Conference and Guest Services, and OIT began charting our path to the cloud, conducting a comprehensive review of housing procedures and processes that would need to be reimaged for our cloud end state, as well as identifying areas of further improvement that could be tackled post-migration.

Several months were spent setting up our cloud environment and revamping the means for updating student data in StarRez, ensuring parity of room assignments in multiple systems, and populating student photos for critical residence hall desk operations.

After much testing, StarRez cloud went live in October 2019 in preparation for Spring room selection. In the first year since migrating to the cloud, we have not only reduced staff time spent on keeping the platform operational, but also updated the underlying housing portal platform; created a more streamlined workflow to book housing assignments and bill student accounts; and implemented a means to send ad-hoc charges and credits from StarRez to Colleague.



"OIT's planning and execution of the StarRez cloud migration was superb. The initial planning discussions, the detailed considerations to reduce the impact of the implementation timeline, and the focus on maximizing learning and use of the new tools, all helped ensure the success of this project. We are now able to use new features allowing us to quickly improve the user interface (and experience!) and reduce staff time on support calls."

CHRIS SILVA, *Director of Housing, Housing & Residence Life*

STRATEGIC GOALS & ACCOMPLISHMENTS

① - DELIVER TECHNOLOGY THAT TRANSFORMS THE UNIVERSITY WITH FOCUS ON AGILITY, AVAILABILITY, EFFICIENCY, & BEING USER-CENTERED

REDESIGNING THE PROCESS FOR RELEASING ONLINE APPLICATION DECISIONS

In August of 2019, the Online Application Decision Release project was kicked off with the goal of providing the Office of Enrollment with an electronic method for reaching a decision on a student's admission application and communicating that decision to the student. The new system consisted of an updated decision workflow as well as integration with the Office of Financial Aid to provide the most up to date financial aid package information to the student.

The previous process of notifying students of their admission decision consisted of printing and mailing a letter to each student. This process would sometimes fail, in instances where a student would reside at more than one address. The admission letter would also contain financial aid package information which, in some cases, would change by the time the student received the admission decision letter, so a more real-time notification system was needed.

There are three decision release cycles when students are notified of their admission decisions: one in December, one in February (these are known as the early decision release cycles), and the primary release cycle in March. The first two decision cycles, although smaller in quantity, proved that the system was performing as expected. They also served the important function of helping us to estimate the load on our computer resources for March when approximately 20,000 students would log in to access their admissions decisions. The regular decision release cycle was performed as scheduled in March and, as students received their admission decisions, we were provided with moments like this one

(<https://mobile.twitter.com/eileenjkeller/status/1207106116502638593>) on social media.

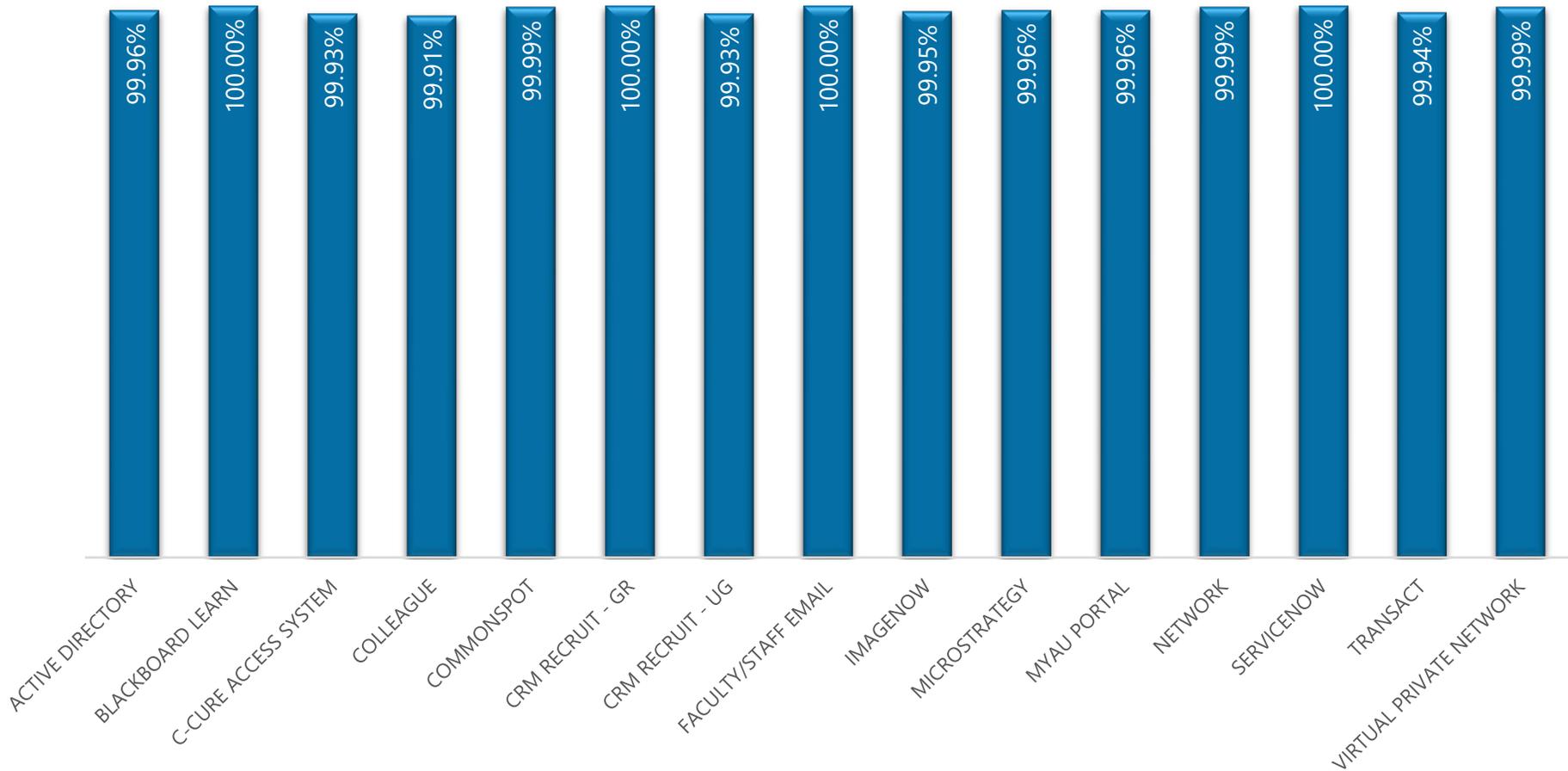
In addition to the cost savings achieved by not mailing over 100,000 letters, the Office of Enrollment could provide real-time information regarding a student's application decision and financial aid package.

PERFORMANCE METRICS

TECHNOLOGY SERVICE

AVAILABILITY

Key services exceed the 99.9% availability target.



STRATEGIC GOALS & ACCOMPLISHMENTS

① - DELIVER TECHNOLOGY THAT TRANSFORMS THE UNIVERSITY WITH FOCUS ON AGILITY, AVAILABILITY, EFFICIENCY, & BEING USER-CENTERED

ADOPTING CISCO IDENTITY SERVICES ENGINE TO MANAGE NETWORK ACCESS

As part of our regular lifecycle replacement of aging network electronics and systems, wired and wireless network authentications were moved from the Aruba RADIUS server platform to a new and more robust system by Cisco.

Over the last two years, the AU wireless environment had migrated from Aruba access points (AP) to Cisco-Meraki APs campus-wide. It was natural to unite the new APs with the latest Cisco authentication platform which are designed to work synergistically together. Cisco Identity Services Engine (ISE) is currently the market leader in identity and classification and will ensure seamless authentication and authorization of any connected device on our network.

ISE implementation was extended to the entire campus after months of rigorous testing at 4200 Wisconsin Avenue, Spring Valley Building, Asbury Building, and Kerwin Hall, which gave us an opportunity to test the ISE's feature-rich network access control solution that naturally includes 802.1x (port-based authentication) as well as identity services such as passive identification, third party device identification, and network device identification. While ensuring that all devices are identified on the network, it further incorporates comprehensive policy management for role-based access control.

To increase availability and eliminate the risk of single point of system failure, ISE appliances have been installed at two separate locations, one at the Mary Graydon Center Hub and the other at the main data center at 4200 Wisconsin Avenue. The implementation took place during the Spring of 2020 and included multiple buildings with each requiring reconfiguration of over 160 network devices campus wide.



Did you know?

