ITS ABOUT YOU

CUSTOMER SUPPORT & STUDENT IT ENABLEMENT

RESEARCH COMPUTING INFRASTRUCTURE

ACADEMIC TECHNOLOGIES & FACULTY ENGAGEMENT

OFFICE OF THE CHIEF INFORMATION OFFICER

ENTERPRISE APPLICATIONS

ENTERPRISE SYSTEMS

NETWORKING & INFRASTRUCTURE

2016-2018

BIENNIAL REPORT

Published October 2018

UK Information Technology Services

LEADERSHIP TEAM

Brian T. Nichols
Chief Information Officer

Stephen Burr
Executive Director of Enterprise Systems

Patsy Carruthers
Senior Director of Academic Technologies & Faculty Engagement

Jennifer D. Edwards
Assistant Director of Strategic Planning, Communications,
& Project Management

Kathy Hamperian
Executive Director of Customer Support & Student IT Enablement

Richard Phillips
Executive Director of Networking & Infrastructure

Lowell Pike
Director of Research Computing Infrastructure

Heath Price
Associate CIO & Interim CISO
Cybersecurity, Data Privacy, & Policy

Adam Recktenwald
Executive Director of Enterprise Applications

Karen Willmott
Executive Director of Administration, Finance, & Human Resources

OVERVIEW

Information Technology Services (ITS) provides IT resources utilized by University of Kentucky (UK) students, faculty, staff, visitors, members of the University community, citizens of the Commonwealth, and beyond.

VALUES

We value customer engagement, collaboration, shared governance, innovation, teamwork, accountability, diversity, inclusivity, accessibility, and integrity.

We value the people of ITS who show initiative, grow interpersonal relationships, pursue excellence, and deliver it in terms of IT infrastructure, services, and solutions.

We value our relationships with the students, faculty, and staff of UK—our customers, partners, and colleagues —and thus honor a service culture above all else.

We value the trust placed in us by University leadership, the Board of Trustees, and the University community, to be efficient and effective in the use of all resources.

We value the security of the technology resources and information entrusted to our care, and will be vigilant in maintaining the integrity of these critical items.

MISSION

In support of UK's Strategic Plan, the ITS mission is to provide, through customer engagement, outstanding technology infrastructure, services and solutions that advance teaching and learning, enable research, empower staff to provide exceptional services, enrich the student experience, and effectively manage and protect institutional data.

VISION

ITS will strive to provide and protect an environment that features, "IT Abundance," wherein IT infrastructure, services, and solutions are innovative, readily available, and utilized to provide exceptional support to students, faculty, and staff in their endeavors to uphold the UK mission.

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MESSAGE FROM THE CIO

Dear Colleagues:

I am pleased to share the ITS Biennial Report. This report includes important projects and noteworthy milestones within our organization.

The 2016 - 2018 report is a reflection of our hard work in various areas, ranging from innovation to upgrading our systems. Technology is completely integrated into the fabric of our lives, and it is a critical enabler in higher education today. The Biennial Report is one effort that we have made to demonstrate the hard work, dedication, innovative solutions, and improved technology infrastructure that will serve to have an increasingly effective impact on the University of Kentucky (UK).

ITS collaborated with the UK community to craft an IT Strategic Plan - a document that provides a blueprint for IT advancement across the enterprise. Indeed, efforts are underway to enhance the IT environment for students, faculty, and staff at the University. For example, we upgraded the SAP environment - the solution that touches every individual on campus. We also collaborated across the enterprise to form the UK Research Computing (UKRC) group to address the rapid growth of demand and diversity of resources, tools, and computational techniques. We have continued to apply cybersecurity best practices to the UK enterprise through new policies, practices, software, and tools.

I hope you enjoy learning more about what we have done, and I look forward to what the future holds for IT at UK.

Thanks for your continued support.

Brian T. Nichols
Chief Information Officer

2016 CUSTOMER RECOGNITION

In May 2017, ITS announced the inaugural recipients of the Customer Excellence Award for Leadership in IT Advancement.

The ITS Customer Excellence Awards for Leadership in IT Advancement program recognizes students, faculty, and staff who have greatly assisted ITS in successfully deploying a new service or resource. Nominated by an ITS staff member, the efforts of these individuals have greatly improved the IT environment for the entire University. Recipients were:

Sarah Ballard (University Advising) provided critical support and subject matter expertise in the design of several signature IT innovation products in 2016, continuing into 2017. Ballard has actively participated in the design, discovery and usability sessions for the myUK GPS and Academic Communication Tool (ACT) projects.

Sarah Kercsmar (Center for Instructional Communication) chairs the Learning Management System (LMS) Committee, and is a member of the Academic Computing Committee representing both her college and campus instructional interests and needs in IT. Kercsmar's leadership on the LMS Committee relaunched the group, leading to a Canvas Customer Fair and ideas to grow adoption and depth of usage.

Nathan Brown (UK Police Department) provided leadership for the implementation of security infrastructure at the university. In addition, he led the successful conversion of the door access systems enterprise-wide, establishing a collaborative relationship with ITS that is vital to the protection of the University community.

2016 EMPLOYEE RECOGNITION

ITS recognized employees in May 2017 who have provided multiple years of service to the University. Forty-two ITS employees were honored for a combined 670 years of service to the University. Each received a charm, lapel pin or tie tack of their choosing as a token of appreciation for their dedicated service.

5 YEARS OF SERVICE

Kerry Boytzun, Patrick Calkins, Kelley Cruse, Buddy Hall, John Henderson, Dan O'Brien, Gerri Sims, Scot Snyder, Angie Taulbee, & Jason Ullstam

15 YEARS OF SERVICE

Adam Boyd, Stephen Burr, Robert Carr, Yan Chen, Casey Hutchinson, Virginia Lacefield, & Donna Schultz

25 YEARS OF SERVICE

Catherine Bell, David Chesnut, Jim Ruberg, Lee Fong Ho Song, & Joe Tietyen

35 YEARS OF SERVICE

Victoria Banks & Sam Newcomb

10 YEARS OF SERVICE

Smitha Chopra, Jennifer Edwards, Edward Herkert, Kirk Laird, Rick Phillips, Ken Randall, Ling Cao Wolbarst, & Tim Worley

20 YEARS OF SERVICE

Kathryn Wong, Joyce Smith, Rainer Dittert, Lisa Bramel, Vratislav Nosek, & Kevin Cheser*

30 YEARS OF SERVICE

Peggy Akridge, Wayne Beech, Deborah Taylor, & Rick Willmott

* Received Service Award from another department

Information Technology Services

2017 CUSTOMER RECOGNITION

In May 2018, ITS selected the second annual recipients of the Customer Excellence Award for Leadership in IT Advancement. Recipients were:

Elizabeth Foster (Electrical Engineering senior) served as a student representative for the Microsoft Product Contract Advisory Panel providing feedback during the contract renewal process. Foster was of great assistance while the IT Strategic Plan was being developed by coordinating student feedback and providing her own student perspective on IT needs.

Beth Kraemer (Libraries) chairs the University Information Technology Coordinating Committee which facilitates the exchange of information regarding University-wide computing and data communication needs and interests in research, instruction and administration. Kraemer also co-chaired the ITS task force for Student IT Enablement during the development of the IT Strategic Plan.

Catie Lasley (Human Resources) has worked closely with ITS on implementing online performance evaluations, establishing electronic file management for employee records, and the online benefits new and open enrollment with in SAP. The electronic file management system has allowed Human Resources to move two semi truckloads of employee files previously maintained in Scovell Hall to an electronic platform.

2017 EMPLOYEE RECOGNITION

ITS recognized employees in May 2018 who have provided multiple years of service to the University. Thirty-three ITS employees were honored for a combined 645 years of service to the University. Each received a charm, lapel pin or tie tack of their choosing as a token of appreciation for their dedicated service.