There are 1,533 individual wireless access points installed throughout AU buildings and main outdoor areas, which are all monitored on a 24 hour basis.

OTHER INFRASTRUCTURE UPGRADES

- **Improving Wireless Services throughout Campus**

OIT continues to be committed to improving wireless services on campus, replacing 1200 category5 cables with category6 enabling multi-gigabit bandwidth in addition to replacing 1200 defective Meraki access points with a different model free of charge.

- **Improving Monitoring of Wireless Operations**

In order to monitor wireless signal quality and coverage, OIT installed 40 sensors from 7Signal in key locations throughout the campus. The sensors perform active tests 24 hours a day, seven days a week, simulating client behavior, with alerts and notifications, telling us where the wireless network performance problems exist.

- **Upgrading Internet Routers to Triple Bandwidth**

The primary and backup Internet routers were upgraded, increasing the bandwidth and throughput from 10 to 30 gigabits per second.

- **Installing Session Initiation Protocol (SIP) Solution to Increase Reliability of Campus Telephone Services**

AU's current local and long-distance phone services are now traversing through two diverse dedicated internet links in addition to a few hardwired lines from Verizon, as OIT installed a new SIP solution to add redundancy through our Internet links. Consequently, if AU were to have a problem with the connectivity of the hardwired lines, local and long-distance phone services for the campus community will not be interrupted.



Did you know?

Through the 2019-2020 academic year, there were 97,524 unique devices connected to one of AU's wireless networks, with 24,239 users connected concurrently.

STRATEGIC GOALS & ACCOMPLISHMENTS

① - DELIVER TECHNOLOGY THAT TRANSFORMS THE UNIVERSITY WITH FOCUS ON AGILITY, AVAILABILITY, EFFICIENCY, & BEING USER-CENTERED

TRANSFORMING OUR BACKUP PLATFORM & STRATEGY

Within the past year, OIT underwent a major transformation in its backup strategy, as our existing solution was starting to show its age. After extensive analysis, OIT made the forward-thinking decision to reevaluate its value-adding proposition. While Rubrik was more expensive, it lays the groundwork for AU to be able to backup cloud-based workloads and positions us to move towards cheaper long-term storage for infrequently accessed archival workloads in the future.

Rubrik reduces our management surface, as it provides both backup storage and software in a single packaged vendor solution. A single solution translates into less to manage and secure, resulting in efficiency gains to free up our storage/backup engineer to focus on value-add activities. Rubrik can also scale much more quickly than our previous system should additional capacity be required at any of our sites.

Rubrik enables faster access to data for other units within our organization. Additionally, we have been able to leverage Rubrik's RESTful APIs in the automation of OIT business processes, which allows us to save time and provide access to data faster and with less friction than in the past.

Though Rubrik fully handles all our backups and restores going forwards, some of the point-in-time data stored on the old system still has business value. Working with Iron Mountain, OIT is planning to leverage their service to seamlessly handle our legacy backup system on a contract basis. This approach costs less than managing this pocket of infrastructure ourselves and enables us to recover data even older than our on-premises equipment can support.



Did you know?

Since the advent of the Rubrik system, we have backed up and subsequently archived 939 TB of data, with a whopping 262.9 GB of average daily growth. That's a lot of data! With a 72.3% local data reduction rate, Rubrik's architecture prevents exponential costs in backup storage increases year to year.

STRATEGIC GOALS & ACCOMPLISHMENTS

2 - ENABLE COMMUNITY INNOVATION LEVERAGING OUR STRONG SECURE CORE



ADVANCING AU'S CYBER SECURITY PROGRAM

MODERNIZED THREAT DETECTION & MONITORING TOOLS

In support of American University's strategic imperative regarding *How AU Works*, the OIT information security team identified the need to replace our highly customized set of solutions used to monitor, detect, and notify on unexpected behaviors on the campus network. After comprehensive analysis of the marketplace, a commercially supported artificial intelligence machine learning service was procured and configured enabling us to modernize our threat detection and monitoring capabilities. As a result, OIT has greater visibility of the traffic moving across the network.

Detect

ASSESSED SECURITY PROGRAM MATURITY

OIT engaged Deloitte to perform an end-to-end cyber security program assessment to determine our readiness to support University strategic goals, preparedness to respond to threats, and benchmark our program maturity against peers in higher education, health care, and the financial industry. Additionally, the consultants identified initiatives that should be focused on now, as well as over the next 2-3 years, to reduce risk and increase our maturity. The assessment results affirmed the initiatives and investments OIT has made align with their recommendations and best practices. The maturity score placed us in line or above our higher education peers and the health

Identify

care industry.

Identify

PERFORMED ANNUAL THIRD-PARTY SECURITY TESTING

Every year, OIT contracts with a different external company to perform security testing of AU's public-facing infrastructure to identify vulnerabilities or threats. The 2019 testing was performed by NuHarbor, who reported the AU systems and services were well protected against cyber-attacks. Compared with our peers of similar sized universities, NuHarbor stated: "we were in the top 10% when it comes to the security of our network borders." They went on to say that the limited attack surface and proper configuration of devices greatly reduce our risk of compromise. Of note, Nuharbor remarked they had never seen such low response rate for their Phishing tests, as less than 1% of recipients clicked on the phishing link, they sent to members of the AU community

via email.



Did you know?

AU's Self-Phishing Training program has produced the desired result of increasing awareness of phishing threats. After four years, OIT receives increased reports of unwanted emails (phish). More importantly, fewer users are clicking on embedded links in the phishing training emails. When the program began, the click rate was approximately 5%, whereas now the rate has been reduced to roughly 2.5%.

Recover

REPLACED AU'S BACKUP & ARCHIVAL PLATFORM

OIT replaced the old CommVault backup and archival solution with Rubrik, a platform which combines backup software and backup storage into one. With the new backup architecture, AU has drastically reduced the risk of an attack, such as ransomware, as the underlying storage can only be interfaced through Rubrik's secured append-only APIs.

While backups today live within our primary data center, Rubrik's Polaris portal allows us to take advantage of cloud-based insights into our backup estate. Rubrik is cloud-ready and can seamlessly be extended to protect Infrastructure-as-a-Service (IaaS) workloads in the future.

Protect

IMPLEMENTED PRIVILEGED ACCESS MANAGEMENT

A privileged access management solution was implemented to modernize the way privileged human and machine accounts are managed. Criminals target privileged accounts in an attempt to break into our network to steal data or abuse our network resources. This solution requires multifactor authentication for access and provides a secure means of storing, managing, and auditing the passwords associated with these highly sensitive accounts.

INCREASED CYBER SECURITY AWARENESS

With the help of a talented and creative student intern, OIT increased our Security Awareness activities in academic year 2019-2020. Kicking off the campaign with observation of National Cyber Security Awareness Month in October, OIT began publishing monthly awareness tips via the AU electronic newsletter and distributed posters across campus. Additionally, information security hosted a multi-day tabling event near The Bridge coffee shop, along with a Scavenger Hunt to encourage exploration of our campus IT and cyber security resources. Over 200 visitors visited the table. At the end of the event, Joshua Evans, undergraduate student majoring in CLEG and Business & Entertainment, was declared the scavenger hunt winner.



Did you know?

Duo multifactor authentications (MFA) doubled in the past year. After you enter your password to access key AU systems, MFA prompts you to enter another unique key using the Duo mobile app. This is a positive trend, as many of our peer institutions have moved to require MFA across all of their services to reduce the risk of criminals' ability to use stolen passwords to gain access to their networks.

Protect

INTRODUCED DATA MASKING

Data Masking is a technique used to protect sensitive data in systems by scrambling the data and making it unreadable. Complimenting several layers of safeguards AU's team takes to protect data from cybercriminals should they gain access to our system, a data masking initiative was completed and applied to all non-production Colleague environments.

Did you know?

Completed GDPR initiatives included:

- mapping data and populating the service inventory,
- revising and posting the Privacy Notice and adding a web cookie notification on www.american.edu,
- defining a process to receive data inquiries from individuals affiliated with the university, and
- working with Procurement & Contracts and General Council to create flexible terms and conditions to meet AU's myriad of contract needs.



Compliance

COMPLETED DATA MAPPING FOR GDPR COMPLIANCE

General Data Protection Regulation (GDPR) compliance is a European Union-initiated regulation, focused on Privacy, which broadens the scope of personally identifiable information and the requirements for safeguarding and notifying individuals regarding where their personal information is stored. Compliance is a large undertaking and begins with a data mapping exercise.

AU partnered with Robert Half to complete the data mapping by interviewing relevant staff to gather details about how specific data may be processed and shared for a given business activity. *Examples of business activities include student recruitment, fundraising, payroll, study abroad, international travel, or new hires.*

Compliance

COMPLETED CREDIT CARD COMPLIANCE REQUIREMENTS

In partnership with Treasury Operations, OIT completed the final technical requirements to meet the stringent set of requirements imposed by the Payment Card Industry's Data Security Standard. In total, over four hundred technical, process, and policy requirements were satisfied across all systems that may store, transmit, or transfer card holder data. The compliance requirements change every two years and require a watchful eye from our community. Additionally, OIT continues to partner with Treasury Operations to watch over the changing landscape and work with our internal audit firm, Protiviti, as needed.

Data Governance

SELECTED COLLIBRA AS OUR DATA GOVERNANCE TOOL

OIT has also made progress on our long term Data Governance strategy with implementation of the Collibra data governance tool, which will serve as the foundational repository for key information, such as data definitions and data sources, and also provide workflows to streamline collaboration on data governance processes and best practices. Setting up data governance is a critical dependency to move forward in a cohesive direction and continue enabling data-driven decision making on campus.

To develop the strategy, campus stakeholders at various levels of the institution were interviewed to discuss their use and management of data. The findings highlighted significant gaps with data definitions, governance, and the lack of an agreed upon framework to clarify roles, processes, and tools for structured data driven workflows. The recommendations stressed the importance of investing in a data governance structure with emphasis on revenue and retention enrollment data in the first year and broader data sets such as

expenses, research, and workforce planning beyond that.

STRATEGIC GOALS & ACCOMPLISHMENTS

3 - ENABLE TRANSFORMATION AND OPERATIONAL EXCELLENCE THROUGH PROJECT AND CHANGE LEADERSHIP

DISCOVERING “A PORTRAIT OF US”

In late Spring 2020, the AU community saw an abundance of creative problem solving in response to limitations imposed by COVID-19. One of the most uncertain themes during this time was community – *how will individuals new to AU feel a sense of cohesion and one-ness when all interactions need to occur digitally?* A group of diverse faculty and staff stakeholders came together to propose a solution that would not only encourage students to learn more about their incoming colleagues but also allow the university to incorporate themes from student responses into future programming.

A Portrait of Us is an initiative designed to provoke thoughtful responses from students regarding their identity to provide a framework for the community to learn more about the incoming class. The themes of this initiative are rooted in the [Project on Civil Discourse](#), and have been contributed to by the Office of Campus Life; Diversity, Equity, and Inclusion; University Communication and Marketing; OIT; AUx; and members of the AU

faculty. This group started with a simple desire to reduce melt (when students have committed to the university, but then change their plans to attend) and promote community. In just over two months, that grew into a multi-stage initiative with a touchpoint in place for students.

Incoming students start by responding to a questionnaire, sent by their orientation leader, aimed at helping each new student identify who they are and what they want for themselves. This questionnaire is comprised of simple prompts like, “*give yourself a grade as a listener,*” as well as thought-provoking questions such as, “*what does it feel like to be the only person in a room with a certain viewpoint?*” Upon completion, respondents are encouraged to share a photo on social media with the project hashtag, which will display on the portrait hosted on the public AU website.

After student submissions are complete, the project team aggregated and visualized the data, presenting representative statistics and findings to the community alongside photos submitted directly by students. Prevalent themes are used to inform university programming, such as the AUx curriculum, allowing student interaction with the initiative to extend beyond the onboarding experience.

The project team is currently analyzing responses. In addition to aligning many staff and faculty to achieve success in a critical time for the university, this initiative gave a platform to marry disparate technology and expertise from across AU to provide a sense of community for our incoming class.



“The OIT team provided invaluable leadership in the A Portrait of Us project, designed to build community and identity among our incoming students. By lending their technical and systems expertise, our OIT colleagues made the project seamless and impactful. It was a joy to work alongside such committed colleagues.”

AMANDA TAYLOR, *Assistant Vice President, Diversity, Equity, & Inclusion*

STRATEGIC GOALS & ACCOMPLISHMENTS

3 - ENABLE TRANSFORMATION AND OPERATIONAL EXCELLENCE THROUGH PROJECT AND CHANGE LEADERSHIP

PROVISIONING IT INFRASTRUCTURE & SERVICES FOR HALL OF SCIENCE

In support of AU's capital projects, OIT completed the network design and cost estimates for wired and wireless network and phone services, as well as provided the infrastructure requirements for indoor and outdoor cabling, power, and cooling in the network equipment closets. Additionally, OIT developed a request for proposal and evaluated the proposals to identify a cabling contractor to install over 1300 indoor category6 cables and diverse backbone fiber from the two main IT hubs on campus to the Hall of Science.

In addition to installing state of the art network electronics for the wired network, OIT installed a new wireless system from Cisco with redundant controllers for added reliability and availability.

OIT also planned for and designed the Voice over IP (VoIP) solution for the Hall of Science instead of traditional telephony. The new VoIP at the Hall of Science will act as a pilot project for extending this technology to the rest of the campus within the next couple of years.

OIT's network engineering and communications services teams collaborated with vendor professional services engineers since April 2020 to complete the VoIP configuration and setup at the Hall of Science and provide staff and faculty with IP phones. Additionally, OIT met the deadline for provisioning IT services to ensure building readiness, since the configuration, setup, installation, and testing of the wired and wireless network electronics and access points were completed by the end of July 2020.



"As a subject matter expert and critical contributor to large facility projects, OIT's early and continuous involvement in the planning, design and construction phases of the Hall of Science project contributed to the efficient delivery and the overall success of the project."

DAVID DOWER, *Assistant Vice President, Planning & Project Management*

It is important to note that through intensive negotiations with the vendors and contractors, OIT was able to purchase the network electronics with a much higher discount than normally possible. Additionally, OIT was able to acquire the wireless network electronics free of charge from the vendor. Consequently, the provisioning of the IT services at the Hall of Science was completed for significantly less than the initial cost estimates.



Hall of Science

STRATEGIC GOALS & ACCOMPLISHMENTS

3 - ENABLE TRANSFORMATION AND OPERATIONAL EXCELLENCE THROUGH PROJECT AND CHANGE LEADERSHIP

LAUNCHING BOARDVANTAGE

The AU Board of Trustees needed a central document repository to securely store their documents, so OIT had previously provided a secure SharePoint portal that was well-suited to store the Board documents which could then be used to compile their Board books. In the past, each section of the Board book would be printed, manually bound, and shipped to the trustees in advance of the Board meeting at a cost of approximately \$20,000.

A dedicated and full-featured web portal was required which could facilitate the secure production of the Board book to electronically share with the trustees. A Nasdaq product called Boardvantage was identified and procured.

In addition to the expected document storage capabilities, this web portal provides an internal email system that facilitates communication among Board members. The primary function of this portal is to facilitate the creation of the Board book, but it also allows the creation of surveys, the gathering of approval votes from trustees, the creation and publishing of Board meeting invitations, and the ability to work with Board documents while offline. Since this portal is provided as a software as a service product,

new capabilities are added regularly by the vendor with little to no disruption to Board operations.

After kicking off the project in July of 2018, the Boardvantage portal was set up in February of 2019 and was then carefully configured for use by AU's Board of Trustees. The initial set of modules that were made available to the Board included the Document archive, the Meetings module, the email system, and the Board Directory. Subsequent modules that provided additional functionality would then be made available after the initial rollout.

It was anticipated that Boardvantage would be used by the trustees during Board meetings to access and edit documents via their laptops and mobile devices. iPads were provided with Boardvantage preinstalled on them to those Board members that requested it. Trustees were introduced to Boardvantage in September 2019 and they began using it during the November 2019 Board meeting.

The trustees have been very pleased with the ease of use and intuitive design of the product. Boardvantage has resulted in significant cost savings and has been used consistently by the Board of Trustees its launch.