5 YEARS OF SERVICE

Angeles Saldana, Chris Greene, Marc Bradley, & Tyler Collins

10 YEARS OF SERVICE

Anita Campbell, Shelby Avery Susan Reinstedler, & Patsy Carruthers

15 YEARS OF SERVICE

Chris Thuringer, Mike Ramsey, Retta Ritchie-Holbrook, Randy Casey, Lena Wu, Kim Stock, & Lowell Pike*

20 YEARS OF SERVICE

Chuck Stewart, James Wireman, Frank Abraham, Teresa Linton, & Loretta DeToma*

25 YEARS OF SERVICE

Brad Kreager*

30 YEARS OF SERVICE

Tracy Cerise, Barbara Williamson, Charles Fisher, Larry Bell, & Melanie Rizk*

35 YEARS OF SERVICE

Bonnie Vanover, Wendell McCarty, & Cynthia Brooks

40 YEARS OF SERVICE

Diane Skoll & Raleigh Watson*

* Received Service Award from another department

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RECOGNITION

Certifications

Peggy Akridge

- Project Management Professional (PMP) & ScrumMaster

Sarah Asher

- Higher Ed Peer Reviewer Course (PRC)

Shelby Avery

- Registered Communications Distribution Designer

Leigh Baker

- Certificate in Business Administration

Cynthia Brooks

- Certificate in Business Administration

Patsy Carruthers

- Educause Learning Initiative Badge

Jacob Chappell

- ScrumMaster

Joe Clary

- PMP

Allison Havelda

- ScrumMaster

Mark Hughes

- Extron XTP Systems Design Engineer, Extron XTP Systems Design Technician, Extron Control Professional

Mike Mattone

- Ekahau Certified Survey Engineer (ECSE)

Steve Napier

- Cisco Certified Design Associate (CCDA), Certified Wireless Network Administrator (CWNA), Certified Wireless Network Professional (CWNP)

Certifications, cont.

Cory Qualls

- Certified Associate in Project Management (CAPM), ScrumMaster, & PMP

Nick Rhodes

- Ekahau Certified Survey Engineer (ECSE), Certified Wireless Network Administrator (CWNA), & Certified Wireless Design Professional (CWDP)

Stephanie Schulte

- ScrumMaster

Tia Williams

- Higher Ed Peer Reviewer Course (PRC)

Kathryn Wong

- Certificate in Business Administration, ScrumMaster

Degrees

Cody Bumgardner

- Doctor of Philosophy in Computer Science

Ray Hyatt

- Master of Science in Computer Science

Scott Mason

- Bachelor's of Science in Computers and Information

Presentations

Patsy Carruthers

- Canvas Roundtable 2017 at IUPUI

Brett McDaniel

- eXplorance Bluenotes Australia, Pacific, & Asia 2018

Brett McDaniel & Kelita Mayorga

- eXplorance Bluenotes Americas 2017

Tonya Prince, Adam Recktenwald, Ezra Schroeder

- Higher Education and Research User Group (HERUG)

Information Technology Services

COMMITTEES

The Deans' IT group is a collaborative of UK staff members that are shepherds of IT products to their respective colleges and departments. Meeting once a month, these members are often the first to hear about upcoming IT projects and provide crucial feedback into new IT services before implementing University-wide.

Dean's IT Group

- Bill Adams, Facilities Information Services
- Jordan Adler, Academic Excellence
- Martin Anibaba, Internal Audit
- Eddie Baker, UK HealthCare Information Technology
- Mark Barker, Information Services
- Jan Bates, UK HealthCare
- Marc Blevins, Internal Audit
- Andrew Blues, Facilities Information Services
- Josh Boldt, College of Education
- David Boyd, Athletics
- Scott Bradley, College of Arts & Sciences
- Joey Brewer, College of Design
- Chris Canjar, College of Agriculture, Food and Environment
- Jennifer Chien, College of Nursing
- Billy Clark, Research
- Kristi Corum, Internal Audit
- David Crossen, College of Fine Arts
- Jeff Davis, UK HealthCare Information Technology
- Matt Dillion, College of Agriculture, Food and Environment
- Earnie Edwards, UK HealthCare
- Alaa El Mediouri, College of Arts & Sciences
- Tim Elam, University Press

- Michael Ellis, KY Geological Survey
- Jason Galyon, Gatton College of Business & Economics
- Steve Garner, College of Agriculture, Food and Environment
- Tyler Gayheart - Academic Excellence
- Brenda Ghaelian - College of Nursing
- Chuck Ham - Public Relations
- Jason Harris - College of Nursing
- Kim Heersche, Human Resources
- Melissa Beaven, Gatton College of Business & Economics
- Sandra Jaros, UK HealthCare
- Scott Johnson, College of Communication and Information
- Natalie Lindgren, Human Resources
- Josh Maddox, College of Communication and Information
- Barret May, College of Health Sciences
- Jason McReynolds, UK HealthCare Information Technology
- Jonathan Milby, College of Arts & Sciences
- Cecilia Page, UK HealthCare Information Technology
- Charles Paskovics, Human Resources
- Melissa Pero-Gamble, Auxiliary Services
- Matthew Renfroe, Human Development Institute

- Derek Rockhill, College of Law
- Tim Shannon, Sanders-Brown Center on Aging
- Andrew Shooner, Public Relations
- Todd Sizemore, College of Pharmacy
- David Smith, Research
- Ned Smith, College of Pharmacy
- Justin Sumner, College of Public Health
- Mark Thompson, KY Geological Survey
- Lynn Tilley, College of Engineering
- Gary Trumble, College of Social Work
- Mark Underwood, Human Resources
- Kelly Vickery, Libraries
- Stephen Welch, UK HealthCare Information Technology
- Scott Wells, College of Agriculture, Food and Environment
- Jeffrey Witty, College of Dentistry
- Charles Woolum, UK HealthCare Information Technology

Academic Computing Committee

- Sarah Kercsmar, College of Health Sciences
- Erin Abner, Sanders-Brown Center on Aging
- Jen Bartlett, Libraries
- Joe Martin, Center for Instructional Communication
- Larry Grabau, Center for Student Success*
- Abigail Firey, History*
- Chris Bradley, College of Law**
- Zhen Qi, Graduate Center for Toxicology**
- Chad Risko, Chemistry**
- James Boyd, Graduate Student**
- Saadia Akhtar, Undergraduate Student**
- Patsy Carruthers [Ex-officio], Information Technology Services
- Brian Nichols [Ex-officio], Information Technology Services
- Kristen Turner [Ex-officio], Student Success Administration
- Stephen Welch [Ex-officio], UK HealthCare Information Technology

Enterprise Systems Committee

- Lisa Wilson, Provost Budget Office
- Ronda Beck, Financial Services
- Lisa Cassis, Research
- Stacey Greenwell, Libraries
- G. T. Lineberry, Faculty Advancement
- Angie Martin, Planning, Budget, and Policy Analysis
- Brian Nichols, Information Technology Services
- Cecilia Page, UK HealthCare Information Technology
- Barry Swanson, Purchasing
- Mary Vosevich, Facilities
- Don Witt, Enrollment Management
- Kim Wilson, Human Resources

IT Coordinating Committee

- Beth Kraemer, Libraries
- Robert English, College of Health Sciences
- Rob Lodder, Pharmaceutical Sciences
- Mark Farman, Plant Pathology
- Mark Lauersdorf, Linguistics
- Alexandre Martin, Mechanical Engineering
- Margaret Bausch, College of Education*
- Michael Hudson, Music**
- Hayder Saeed, Internal Medicine & Divisions - HEM/BMT**
- Sarah Kercsmar [Ex-officio], College of Health Sciences
- Angie Martin [Ex-officio], Planning, Budget, and Policy Analysis
- Brian Nichols [Ex-officio], Information Technology Services
- Kathy Hamperian [Ex-officio], Information Technology Services
- Cecilia Page [Ex-officio], UK Healthcare Information Technology
- Colleen Swartz [Ex-officio], EVPHA Administration
- Kirsten Turner [Ex-officio], Student Success Administration
- Lisa Wilson [Ex-officio], Provost Budget Office

IT Security & Policy Advisory Committee

- Doug Fee, UK HealthCare
- Richard Chapman [Ex-officio], UK Healthcare
- Timothy West, College of Agriculture, Food and Environment
- Scott Bradley, College of Arts and Sciences
- Melissa Huffman-Beaven, Gatton College of Business and Economics
- Tony Elam, College of Engineering
- Beth Kraemer, Libraries
- Todd Adkins, Office of Risk Management
- Nick Kehrwald, Dean of Students Office
- Drew Smith, UK Health and Well-Being
- Nathan Brown, University Police
- Mark Lauersdorf, College of Arts & Sciences
- Brian Nichols, Information Technology Services
- Heath Price, Information Technology Services
- Kathy Hamperian, Information Technology Services
- Stephen Burr [Ex-officio], Information Technology Services
- Jennifer Edwards [Ex-officio], Information Technology Services

*2016-2017 **2017-2018

CUSTOMER SUPPORT & STUDENT IT ENABLEMENT

Customer Support & Student IT Enablement is the public face of ITS, providing customers with an entry point to the technology needed for academic and professional success. When students, faculty, and staff are faced with technology issues, they can reach out for the help they need. For a wide variety of technologies such as application issues, classroom A/V connections, and desktop hardware, their services help customers better navigate technology.