STRATEGIC GOALS & ACCOMPLISHMENTS

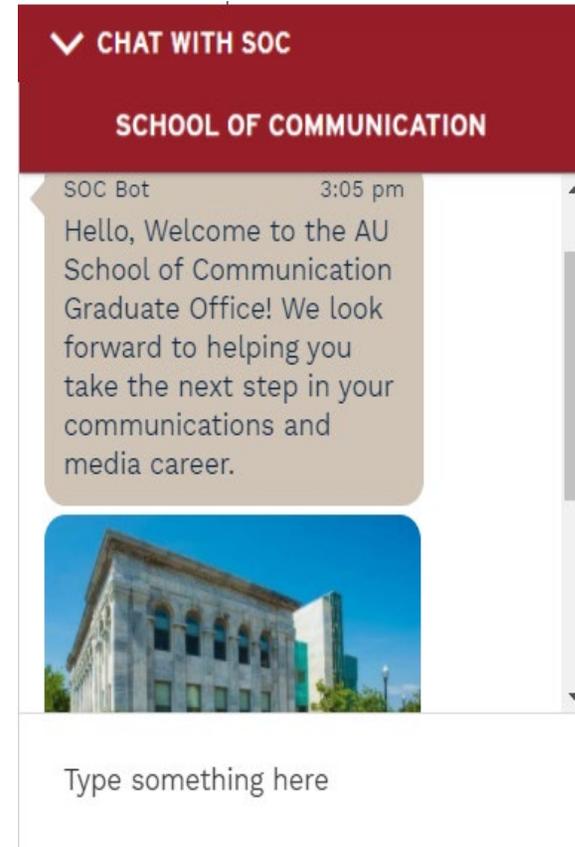
3 - ENABLE TRANSFORMATION AND OPERATIONAL EXCELLENCE THROUGH PROJECT AND CHANGE LEADERSHIP

INTRODUCING CHAT SERVICES TO SUPPORT GRADUATE ADMISSIONS

OIT partnered with WebsiteAlive, a third-party digital customer service technology provider, to implement online chat services for AU's Graduate schools. These digital customer service tools gave the graduate admissions teams the ability to support and engage with prospective students and applicants virtually around the world on a 24-hour basis, seven days per week.

Inquiries submitted during normal business hours are able to be handled by a graduate admissions counselor, when available; an Artificial Intelligence (AI) powered tool, known as a ChatBot, was configured with predefined logic to provide application information and address frequently asked questions regarding the admissions process outside of business hour, in lieu of providing direct contact with a live human operator. Despite the challenges presented by the COVID -19 pandemic, AU's graduate schools were empowered to provide timely information about critical business processes and university operating status to prospective students around the globe.

Additionally, OIT was able to integrate to chat functionality with the graduate admissions CRM system, Recruit. This allows the team to identify and store critical conversations to trigger future communication and re-engagement.



Chat Bot for School of Communications Graduate Admissions

STRATEGIC GOALS & ACCOMPLISHMENTS

3 - ENABLE TRANSFORMATION AND OPERATIONAL EXCELLENCE THROUGH PROJECT AND CHANGE LEADERSHIP

IMPLEMENTING CASE MANAGEMENT SOLUTION FOR HUMAN RESOURCES & PAYROLL

In October 2019, Human Resources (HR) and Payroll implemented the ServiceNow case management system marking the first time the group used an integrated customer management system. Through careful planning, implementation, and training delivery by a cross-functional working group of HR, Payroll, and OIT staff, the efforts resulted in a successful launch in advance of the busy open enrollment period for staff benefits.

Rolled out with a series of interactive dashboards and reports, ServiceNow enables the teams to better quantify and triage requests, resulting in both efficiency gains and improved accuracy of responses. Since the October launch, there have been numerous additional accomplishments of note, namely:

- In January 2020, OIT developed an electronic version of the *Employee Personal Data Change Form*, which allows faculty and staff to update their home address, telephone number, legal name, and preferred name for their web profile. The form eliminated errors due to poor legibility and simplified handling as scripts were developed to automatically assign the request to the proper HR team member for processing based on the individual's employment status and department or division.
- In May, OIT developed forms and accompanying reports to collect information regarding faculty and staff work modifications or American with Disabilities Act (ADA) accommodations required to support the class scheduling process and planned return to campus for Fall 2020.
- In June, the portal systems team configured ServiceNow to support the AU Leave Modernization project to comply with the DC Paid Leave Act.



"Implementing ServiceNow last fall turned out to be so helpful to us as we navigated the myriad challenges of COVID-19. It's enabled our continuity of operations and has allowed us to be flexible and adaptable as new situations arose. Many thanks to the ServiceNow team for helping us get set up, and then being so responsive to our needs throughout the year."

KATHERINE SIMPSON, Senior Director, Talent Strategies, Human Resources

STRATEGIC GOALS & ACCOMPLISHMENTS

3 - ENABLE TRANSFORMATION AND OPERATIONAL EXCELLENCE THROUGH PROJECT AND CHANGE LEADERSHIP

REBRANDING ACADEMIC ALERTS

Since 2015, members of the AU community have had periodic discussions about improving the early warning program used by faculty to report on students' academic performance in their classes. These conversations were typically led by representatives from the Office of the University Registrar and/or the Office of Undergraduate Education and Academic Student Services.

The key goals of the completed work were to rename the program and improve communications around these alerts. Faculty can now indicate one of several reasons for sending the *Academic Alert* including failure risk, missing assignments, poor assignments, excessive absences, or low-test

scores to quickly identify the concern at hand. The messaging to students and advisers has been updated with improved language that better aligns with the goal of alerting students to academic concerns while also allowing proactive outreach when there are existing resources that may assist in mitigating concerns.

With a semester that will likely be challenging for many, due to the ongoing pandemic, the rebranding of *Early Warning Notifications* to *Academic Alerts* will make one more tool for communication between faculty and students that much more accessible.



"The successful conversion to Academic Alerts is the realization of an institutional priority a long time in the making. It took the exceptional team assembled this year to finally breakthrough on this project. The successful revitalization of this application has rejuvenated the program and the timing could not be more beneficial given the challenges to come in fall 2020."

JIMMY ELLIS, *Assistant Dean, Undergraduate Education*

STRATEGIC GOALS & ACCOMPLISHMENTS

3 - ENABLE TRANSFORMATION AND OPERATIONAL EXCELLENCE THROUGH PROJECT AND CHANGE LEADERSHIP

IMPLEMENTING ANALYTICS PLATFORM FOR DEVELOPMENT & ALUMNI RELATIONS

In collaboration with the Office of Development and Alumni Relations (DAR), OIT has successfully developed a new DAR Analytics platform, which offers comprehensive insights into the university's fundraising performance, prospective donor relations and stewardship, and individual officer activities.

Data is automatically extracted from the university's customer relationship management system—Ellucian's CRM Advance—transformed and loaded into the MicroStrategy business intelligence platform, thereby eliminating

manual processes. The interactive analytical capabilities include drilling down to individual unit contributions and gift designations, full view of constituents and their commitments, year over year trends, as well as a close look at the staff development activities to attract and convert prospective donors and manage planned giving. The new DAR Analytics platform creates a single point of reference for important discussions and decisions about fundraising campaign performance and operations management.



"DAR's partnership with OIT in the past year while working on the BI project will greatly enhance our reporting capabilities and overall efficiency. In addition to CRM Advance reporting features, DAR will now be able to rely on MicroStrategy for dynamic reporting and visualizations that can keep a timely pulse on campaign progress, inform strategy decisions, and track performance metrics. "

SAMANTHA HOWELL, *Director, Reporting and Analytics*, Office of Development and Alumni Relations

STRATEGIC GOALS & ACCOMPLISHMENTS

3 - ENABLE TRANSFORMATION AND OPERATIONAL EXCELLENCE THROUGH PROJECT AND CHANGE LEADERSHIP

CONFIGURING VIRTUAL APPLICATIONS SYSTEM

For the start of the Spring 2020 semester, the old Virtual Computing Lab system was retired and replaced with the new Virtual Applications system, which allows access to software that is not installed on your local computer. Fortunately, these applications will run on any operating system, such as Windows, OS-X, Linux, Android, iOS, etc.

HIGHLIGHTS OF THE VIRTUAL APPLICATION SYSTEM

- Students may access these applications without having to individually purchase them.
- The applications may be run at anytime from anywhere on any operating system, as long as they have an internet connection.
- The system is cloud-hosted, which simplifies management and reduces required resources.



Did you know?

During the summer, 467 unique individuals took advantage of the virtual applications system, launching the applications 8,043 times. The most used application was SPSS, with STATA following as a close second.

- Access is provided to University-licensed software on a per-application basis, rather than a full virtual Windows desktop like the old system.

SOFTWARE CURRENTLY AVAILABLE ON THE VIRTUAL APPS SYSTEM

- GAMS v24.3
- IBM Analyst's Notebook v9
- Microsoft Access 2019
- Microsoft Excel 2019
- Microsoft Project 2016
- Microsoft Visio 2016
- SAS v9.4
- SPSS v26
- STATA IC v16
- STATA SE v16

STRATEGIC GOALS & ACCOMPLISHMENTS

4 - FOSTERING AN INCLUSIVE LEARNING ORGANIZATION & MAXIMIZE INDIVIDUAL'S POTENTIAL

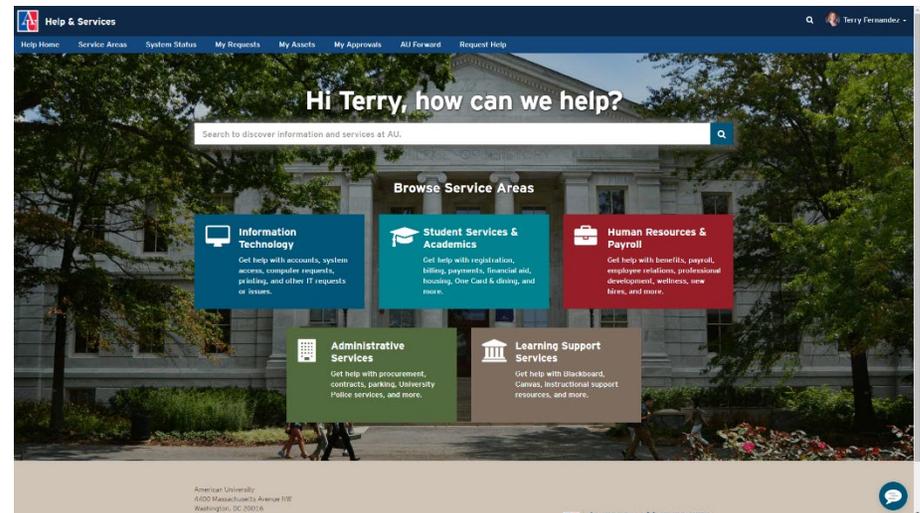
CHAMPIONING ADOPTION & MATURITY OF SERVICENOW PLATFORM

The OIT champions the adoption and maturity of the ServiceNow platform by helping our campus partners leverage it to become a more efficient and effective organization. Through regular communication, we strive to ensure that our partners employ best practices, including the newest self-service and automation techniques. We host ServiceNow user group meetings, training sessions, and onsite support and consultations, as well as publish periodic newsletters and Knowledge articles.

During October of 2019, OIT onboarded Human Resources and Payroll to ServiceNow's customer service management application, followed closely by OIT's adoption of ServiceNow's Project & Portfolio Management suite which allowed for the consolidation of both strategic, project-based, and operational support work into a single platform for managing demand, resources, and prioritization. Both groups started using the tool to manage development work to realize quick deliverables, while addressing rapidly changing needs.

Soon after, OIT welcomed Procurement & Contracts to the case management application, expanding upon their past use of ServiceNow for managing contracts. SOC Technology also joined the IT service management platform.

To make our Help & Services portal easier for the AU community to navigate, OIT introduced a unified design where customers can create service requests, access knowledge articles, and receive help with various offices all from one location.



Help & Services Portal

A busy season was concluded with the upgrade to ServiceNow's New York release in December. This upgrade included enhancements to the Chatbot feature, self-created quick messages, and record producers.

The new year started with the continuing expansion of the roster of ServiceNow campus partners with the Office of General Counsel joining in January to facilitate contract reviews, and the School of International Service's Office of Financial Operations adopting case management in March.

As it became evident that the COVID-19 pandemic would be a major disruptor to the Spring 2020 semester, OIT leveraged the ServiceNow platform to automate and move key processes online, such as the request for Microsoft Teams creation, the Student Proxy Move out Form, and the Higher Education Emergency Relief Fund grant application.

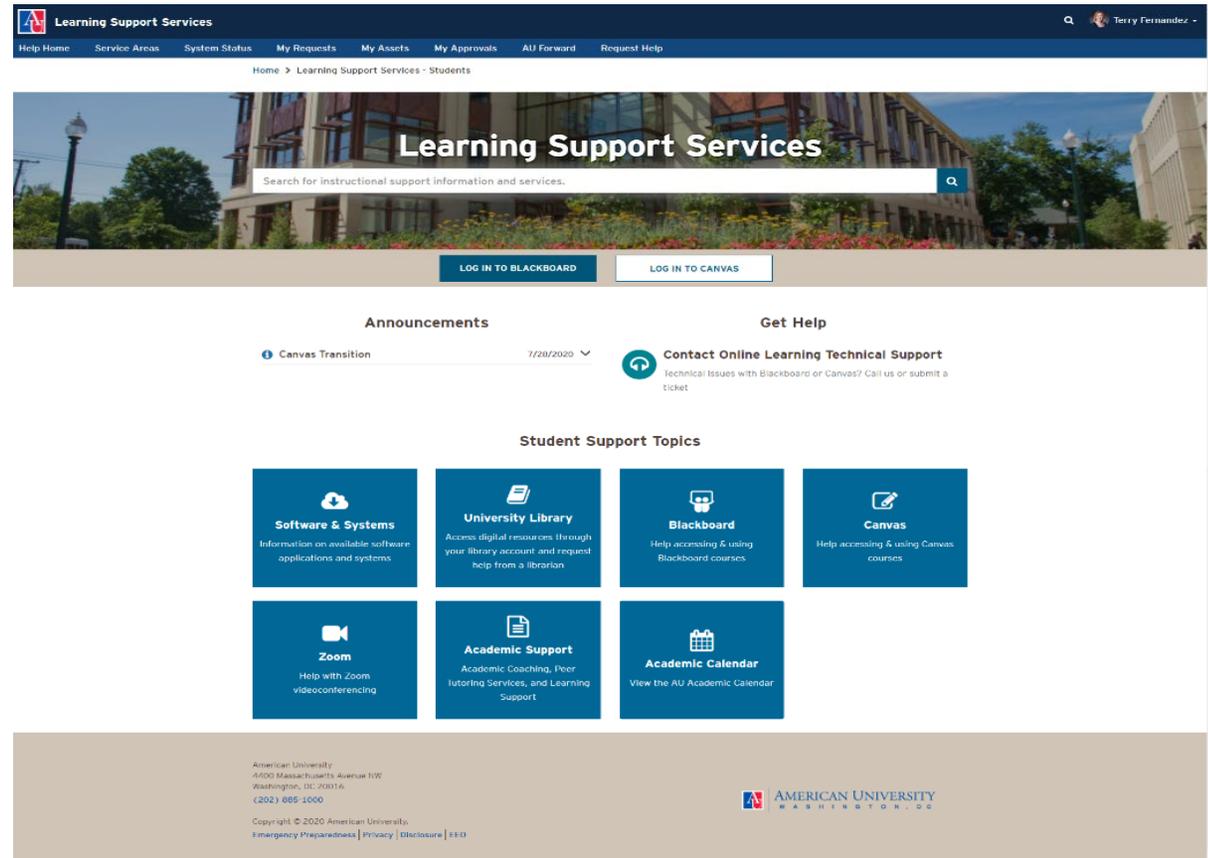
In early summer, OIT also rapidly onboarded additional offices including AU Parent and Family Engagement and the Student Health Center. New and existing partners were encouraged to use streamlined processes such as the Chat feature and to prepare to use new features such as the Agent Workspace and Walk Up Experience to better manage customer support requests.



"As a new operation, the Parent and Family Engagement team needed a simple and reliable method to track inquiries. OIT understood the challenges for our tiny crew and the needs of our families; and helped us to set up ServiceNow just in time to meet the increased demands brought on by COVID-19. Quite simply, there is no way that our team of 1.25 FTE could have closed 1,400 family inquiries in the summer of 2020 without ServiceNow. Being able to assign cases to other departments, offer live chat sessions, and set follow-up reminders ramped up our capacity to be incredibly responsive in uncertain times. "

KARYN CASSELLA, *Associate Director, Parent & Family Engagement*

A final highlight of this year was the deployment of a new Learning Support Services portal (pictured above) to host best practices for instruction and use of our learning management systems (Blackboard and Canvas). This portal was developed in partnership with the University Library and the Chief Online Officer.