Classroom, AV Support, & Student Technology Services

Classroom, AV Support, & Student Technology Services provides support for the use of multimedia technology and classroom equipment for the University. They provide audio visual equipment for special events, such as continuing education programs, professional association meetings, and other University related functions on campus.

" *Our #1 priority is to make sure classes take place no matter what. We want to help the students and faculty succeed.* "

- JOHN LATHROP

ITS Division:
Customer Support & Student IT Enablement

Service Area:
Classroom, AV Support, & Student Technology Services

> " *I aim to speak to everyone in our office every day in order to make sure all questions are answered. Communication is very important in our field.* "

- RAINA CLAY

ITS Division:
Customer Support &
Student IT Enablement

Service Area:
Customer Services

> " *With technologies constantly changing, our team is called upon to be technically flexible and conscience of our customers computing needs and work flows.* "

- RICHARD MUELLER

ITS Division:
Customer Support &
Student IT Enablement

Service Area:
Technical Support
Services

The Classroom, AV Support, & Student Technology Services also maintain computer labs all over campus where students can find the necessary hardware and software to complete their assignments and projects. This also includes the Student Media Depot which has multimedia equipment and resources available for students to check out and use.

Customer Services

Customer Services provides a single point of contact for the technological needs of students, faculty, staff and alumni. Customer Services supports the overall strategic goals of ITS by assisting with the knowledge and tools for success with any information technology at the University Of Kentucky.

Technical Support Services

Technical Support Services (TSS) provides life-cycle (deploy, manage, support, retire) support to end user university authorized computing devices. Common examples of support provided by TSS include creation of end user system quotes, computer imaging, anti-virus management/reporting, software installation, configuration, updates, troubleshooting and remote control assistance. Remote control assistance allows a TSS agent to remotely connect to end user authorized computing systems. Should remote control assistance fail to meet customer needs TSS can offer on-site support.

PRODUCT SPOTLIGHT
Download.uky.edu

"Microsoft products are beneficial to me - my classes require the use of Word and Excel regularly. The software provides benefits to all students"

- Elizabeth Foster
Student, Electrical Engineering

An enhanced version of download.uky.edu was made available to all students, faculty, and staff in early 2018. A wide variety of software and apps are available (e.g., SPSS, SAS, Cisco AnyConnect VPN). Additionally, Download.uky.edu allows customers to access OntheHub, a third-party online store for discounted educational software.

Licenses for Adobe Creative Cloud applications, including Acrobat, Photoshop, Illustrator, InDesign, Premiere, and more, can be requested through Download.uky.edu. After obtaining a license,

Adobe Creative Cloud software can be installed via the Adobe Creative Cloud desktop app, available from Download.uky.edu and Adobe.com. Employees may also download separately licensed Adobe products, such as Adobe Captivate and Presenter, directly from the site.

Microsoft Office 365 ProPlus, also available, boasts robust security features, analytics, and cloud communication. Additionally, OneDrive storage has been increased from 1TB to 5TB; and email from 50 GB to 100 GB of storage, with unlimited online email archives.

SERVICE SPOTLIGHT
VIRTUAL DEN

Virtual Den provides access to general student lab software on any UK student's personal devices (desktop, laptop, tablet, mobile). This allows anywhere, anytime access to software like SAS, SPSS, ArcGIS, and others. The benefit of this technology is that it allows access to software and desktops 24/7 without the need to go to a computer lab or use up significant disk space on a personal computer.

"*With the workforce evolving and becoming more technologically focused, UK has given me the resources to make sure I am prepared to enter it.*"

- Megan Parsons
Student, Community & Leadership Development, Career & Technical Education – Agricultural Education

FY 2017

634,568

TOTAL PHONE CALLS TO CUSTOMER SERVICES

20,996 ECHO360 CAPTURES

300,790 SCHEDULED EVENTS/CLASSES IN MANAGED LEARNING SPACES

TOP 5 APPLICATIONS USED IN STUDENT COMPUTER LABS

1. MS WORD
2. MS EXCEL
3. ADOBE ACROBAT
4. MS POWERPOINT
5. ANSYS MODELING SOFTWARE

4,769

SYSTEM CENTER CONFIGURATION MANAGER (SCCM) ADOPTION

LOGINS AT STUDENT COMPUTER LABS

185,465

HELP …

21,188 INCIDENTS/REQUESTS REPORTED TO CUSTOMER SERVICES

324 MANAGED LEARNING SPACES

3,077 WALK-IN TRAFFIC TO **TECH HELP @ THE HUB**

FY 2018

3,017 WALK-IN TRAFFIC TO **TECH** HELP @ THE HUB

5,149
SYSTEM CENTER CONFIGURATION MANAGER (SCCM) ADOPTION

317
MANAGED LEARNING SPACES

HELP ...
59,269
INCIDENTS/ REQUESTS REPORTED TO CUSTOMER SERVICES

649,497
TOTAL PHONE CALLS TO CUSTOMER SERVICES

292,127
SCHEDULED EVENTS/CLASSES IN MANAGED LEARNING SPACES

75.9%
'VERY SATISFIED' CUSTOMERS

TOP 5 APPLICATIONS USED IN STUDENT COMPUTER LABS

1. MS WORD
2. CHROME
3. DREAMWEAVER
4. ADOBE PREMIERE
5. MS POWERPOINT

22,382
ECHO360 CAPTURES

LOGINS AT STUDENT COMPUTER LABS
135,462

Information Technology Services

ACADEMIC TECHNOLOGIES & FACULTY ENGAGEMENT

Academic Technologies & Faculty Engagement (ATFE) provides support, workshops, and one-to-one consulting for faculty who use a variety of technologies. They help with online teaching and learning tools, Distance Learning development and compliance, multimedia and audio visual recording, online Teacher Course Evaluation (TCE) technology, and more. ATFE also offers the Faculty Media Depot for drop-in services.

Distance Learning

The Distance Learning Team provides guidance and support for those teaching courses in which a majority of instruction occurs when students and instructors are not in the same place.

Academic Technical Support Services

The Academic Technical Support Services Team ensures that the online Teacher Course Evaluation (TCE) technology and similar support tools work smoothly.

Learning Management

The Learning Management Team focuses on the Canvas learning management system, Zoom web conferencing, and other learning management tools through one-to-one support and workshops for faculty and instructors.

"My favorite part of working in ITS and at the University is the variety of interactions and challenges that present themselves daily."

- MIRANDA HINES

ITS Division:
Academic Technologies & Faculty Engagement

Service Area:
Distance Learning

"I enjoy teaching faculty how to utilize technology in the classroom and show them the limitless opportunities it supplies for the students to learn."

- FRANK JOHNSON

ITS Division:
Academic Technologies & Faculty Engagement

Service Area:
Learning Management

"Collaboration and relationship building are extremely important to create trust among our team and customers."

- KELLEY CRUSE

ITS Division:
Academic Technologies & Faculty Engagement

Service Area:
Learning Management

PROJECT SPOTLIGHT
eLEARNING INNOVATION INITIATIVE

Through funding provided by The Office of the Provost, in cooperation with Information Technology Services (ITS) and the Center for Enhancement of Learning and Teaching (CELT), the eLearning Innovation Initiative (eLII) began in 2013 and concluded with the last cohort selected to run through 2016-2017. In this time, 123 faculty members went through training and 33 courses were developed as either a hybrid course redesign, online degree. or Massive Online Open Course (MOOC). eLII enabled faculty, departments and units to apply for three different funding opportunities:

- New online degree programs: support for the development of innovative, technology-rich pedagogy and learning strategies to address needs in a constantly changing learning environment.

- Online Learning and/or Blended Learning Faculty Communities: a stipend for faculty to participate in an intensive faculty development program to improve student learning outcomes, student success, engagement and retention by leveraging innovative pedagogies and learning technologies.

- Redesign of large-lecture courses: focusing on the development of innovative, technology-rich pedagogy and learning strategies to address needs in the constantly changing learning environment via synchronous and asynchronous hybrid learning opportunities, "flipped" class designs, and IT enabled personalized/adaptive learning.

PROJECT SPOTLIGHT
CANVAS IMPLEMENTATION

" *My experience has been very positive in being supported and guided by ITS as we determine how technology can move our college forward and support and accommodate 21st century learning.* "

- Mollie Aleshire
Faculty, College of Nursing

The final transition from the previous learning management system (LMS) to Canvas was completed on June 1, 2016 when the old LMS was decommissioned. Careful consideration was put into the decision to make this change. UK students, faculty and staff provided feedback and usability preferences for a "next generation" LMS. They worked in depth with the ITS Learning Management Team to review the existing and future state of the LMS in use, while exploring other systems through small working groups, pilots and a faculty-led LMS review committee. Several vendors proposed systems to meet those expressed campus needs. Each of the systems had unique strengths, however Canvas by Instructure emerged as a proven software-as-a-service (SaaS) system.
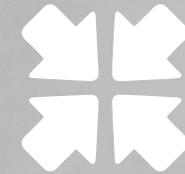
FY 2017

CANVAS ADOPTION
7,989
AVERAGE INSTRUCTORS PER MONTH

68,683
AVERAGE STUDENTS PER MONTH

86 INTERACTIVE VIDEO (ITV) COURSES DELIVERED

6,169
AVERAGE ZOOM MEETING PARTICIPANTS PER MONTH

34 **WORKSHOPS**

100 **FACULTY CONSULTATIONS**

FACULTY MEDIA DEPOT

578
VIDEO SEGMENTS PRODUCED

48
AUDIO STUDIO USERS

ONLINE TEACHER COURSE EVALUATION AVERAGE RESPONSE RATE
51.93%

72
DISTANCE LEARNING GRANTS AWARDED TO FACULTY

4,029
ZOOM PRO ACCOUNTS

56,430
MASSIVE OPEN ONLINE COURSE STUDENTS

6,591 CANVAS TICKETS CREATED

FY 2018

CANVAS ADOPTION
3,050
AVERAGE INSTRUCTORS PER MONTH
26,168
AVERAGE STUDENTS PER MONTH

5,971 CANVAS TICKETS CREATED

ONLINE TEACHER COURSE EVALUATION AVERAGE RESPONSE RATE
54.2%

7,194
ZOOM PRO ACCOUNTS

FACULTY MEDIA DEPOT
704
VIDEO SEGMENTS PRODUCED
225
AUDIO STUDIO USERS

10,898
AVERAGE ZOOM MEETING PARTICIPANTS PER MONTH

45
DISTANCE LEARNING GRANTS AWARDED TO FACULTY

46
WORKSHOPS

147
FACULTY CONSULTATIONS

22,329
MASSIVE OPEN ONLINE COURSE STUDENTS

343 ITV COURSES DELIVERED

19

Information Technology Services

RESEARCH COMPUTING INFRASTRUCTURE

UK has a rich history of computing, originating with the establishment of the UK Computing Center in 1958. In 1987, UK's High Performance Computing (HPC) program began with the creation of the Center for Computational Science (CCS), the acquisition of research-focused computational hardware, and research-focused network communications.

For nearly three decades, information technology professionals and computational scientists have provided HPC-focused consulting services, software support, and infrastructure operations. Over the past decade cyberinfrastructure (CI) utilization once dominated by research in theoretical physics, computational chemistry, computational biology, and materials engineering now competes for computational resources with the areas of artificial intelligence, computer vision, genomics, social sciences, and a broad range of other historically underrepresented scientific areas.

In July 2016, the UK Research Computing (UKRC) group was formed to address the rapid growth of demand and diversity of CI resources, tools, and computational techniques. Working in conjunction with ITS, CCS, and the Institute of Biomedical Informatics (BMI), the UKRC team serves a broad scientific community of researchers across academic and clinical disciplines applying advanced cyberinfrastructure and computational techniques in the advancement of research.

"Networking is complex and I've been able to learn and experiment with different technologies. In the Research Computing group, I hope to develop this knowledge to the limits and beyond."

- MATTHEW MOSELEY

ITS Division:
Research Computing Infrastructure

Service Area:
Research Computing

RESEARCH CORE NETWORK

INTERNET2 EDGE: 100G

RESEARCH CORE: 100G

FY 2017- FY 2018

PRIVATE CLOUD

COMMONWEALTH OFFICE OF TECHNOLOGY (COT) & PKS2 OPENSTACK — **576 CORE, 6.5TB RAM, 190TB BLOCK STORAGE**

COT & PKS2 — **3PB OBJECT STORAGE**

HIGH PERFORMANCE COMPUTING

COMPUTING — **ESTIMATED +320 NODES**

STORAGE — **1.6PB**

NETWORK — **40G DTN, LOGIN EXTERNAL 2 X 10G, INTERNAL FDR (56G)**

RESEARCH CORE NETWORK

COMMONWEALTH OFFICE OF TECHNOLOGY (COT) : 100G

PORTS: 119 x 100G & 96 x 40G

SOFTWARE DEFINED NETWORKING (SDN) NETWORK

+3000 SDN-ENABLED CAMPUS PORTS

88x IMPROVEMENT INTERNET2 FROM CAMPUS PORTS

HIGH PERFORMANCE COMPUTING

DTN — **146X SPEED IMPROVEMENT TO INTERNET2 FROM HPC**

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Information Technology Services

PROJECT SPOTLIGHT
SOFTWARE DEFINED NETWORKING

The Software Defined Networking (SDN) project addressed a widespread problem for research universities, that is, ever-growing demands for improved cyberinfrastructure to support data-intensive scientific research. The campus network architecture uses conventional non-SDN router technology that does not differentiate between research traffic and non-research traffic. As a result, the same policy constraints applied to all forms of network traffic, forcing research traffic to pay the same overheads and pass through the same choke points as non-research traffic. This propelled ITS to integrate SDN technology into the campus network at strategic locations, to meet research requirements. Ultimately, this project will:

- Enable scientific research not previously possible using conventional network designs.
- Build new infrastructure tailored to the needs of researchers.
- Extend beyond the campus network to provide end-to-end SDN connectivity to services in the Internet/Cloud. Specifically, ITS plans to utilize emerging SDN capabilities offered by regional and national backbones, such as the Kentucky Region Optical Network (KyRON) and Internet 2, which now offer limited support for SDN in the form of OpenFlow and/or GENI.
- Provide end-to-end SDN support, allowing network administrators (and ultimately normal users/researchers) to be able to control the way their data is handled by the network.
- Provide both increased capacity and SDN capabilities end-to-end.