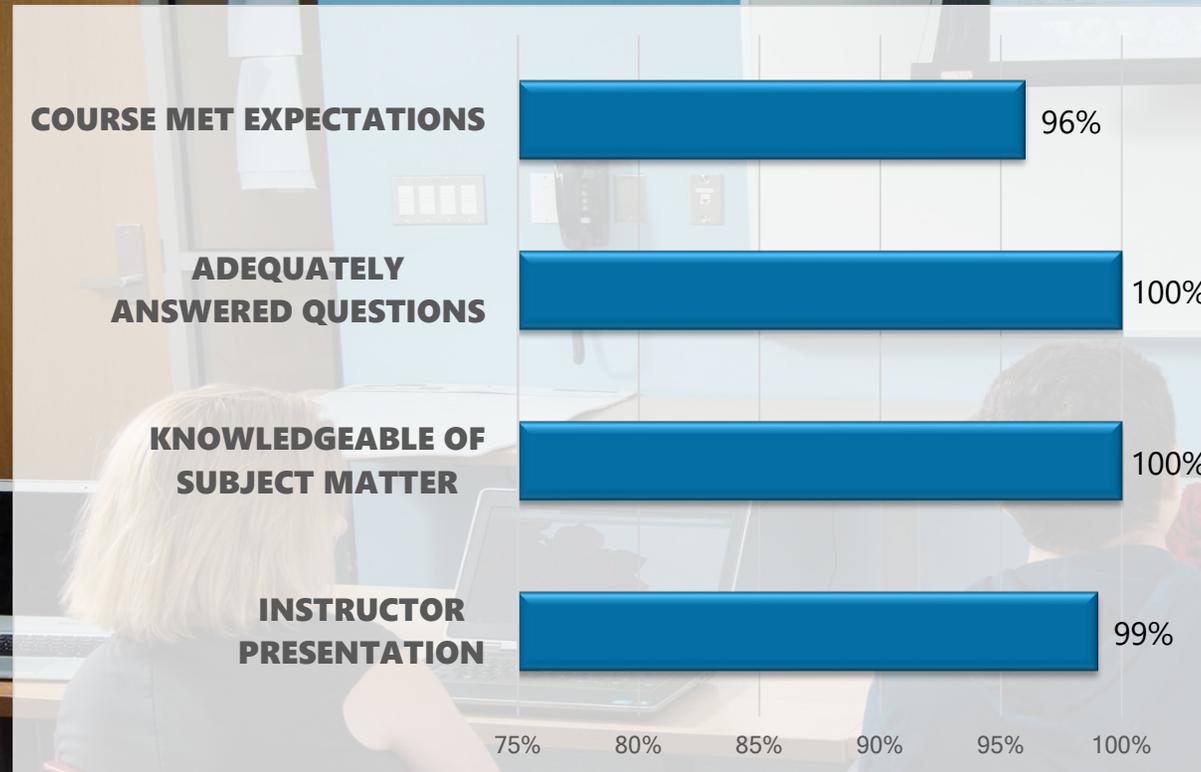
Did you know?

In the first month of the pandemic, OIT developed a fully automated self-service experience for faculty & staff to create Microsoft Teams. As a result, 150 teams were created each within 8 minutes or less, whereas requests would have previously required 29 hours each to fulfill.

PERFORMANCE METRICS

SERVICE DELIVERY & SUPPORT

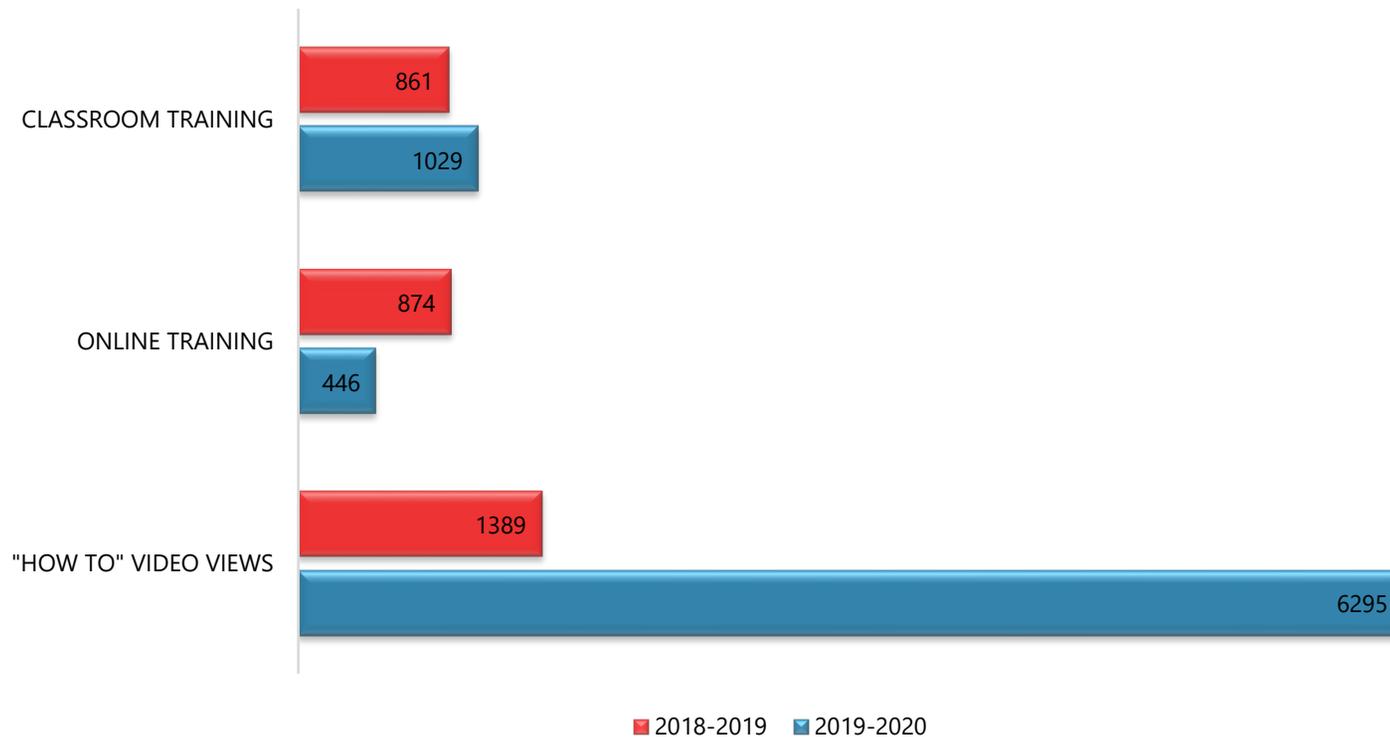
High satisfaction reported by 1,475 AU employees attending OIT classroom-based or online training classes



PERFORMANCE METRICS

SERVICE DELIVERY & SUPPORT

AU's rapid technological advances inspired new training offerings—balancing needs for timely and informative, on-demand training with in-depth workshops.



RESOURCES

With approximately \$24 million in total expenditures last year, OIT accounts for approximately 3.18% of the university's overall budget.



PROJECT MANAGEMENT

Notwithstanding the global pandemic and a challenging year for the University by any measure, the Project Management Office (PMO) delivered on several important AU initiatives and projects including the launch of the new online portal, Nasdaq Boardvantage, for the Board of Trustees; Online Application Decision Release for students; rapid deployment of Zoom video conferencing for online collaboration, teaching and learning, as well as supporting full remote work for AU staff. Other notable projects included the complex transition and migration project involving the School of Education being recognized as a separate school across many IT systems, the Fiscal Year End Change project, CRM Recruit and CRM Advance upgrades, and implementation of the ServiceNow Project & Portfolio Management system.

GOING AGILE

World class IT organizations across every industry are continually grappling with response to change, and the speed in which they can adapt often defines their success. In recent months, response to change has been more important as ever and critical to the University's success and stability. OIT has worked tirelessly to address these needs head-on by adopting the *Agile Framework and Principles*.

The Agile Framework:

- focuses on customers' changing priorities,
- allows for a streamlined feedback mechanism between IT and customers to address these changes, and
- improves campus collaboration to identify, prioritize, develop, and deliver the right technology solutions at the right time.

Over the past year, the Office of Information Technology (OIT) adopted a Product Management structure coupled with Agile Scrum development principles to re-establish our focus on our University partners. OIT identified product managers to work directly with campus stakeholders, evaluating their technology needs, and prioritizing this work for our Agile Scrum teams to develop solutions. To date, OIT established five scrum teams with focus areas that span across the University. The impact of this change has paid invaluable dividends. University partners are continuing to become more engaged in the development process, OIT is evolving to execute in the short-term while having a long-term focus, and our development teams are empowered to build unique solutions to best meet the University's needs.