SERVICE SPOTLIGHT
HIGH PERFORMANCE COMPUTING

" In the last two years we have seen tremendous growth in computational data Sciences across multiple disciplines from Healthcare to linguistics, business and agriculture. High performance computing is no longer limited to computational chemistry and physics. Big data analytics and machine learning is empowering new research areas. "

- Anthony Elam
Center for Computational Sciences

The University of Kentucky has been a leader in High Performance Computing (HPC) for scientific research and teaching since 1987, and its supercomputers have ranked as high as #66 on the world-wide Top 500 list supercomputers list. These facilities are available to the faculty at UK and to research institutions throughout the state.

Since 2016, ITS Research Computing in partnership with the Center for Computational Sciences (CCS), has drastically increased the amount of computational, storage, and network resources used for research. Now boasting nearly 500 TFLOPs of computational performance, multi-petabyte scale storage, and high speed networking, HPC at the University of Kentucky has never been better equipped to support advancement in research and academic exploration.

These HPC resources, hosted on the UK campus, are open to regional researchers and available to national research collaborators. Active research areas include physics, astronomy, biochemistry, business, pharmacy, medicine, mechanical engineering, and many others. The University also participates in networks of research supercomputers and collaborates with researchers across the country and around the world.

Information Technology Services

ENTERPRISE APPLICATIONS

Enterprise Applications (EA) supports the key administrative computing systems for the University. Their primary focus is the integrated Enterprise Resource Planning (ERP) software from SAP. We are responsible for enhancing, maintaining, and supporting the functional operations of the ERP system to accomplish and further the goals and objectives of the various operational units across campus. Because the EA is grounded in developing and supporting the ERP, in addition to ITS staff, other members of EA are assigned from the major business units of the University.

Product Development & Integration Services

Re-imagine |> **Research** |> **Re-shape** |> **Release.** The Product Development & Integration Services are passionate about building research-driven software solutions that aim to remove administrative and process hassles to allow users to focus on things they care about most when working with our core enterprise systems. On the front-end, they build mobile and web applications for students, faculty, and staff of the University of Kentucky. Behind the scenes, they weave together disparate systems for efficient transfer and integration of ERP data to keep critical systems operational. They lead the day-to-day operations of our Service Management platform for ITS and other partner units. This team is fun and fast-paced, shipping releases frequently via a lightweight agile process. They are software engineers and designers who believe in collaborative decisions and delivering the best experience to customers.

Analytics

The Analytics team is a collaborative effort between the Office of the Provost's Institutional Research team and Information Technology Services' Analytics team. Together, they support strategic decisions & initiatives at the University of Kentucky. They do this by studying past trends, completing detailed analyses, delivering interactive data visualizations and dashboards, & providing official institutional data to external stakeholders.

"I enjoy having the ability to try out new technology and I like seeing where it can help improve our processes."

- NICK MCCLURE

ITS Division:
Enterprise Applications

Service Area:
Product Development & Integration Services

"I am so proud of the amazing deliverables our team has produced, knowing how helpful it is to the University."

- DIANE SKOLL

ITS Division:
Enterprise Applications

Service Area:
Analytics

> "*I believe in positive momentum; I love when others are succeeding and thriving. I do not believe in failure, but rather think of these moments as opportunities for improvement.*"

- ANITA CAMPBELL

ITS Division:
Enterprise Applications

Service Area:
Core Applications

> "*I like that the work is always challenging since both higher education and the technology that accompanies it are constantly evolving.*"

- MARC BRADLEY

ITS Division:
Enterprise Applications

Service Area:
Business Process
Improvement

Core Applications

Core Applications supports key administrative computing for the University. Their primary focus is to operationally maintain and enhance the integrated Enterprise Resource Planning (ERP) software - SAP. In addition, they are responsible for working with various operational units across the University to accomplish and further goals and objectives. Because the core applications unit is grounded in developing and supporting the ERP, in addition to ITS staff, other members of are assigned from the major business units of the University. Key functional areas of the core applications team include: student lifecycle management; financial services; human resources, payroll and training; facilities services; enterprise content management; workflow services; budget services; procurement services; and graduate school services.

Implementation

The implementation manager within the Division of Enterprise Applications collaborates with ITS' Office of Strategic Project Management to ensure coordination of project implementation timing, communication & coordination between teams, their endeavors and deliverables. This is done by examining and modifying the teams' practices, policies, & procedures to improve overall implementation effectiveness. This individual also works with customers to ensure expectations are clearly understood and met.

Business Process Improvement

Business Process Improvement supports the developments of strategies and application-level recommendations for improving processes, efficiency, and practices of University systems. This is done by collaborating with functional and technical teams to understand organizational processes, analyzing operations, and identifying opportunities to optimize functions.

Information Technology Services

PRODUCT SPOTLIGHT
MYUK GPS

The myUK: GPS (Graduation Planning System) project encompassed several components to improve student lifecycle processes including course planning, advising, course registration and academic program guidance. This transformative program supports University strategic initiatives, will enhance operational and efficiency aspects of student lifecycle management and will improve university services. Integration of these processes will foster a streamlined student experience from recruitment through graduation by utilizing better tools, data and analytics, as well as improved advising experiences for students and advisers. Long-term, this initiative will improve resource management capabilities through integrated data and real-time reporting. This allows

" During the early development of the myUK GPS application, I was a pilot advisor. It was interesting to see how the application was created and the improvements made along the way, based on the feedback from students and advisors. "

- Sarah Ballard
Staff, University Advising

students better access to courses, college planning and improvements in academic success. The myUK: GPS program enhances and reshapes the student planning, advising and course registration experience as colleges have access to improved data to better predict student enrollment. Delivering real-time, critical information via self-service features in a single location promotes proactive and informed planning that has the power to impact many facets of the student experience and an opportunity to change the campus culture of student success.

SERVICE SPOTLIGHT
INSTITUTIONAL RESEARCH &
ADVANCED ANALYTICS OPEN LABS

Institutional Research and Advanced Analytics (IRAA) offers two-hour Open Lab sessions on the first and third Friday of every month. Sessions are open to students, faculty, and staff. The first hour is geared toward providing attendees with an overview of analytics at the University of Kentucky, what data is available, how to access that data and a brief walk through of the Tableau Server interface. This is an introductory training for anyone new to accessing data at the University or through Tableau Server, and will be offered at the beginning of every Open Lab. The second part of Open Lab is used to give the attendees updates on any changes to the data models, processes, or reports. This is also a time for more in-depth discussion, presentations, and feedback. Campus customers and partners are invited to share what they've done with Tableau, projects they're working on, or present on specific topics of interest.

> " Institutional Research at UK could simply not function without the HANA data warehouse, Tableau reporting tools, and other data systems supported by Advanced Analytics and ITS. "

- Craig Rudick
Institutional Research and Data Science

FY 2017

514,926 DOCUMENTS ARCHIVED TO ENTERPRISE CONTENT MANAGEMENT

113,655 PURCHASE ORDERS PROCESSED

UK 12,730 myUK MOBILE APP DOWNLOADS

1,703 CHANGE REQUESTS PROCESSED BY ENTERPRISE APPLICATIONS TEAM

14,152 TRIP TRAVEL REIMBURSEMENTS PROCESSED

60,847 PURCHASING REQUISITION DOCUMENTS PROCESSED

UK 14,621
myUK MOBILE APP
DOWNLOADS

1,739
CHANGE REQUESTS
PROCESSED
BY ENTERPRISE
APPLICATIONS
TEAM

64,400
PURCHASING
REQUISITION
DOCUMENTS
PROCESSED

25,975
TRIP TRAVEL
REIMBURSEMENTS
PROCESSED

700,072
DOCUMENTS
ARCHIVED TO
ENTERPRISE
CONTENT
MANAGEMENT

125,840
PURCHASE
ORDERS
PROCESSED

29

ENTERPRISE SYSTEMS

The Enterprise Systems team supports the large-scale application software packages for the University, including information flows, reporting, and data analytics.

Cloud Operations

The Cloud Operations team at the University of Kentucky Information Technology Services (ITS) is dedicated to providing support for faculty, students, and staff at the University as the shift to the cloud becomes a reality. This program includes a dedicated group, who are responsible for the development and maintenance of UK's new cloud-based computing environments, as well as additional services which support broader University needs.

System Operations

Systems Operations take care of the servers from the back of the machine up through the hyper-visor stopping at the OS layer, database layer, or webserver layer depending on the customer facing service it represents. This private cloud encompasses compute, storage, data protection and recovery, as well as availability services on premise. They provide similar services based out of public clouds and are have more on the roadmap.

Data Center

Responsible for the operation and maintenance of the facility housing the University's core computing systems. They provide monitoring and support services for these systems and the data center infrastructure that support them. In addition, staff duties include grading Scantron forms for student tests and research data collection as well as processing print requests for other campus departments.

Directories, Messaging, & Collaboration

Directories, Messaging & Collaboration is the provider of essential services that all other UK computing services rely on for authentication, authorization, and directory services. Providing a suite of rich collaboration tools including email, instant messaging, file and desktop sharing, and online meetings. These tools allow faculty, staff, and students the power to collaborate on campus and around the world to advance their research, service, and university outreach.

ERP Security & Support

The ERP Security & Support team provide platform and application administration for the myUK system and ancillary servers and software. These systems support the core business functions of the University of Kentucky including student management, human resources, financials, materials management, and analytics.

> " *I want to be as helpful as possible to our customers, providing the best support in a timely fashion.* "
>
> **- WAYNE BEECH**

ITS Division:
Enterprise Systems

Service Area:
Systems Operations

SERVICE SPOTLIGHT
CLOUD COMMUNITY OF PRACTICE

ITS has hosted nine Cloud Community of Practice sessions. Each 1.5 hour session offered members of the University community an opportunity to learn about cloud strategies. Guest presenters included employees from Google, Amazon Web Services, and Microsoft as well as members of the University community presenting on work they have performed in the cloud.

" **The Cloud Community of Practice is another great example of how UK ITS is reaching out across the enterprise and bridging organizational divides to build a collaborative learning community - leveraging our shared experiences and ideas to improve service delivery for our clientele using new technologies. As cloud platforms and services increasingly factor into the future plans of our College-- learning first hand of the challenges that others in our enterprise have faced, harnessing our collective creativity, and building strong working relationships with our Cloud Service Providers has provided a great wealth of knowledge. I'm proud to be a part of this group, and thankful for the leadership that UK ITS has provided in organizing the effort.** "

- Chris Canjar
College of Agriculture, Food and Environment

SERVICE SPOTLIGHT
ADVANCED THREAT PROTECTION

ITS launched Microsoft 365 Advanced Threat Protection (ATP) to all students, faculty and staff. ATP reduces the likelihood that members of the UK community will become victims of phishing emails and ransomware attacks. ATP provides protection against malicious content sent to any university email address by analyzing incoming email, blocking malware and unsafe links through real-time, time-of-click protection. ATP also provides protection against opening or downloading of files from SharePoint, OneDrive, Office 365 Groups, and Microsoft Teams.

FY 2017

11,324
VIRTUAL APP/DESKTOP SESSIONS

MAILBOXES BY PLATFORM

70,055
EXCHANGE

81,083
G SUITE

1,066
VIRTUAL MACHINES HOSTED BY PLATFORM
(INCLUDING CLOUD)

2,353.9
TB OF STORAGE AVAILABLE TO CAMPUS

4.71 PB
OF DATA BACKED UP

79,706
SKYPE FOR BUSINESS MEETINGS

FY 2018

95,441
SKYPE FOR BUSINESS MEETINGS

975
VIRTUAL MACHINES HOSTED BY PLATFORM
(INCLUDING CLOUD)

2.01 PB
OF DATA BACKED UP

MAILBOXES BY PLATFORM

74,201
EXCHANGE

85,631
G SUITE

1,514
TB OF STORAGE AVAILABLE TO CAMPUS

46,507
VIRTUAL APP/DESKTOP SESSIONS

33

NETWORKING & INFRASTRUCTURE

The Networking & Infrastructure team is responsible for all wired networking, wireless networking, and voice communications for the entire enterprise.

Networking Engineering

The Network Engineering group ensures that the network is designed and constructed in a fashion that meets the business needs of the enterprise while also taking into account technical considerations like security, scalability, resiliency, and redundancy. This group creates design and implementation plans for wired and wireless access to the local area network (LAN), expansion of LAN services through the wide area network (WAN), and shared access to public and partner resources through the Internet edge and remote access tiers of the network. The Network Engineering group is committed to creating a network that positively impacts the lives of our students, faculty, staff, and community and which enables these groups to achieve their own measures of success. This group stays current on the design and implementation of modern-day technologies like routing, switching, and firewalling and well versed in emerging technologies like software defined networking (SDN), next-generation firewalling, and virtual networking. The Network Engineering group looks for ways to streamline the implementation of these new technologies and integrate emergent technologies to further it's goal of allowing the network to enable the success of the campus community for years to come.

Infrastructure Operations

The Infrastructure Operations team is made up of technician teams that handle incidents and requests concerning fiber, data access, and telephone infrastructure throughout campus and HealthCare.

Network Operations

Network Operations encompasses the areas of unified communications and wired and wireless network operations. Unified communications provides voice and video communications in the form of IP Telephony, standards based video, contact center services, emergency notification, and adjunct communications services. This includes over 40,000 phone numbers and the subsystems to support these services, enhanced 911 systems, voicemail, contact center operations (agent based calls), auto attendant systems, and emergency paging systems. Wired and wireless network operations includes the management and deployment of physical, virtual, and logical network across the University. This includes internet access and wired and wireless network access. ITS emphasizes security, stability, and performance when delivering network services with the University's student, patient, and business needs in mind.

Infrastructure Project Management & Estimation

The Infrastructure Project Management and Estimation team engages with the campus community to collaborate on network and telephone solutions. A key focus is delivery of network resources for new construction, building renovations, upgrades and equipment lifecycle refreshes. This includes the sizing and installation of switch equipment, wired data ports, wireless access points, cabling pathways and phone hardware.

> *"There are only a few places where the technology we work with can have such a substantial impact on such a large number of lives..."*
>
> **- COLIN BAKER**
>
> **ITS Division:**
> Networking & Infrastructure
>
> **Service Area:**
> Network Enigeering

FY 2017

311 IT SERVICE CENTER ESTIMATES REQUESTED

✓ **238** IT SERVICE CENTER PROJECTS COMPLETED

NETWORK

99.91% CORE/DISTRIBUTION UPTIME

12.3 MAX INTERNET BANDWIDTH

235,000 UNIQUE WIRELESS CLIENTS (MAC ADDRESSES SEEN ON NETWORK)

7,691 TOTAL NUMBER OF WIRELESS ACCESS POINTS

VOICE

2,030,372 AVERAGE CALLS PER MONTH

383,549 AVERAGE LONG DISTANCE CALLS PER MONTH

$172 IT SERVICE CENTER ESTIMATES FUNDED

FY 2018

210 IT SERVICE CENTER ESTIMATES REQUESTED

$117 IT SERVICE CENTER ESTIMATES FUNDED

VOICE

2,143,976 AVERAGE CALLS PER MONTH

414,981 AVERAGE LONG DISTANCE CALLS PER MONTH

✓ **152** IT SERVICE CENTER PROJECTS COMPLETED

NETWORK

99.99% CORE/DISTRIBUTION UPTIME

7.7 MAX INTERNET BANDWIDTH

52,478 UNIQUE WIRELESS CLIENTS (MAC ADDRESSES SEEN ON NETWORK)

4,213 TOTAL NUMBER OF WIRELESS ACCESS POINTS

35

SERVICE SPOTLIGHT
SECURE WIFI NETWORKS

As part of the University's cybersecurity efforts and a continued commitment to provide high-speed bandwidth across campus, the wireless network transitioned to eduroam. Eduroam is a secure WiFi network providing enterprise-level access at UK. Over 400 universities and colleges worldwide use eduroam, allowing students, faculty, or staff members that are visiting a participating institution to receive access to wireless without requesting a guest account. Guests to the University can also self-register or be sponsored for access to the designated UK-Guest network.