PERFORMANCE METRICS

OIT PROJECT MANAGEMENT

During the 2019-2020 fiscal year, OIT responded to projects and requests of various sizes and complexities, as depicted in the graph below.

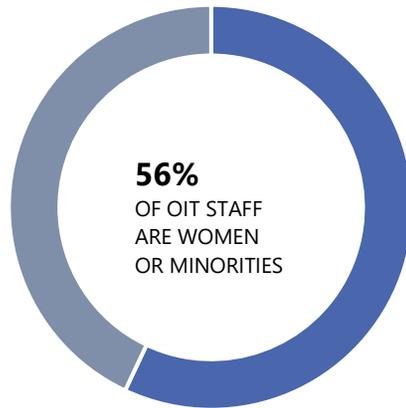


INDUSTRY-STANDARD BEST PRACTICES

OIT continually strives to advance and mature our business processes, architecture, and workplace culture by aligning with industry-standard best practices. Not only do we adopt and consistently employ these practices ourselves, but we also model them for our AU colleagues to encourage more widespread adoption campus wide.

PEOPLE FIRST AND INFORMATION TECHNOLOGY

- Hiring a diverse workforce, despite the profession being dominated by Caucasian or Asian males



Industry-wide only 26% of the computing workforce are women and 15% of the workforce are underrepresented minorities.

- Engaging staff in meaningful conversations about the future of IT, as it pertains to decision-making, planning, budgeting, and managing day-to-day operations

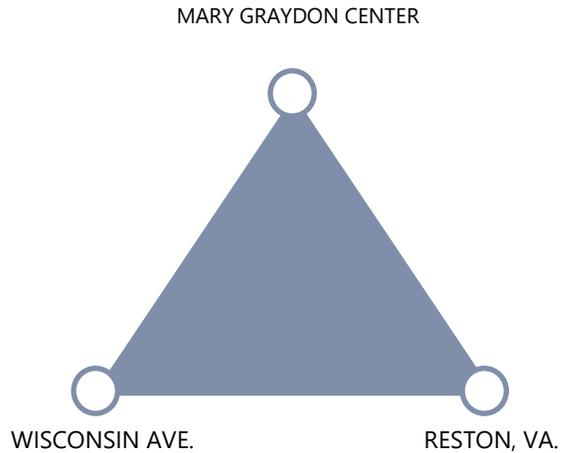


- Consciously address workforce planning to hire and retain talented professionals eager to serve AU's mission



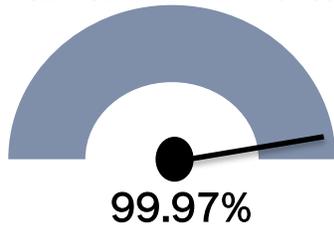
KEY TECHNOLOGY BEST PRACTICES

- Ensuring continuity of operations through use of business continuity data centers



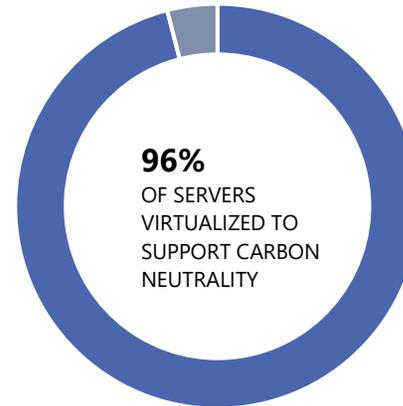
- Measuring our current performance and tracking historical trends to support management decisions

SERVICE AVAILABILITY FOR CORE SERVICES



Translating to Fewer Than 1 Hour of Unplanned Downtime per Year for Services Including Blackboard Learn; Ellucian's Colleague; Network Infrastructure; Email, and the myAU Portal

- Virtualizing as many services as possible to offer redundancy, simplify maintenance, and support AU's goal of carbon neutrality



- Articulating the roles and responsibilities for each group within OIT to support a system or service



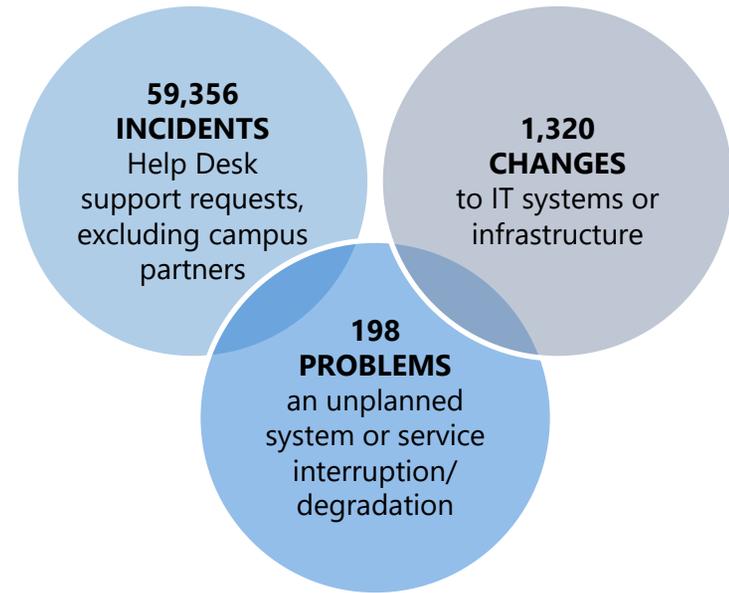
23 SERVICE-LEVEL AGREEMENTS--

the Formalized Service Structure
Allowing for Consistent Service Delivery
as Negotiated with Campus Partners

- Incorporating security measures throughout our technology and operational processes



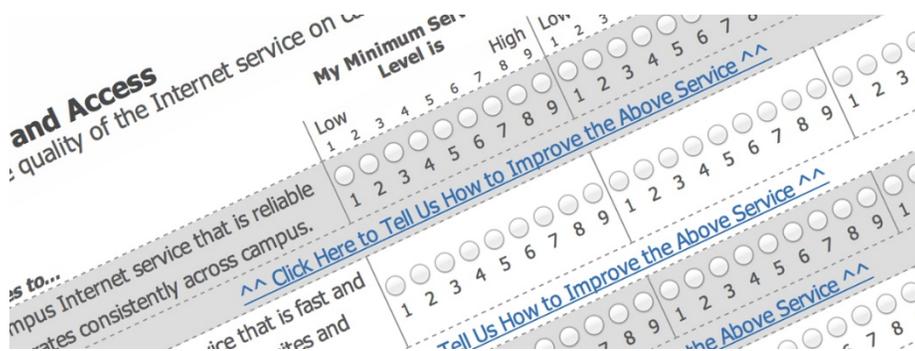
- Streamlining the handling of incidents, problems, and changes through formalized processes and use of a state of the art, integrated case management system



ASSESSING IT SERVICE OUTCOMES: RESULTS FOR THE HIGHER EDUCATION TECHQUAL+ SURVEY AT AU

OIT is pleased to share this summary report of the IT Customer Feedback Survey administered to campus between November 25, 2019 – December 6, 2019, as part of the *Higher Education TechQual+ Project*, to assess the quality and effectiveness of technology services provided to our community.

The 2019 survey results were analyzed and compared to those from 2017 to measure progress. Additionally, our results were benchmarked against peer institutions to guide our continued planning and prioritization decisions. Action plans were developed and initiated to address the perceived technology adequacy gaps on campus. Normally, we would repeat the survey every two years; however, the TechQual+ Survey was retired as of December 31, 2019.



OVERVIEW OF THE TECHQUAL+ SURVEY

The Higher Education TechQual+ Project provides IT leaders and administrators with the tools to assess, analyze, and report on the effectiveness of technology services at their institution. There are 13 core IT service outcomes that are standardized across every participating institution and grouped together into the following distinct core commitments:

- Connectivity and Access
- Technology and Collaboration Services
- Support and Training
- Other Important Information Technology Services

Respondents were asked to rate the service dimension in three ways, based on a rating scale with 1 being the lowest and 9 being the highest.

- Minimum Service Level Expectation – the number that represents the minimum level of service that the respondent finds acceptable.
- Desired Service Level Expectation – the number that represents the level of service that the respondent personally wants.
- Perceived Service Level Expectation – the number that represents the level of service that the respondent believes is currently provided.

Additional supplemental questions were added that were unique to AU. Respondents also had the opportunity to leave narrative comments for each question.

KEY FINDINGS

Customer expectations continue to grow, as inspection of the graph on page 39 reveals a noticeable shift upward for the zone of tolerance across almost every service category, as compared to the 2017 survey.