SERVICE SPOTLIGHT

PROJECT MANAGEMENT & ESTIMATION

"My favorite part of working in ITS and UK is the sense of purpose it provides. I'm able to see how what I do fits into the overall mission of the University and my team."

- Wayne Campbell
Infrastructure Project Management & Estimation

When Kentucky Children's Hospital opened its new NeoNatal Intensive Care Unit (NICU) in April 2018, the Infrastructure Project Management & Estimation team had been hard at work for just short of two years in preparation. The team prepared estimates for this large-scale project that included over 50 wireless access points, 130 phones, more than 1500 wired data ports, along with all the cabling and networking hardware to support it.

A shining star on campus, UK's new Gatton Student Center was officially opened in April of 2018. The state-of-the-art facility contains sparkling, new dining, a two-story Barnes & Noble bookstore, high-tech office and meeting rooms, as well as living and learning spaces. This modern facility required modern solutions for network, cable, and data needs. The Infrastructure Project Management & Estimation team and the entire Network Infrastructure division worked over years to make sure the Gatton Student Center was fully equipped to handle all the needs of students, faculty, staff, & visitors to the University.

OFFICE OF THE CIO:

CYBERSECURITY, DATA PRIVACY, & POLICY

IT Enterprise Security is a shared responsibility by the University's faculty, staff, and students. All members of the University are responsible for the protection and integrity of the University's data and network. All members of the University's community are tasked with understanding and adhering to the University's policies, and complying with best practices as established by the University's Enterprise Security Office. The Enterprise Security Office maintains a list of policies and practices designed to protect the confidentiality and integrity of the University's data while maintaining the availability of that data.

Cybersecurity

The Information Technology Services Enterprise Security team is responsible for overseeing the University of Kentucky's network security; establishing required minimum security standards for handling the University's data and information; overseeing technology policy; managing information security training and awareness; handling information security incidents.

Data Privacy & Policy

In collaboration with other units, ITS develops enterprise level IT policies that support the efforts of the University's students, faculty, staff, and strategic plan while upholding the mission of the University of Kentucky. ITS will also provide IT policy consultation to any unit, as requested. ITS has launched a new IT Security & Policy Advisory Committee to review and form appropriate IT Security practices.

" We try to provide a feeling of confidence and professionalism when dealing with the emergencies. To do this we have to be honest, trustworthy, and discreet. "

- Michael Sheron

ITS Division:
Office of the CIO

Service Area:
Data Privacy & IT Policy

Disaster Recovery & Risk Management

Disaster Recovery is something that should be considered by everyone who administers any shared systems at the University of Kentucky. It is essential to have plans in place to ensure our business viability is not at risk from a critical incident. A DR plan is designed to mitigate the risk of system and service unavailability by providing written and cost-effective contingency solutions. Defining the criticality and timeliness of recovering our services is imperative to building an effective long-range Business Continuity strategy.

The end goal is to be prepared for any incident that may prevent continuous use/operation of our data resources. Backups are very important, but not the entire solution. We should be able to execute prompt and effective continuation of services in the event of a disaster today, by evaluating our recoverability options, preparation and execution of a test plan.

PROJECT SPOTLIGHT
#SECUREBLUE

As part of a year-long campaign, the ITS #secureblue initiative worked to provide information and awareness to the University community on a variety of topics around internet safety and technology best practices. Printable & shareable infographics were designed and made available to inform on subjects of protecting your identity, defense against phishing emails, protecting devices and personal information, and copyright compliance.

ITS participated in the annual Cybersecurity month in October by handing out postcards to students with tips on how to avoid phishing scams; each card had a Swedish Fish candy attached to draw attention. Throughout the month social media was used to post cybersecurity tips and articles on important cybersecurity topics were shared.

SERVICE SPOTLIGHT
ISTHISEMAILSAFE@UKY.EDU

Ongoing attacks are being led against University and personal data on a daily basis and ITS Cybersecurity works hard to protect the University community against malicious attacks. As part of UK's defense, ITS has put in place as much automated protection as possible, however, events still bypass established safeguards. It is never a good idea to click on anything you are not sure about. ITS Cybersecurity has created and monitors IsThisEmailSafe@uky.edu where students, faculty, and staff can forward suspicious email for further investigation. The team will then investigate those emails for links that may need to be blocked at the university firewall level.

FY 2017

473,148
INTRUSIONS
PREVENTED

7,716
REMEDIATIONS
OF
MALWARE

10
REPORTABLE
INCIDENTS
INVESTIGATED

2,892
MACHINES
PATCHED

227
DIGITAL
MILLENIUM
COPYRIGHT
ACT (DMCA)
VIOLATIONS

FY 2018

3,204
MACHINES PATCHED

120
DIGITAL MILLENIUM COPYRIGHT ACT (DMCA) VIOLATIONS

3
REPORTABLE INCIDENTS INVESTIGATED

11,304
REMEDIATIONS OF MALWARE

41

Information Technology Services

OFFICE OF THE CIO:
STRATEGIC PLANNING, COMMUNICATIONS, & PROJECT MANAGEMENT

The Strategic Planning, Communications, & Project Management (SPCPM) team was formed on February 1, 2017. Three pre-existing ITS teams came together to form this team: Strategic Project Management, Communications & Marketing, and Web Content Management.

Project Management

Through major project initiatives, the Strategic Project Management team works with the CIO & ITS Leadership Team to align IT efforts in support of the UK & ITS strategic plans. The team provides hands-on project management support for top ITS projects and portfolio management support for all ITS projects. Occasionally, team members are called on by executive leadership to manage IT-related projects throughout the University. Key functions of our team include planning, implementation, monitoring, reporting, communications, resource management, risk management, business case analysis, requirements gathering, and project management consultation, coaching, training and education.

ITS Communications

The team works hand-in-hand with the CIO, ITS Leadership Team, and ITS staff to ensure an effective customer experience and engagement, creating an outstanding reputation of customer service excellence. The team is responsible for ensuring the ITS mission, vision, and values are reflected in all ITS does. Key functions include communications and messaging, public relations, marketing, market research and advertising, branding, risk and crisis management consultation, customer satisfaction, experience and engagement, relationship management and event management.

" No matter where we work within the UK structure, always remember the student is the center, and the reason we are here. I also believe that cooperation is a key factor in any endeavor. "

- PEGGY AKRIDGE

ITS Division:
Office of the CIO

Service Area:
ITS Communications

" There is immense satisfaction in seeing a program or application implemented, and our customers using it. "

- KATHRYN WONG

ITS Division:
Office of the CIO

Service Area:
Project Management

Strategic Planning

As UK pursues our five-year strategic plan ITS is committed to propose strategic initiatives, recommendations, & action items that will ensure its success in supporting the mission and goals of the enterprise. Key functions of our area include the creation of, implementation, and tracking towards progress of the IT Strategic Plan; assistance with SACS accreditation efforts for ITS; and annual reporting to UK Institutional Effectiveness.

PROJECT SPOTLIGHT
SALESFORCE IMPLEMENTATION

The University entered into an Enterprise Level Agreement with Salesforce.org for the implementation of a Constituency Relationship Management (CRM) system to effectively manage our relationships of prospective students, students, alumni, faculty and staff. This effort was assisted by project management from SPCPM to help maintain a flow of university resources, as well as coordinate with the external consulting group sourced to implement the University's CRM strategy. The first phase implemented the system to be used by Enrollment Management, Recruitment, Housing & Dining, and Retention Operations.