The highest desired service levels corresponded to the following services: having reliable Internet service, having adequate wireless coverage, having fast Internet service, having reliable cellular coverage, and having knowledgeable IT support staff, which have long been a priority focus for OIT.

All services fell below the desired service level, since mean ratings were extremely high. On a nine-point scale, desired service levels ranged from 7.99 – 8.8 with only a 0.81 spread across all service areas. For many individuals, Internet and Wi-Fi coverage are synonymous, so it is difficult for them to discern the cause of any connectivity issues. Even though Internet service has not been interrupted all year, ratings fell from the 2017 survey.

Below is a summary of the weaker and stronger areas by University role, based on the perceived service levels on a nine-point scale.

	STUDENTS	FACULTY	STAFF
	Knowledgeable IT Staff (7.24)	Reliable Internet (7.78)	Reliable Internet (7.92)
STRONGER AREAS	Understandable Communications (7.03)	Knowledgeable IT Staff (7.77)	Fast Internet (7.90)
	Cellular Coverage (7.02)	Fast Internet (7.75)	Knowledgeable IT Staff (7.76)
	Reliable Internet (6.11)	Available Classrooms/Meeting Spaces (6.38)	Data to Inform Decisions (6.53)
WEAKER AREAS	Wi-Fi Coverage (6.29)	Easy to Use Web Sites (6.54)	Easy to Use Web Sites (6.67)
	Fast Internet (6.31)	Collaborate Effectively (6.57)	Access to Training or Self Help (6.76)

Areas of focus become clearer when examining the ratings with a negative adequacy gap. These services include (in order from the greatest to least adequacy gap):

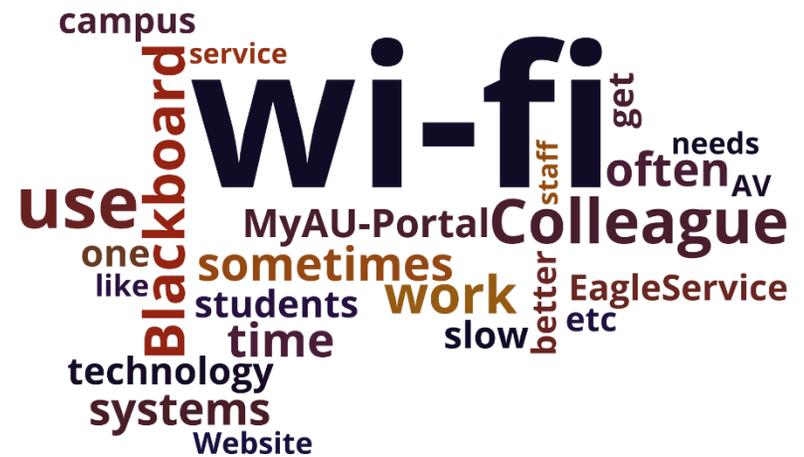
- Having an Internet service that provides adequate Wi-Fi coverage. (-0.63 gap overall with 6.84/9 mean for perceived service level)
- Having an Internet service that operates reliably. (-0.35 gap overall with 7.00/9 mean for perceived service level)
- Having systems that provide timely access to data that informs decision-making. (-0.33 gap overall with 6.66/9 mean for perceived service level)

- The availability of classrooms or meeting spaces with technology that enhances the teaching and learning experience. (-0.31 gap overall with 6.57/9 mean for perceived service level)
- Having Web sites and online services that are easy to use. (-0.29 gap overall with 6.66/9 mean for perceived service level)

With regard to benchmarking against our peers, AU perceived service ratings were almost all below those of peer institutions, with only the exception of cellular coverage. The difference between AU and peers ranged from -0.37 to 0.08.

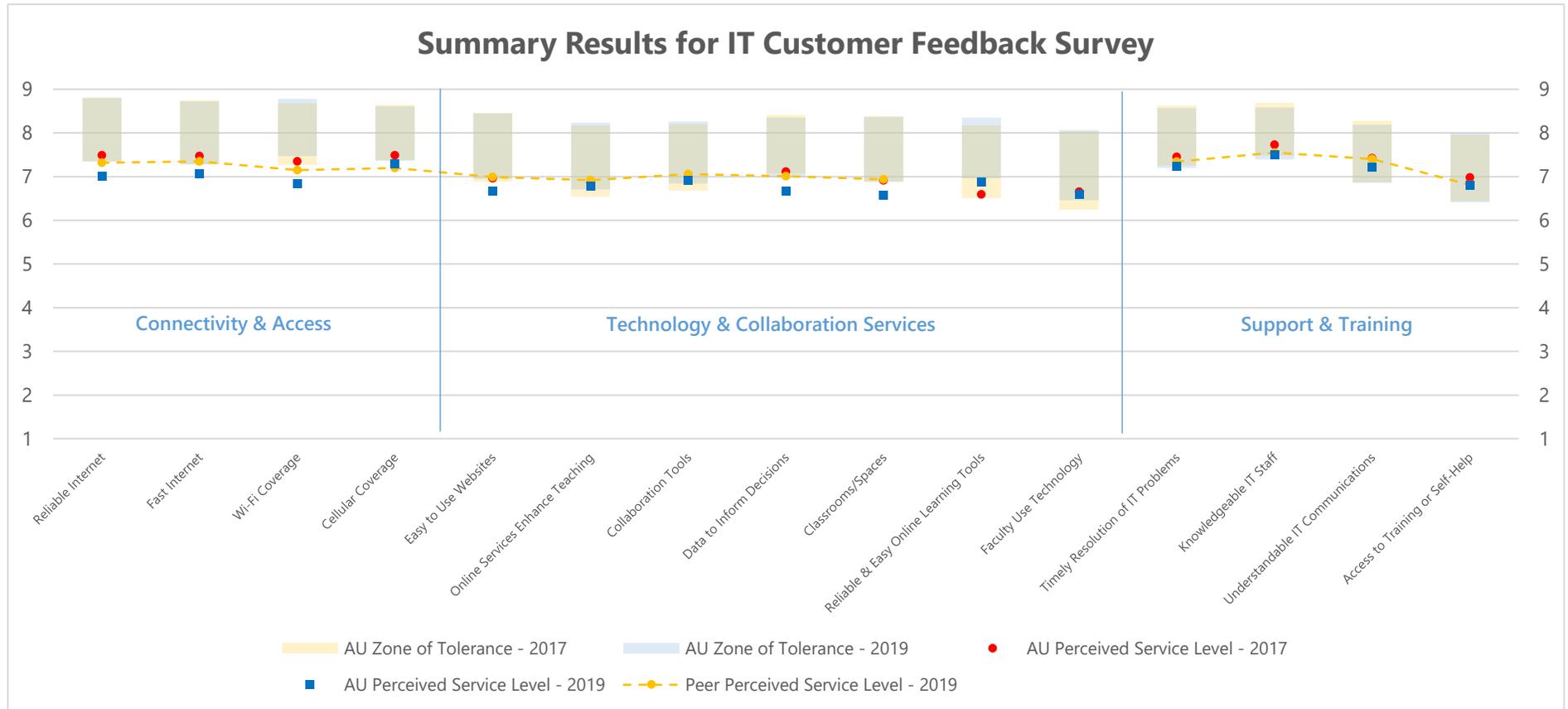


Word Cloud of Most Helpful Services



Word Cloud of Poorly Performing Services

SURVEY RESULTS – ZONES OF TOLERANCE



- The light yellow bar indicates the zone of tolerance from 2017 with the bottom representing the minimum service level expectation and the top representing the desired service level expectation.

- The light blue bar indicates the zone of tolerance from 2019 with the bottom representing the minimum service level expectation and the top representing the desired service level expectation.

- The red circle indicates the perceived service level expectation indicated by AU faculty, staff, and students in 2017.

- The blue square indicates the perceived service level expectation indicated by AU faculty, staff, and students in 2019.

- The golden dashed line with round markers indicates the average perceived service level expectation for faculty, staff, and students from the peer research universities.



OFFICE *of*
INFORMATION
TECHNOLOGY

4400 Massachusetts Avenue NW

Washington, DC 20016

202-885-2550

helpdesk@american.edu

help.american.edu

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For information, contact the dean of students (dos@american.edu), assistant vice president of human resources (employeerelations@american.edu), or dean of academic affairs (academicaffairs@american.edu); write American University, 4400 Massachusetts Avenue NW, Washington, DC 20016; or call 202-885-1000.