> " The project management services from ITS have helped us explore the first-year experience for students. This includes many important milestones in a student's experience at UK. "

- Justin Blevins
Academic Excellence

SERVICE SPOTLIGHT
IT STRATEGIC PLAN

Beginning in fall 2016, the Strategic Planning, Communication, and Project Management (SPCPM) team provided guidance and support for the development of the UK Information Technology Strategic Plan. The process brought together University thought leaders in a myriad of areas of expertise to brainstorm about areas of strategic priority in their units and day-to-day activities related to IT. Five task forces were developed and their work took place during spring 2017. The plan was finalized and published January 2018. Throughout, a project manager was engaged to coordinate the forming of the task forces, collate and assemble the work of the task forces into a cohesive set of recommendations and action items, and provide edits and formatting of the final document.
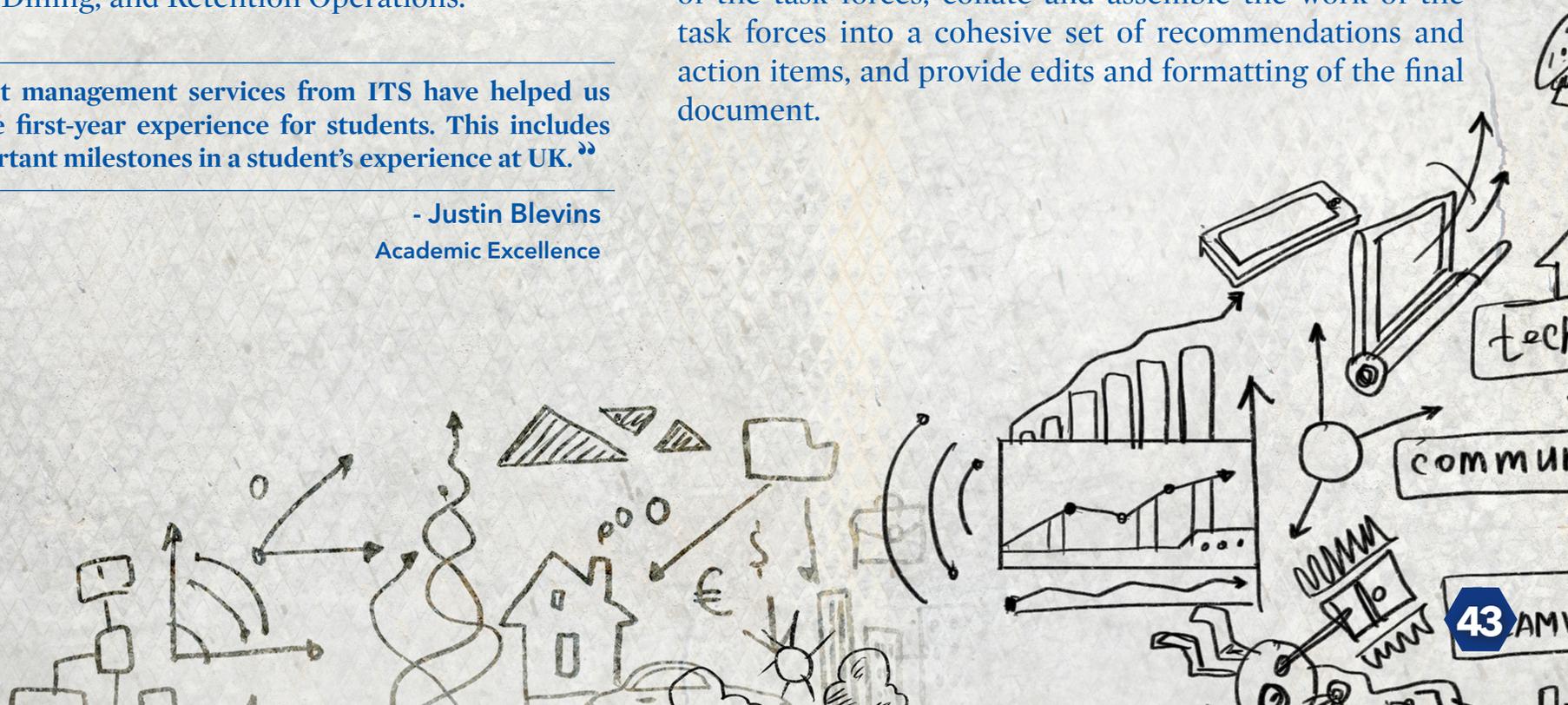
FY 2017

82 PROJECTS LINKED TO IT STRATEGIC PLAN

25 ARTICLES PUBLISHED

166 INSTAGRAM LIKES & COMMENTS

29 PROJECTS CHARTERED

770 TWITTER FOLLOWERS

35 PROJECTS LINKED TO UK STRATEGIC PLAN

2,091 VISITORS TO ITS WEB PROPERTIES

669 FACEBOOK FOLLOWERS

300,778 REACHED ON FACEBOOK

38,881 TWITTER IMPRESSIONS

48 PROJECTS COMPLETED

91 INSTAGRAM FOLLOWERS

FY 2018

89
ARTICLES PUBLISHED

48
PROJECTS LINKED TO IT STRATEGIC PLAN

1,546
INSTAGRAM LIKES & COMMENTS

129
PROJECTS CHARTERED

1,091
TWITTER FOLLOWERS

23
PROJECTS LINKED TO UK STRATEGIC PLAN

285,829
VISITORS TO ITS WEB PROPERTIES

721
FACEBOOK FOLLOWERS

464,077
REACHED ON FACEBOOK

417,300
TWITTER IMPRESSIONS

237
INSTAGRAM FOLLOWERS

77
PROJECTS COMPLETED

45

Information Technology Services

OFFICE OF THE CIO:
ADMINISTRATION, FINANCE & HUMAN RESOURCES

Administration, Finance & Human Resources pull together the budgeting, purchasing and staffing to keep a large and diverse organization like ITS running.

Finance

The Finance team is responsible for preparing and managing the budget for ITS. They are responsible for processing the day-to-day financial transactions, payables and receivables, within our different sources of funds. The team strives for excellence in customer service, promptness and accuracy in all financial transactions and continuous improvement to ensure that all needed technology is available to students, faculty and staff to succeed at the University of Kentucky.

Vendor Management

The Vendor Management Office (VMO) in ITS is charged with Vendor Relationship Management, Vendor Performance Management, Vendor Risk Management, Contract Management, and the operation of the IT Service Center's Inventory Warehouse. The ITS VMO focuses on value generation through vendor selection, negotiation, and collaboration.

Human Resources

The HR team maintains complete and accurate information about employees to ensure timely payment of compensation, develop career paths, and provide professional development opportunities through the use of enterprise-wide systems. The HR team supports the functional operations of these systems to accomplish the goals and objectives of Human Resources.

"My favorite part of ITS is working with coworkers whom I consider great partners, as well as a diverse group of students, faculty, and staff."

- KIM STOCK

ITS Division:
Office of the CIO

Service Area:
Finance

"I value honesty, consistency, problem solvers, and drivers of continuous improvement."

- DAN O'BRIEN

ITS Division:
Office of the CIO

Service Area:
Vendor Management

"Working for ITS has given me the ability to meet a wide range of people throughout the University and has given me the opportunity to complete complex tasks."

- SHELBY LYNN

ITS Division:
Office of the CIO

Service Area:
Finance

SERVICE SPOTLIGHT
CELL PHONE MANAGEMENT

The Finance team within the Office of the CIO facilitates the acquisition of wireless communication devices. These devices include departmental cell phones, iPads with data plans, and mobile hotspots (MiFi's) for the University. This service provides best rates for the University as a whole rather than multiple plans with varying costs.

PROJECT SPOTLIGHT
COMPUTER STANDARDS COMMITTEE

The Vendor Management Team is charged with chairing the Computer Standards Committee. This committee creates the RFP and serves as the selection committee to choose a vendor to supply standard computer configurations at a discount to the University. Once a vendor is selected the committee oversees the execution of the contract by meeting to discuss the vendor's performance and provide feedback as needed. The Vendor Management team is highly involved with contract negotiations and works closely with the University Purchasing Division.

66 POSITIONS POSTED

721 INVENTORY ORDERS PROCESSED

FY 2017

64 NEW STAFF ON-BOARDED

244 RENEWAL CONTRACTS MANAGED

64 POSITION DESCRIPTION UPDATE REQUESTS COMPLETED

721 TRAVEL REQUESTS PROCESSED

635 PROCUREMENT REQUESTS PROCESSED

46 STAFF OFF-BOARDED (ATTRITION)

Information Technology Services

OUR YEAR IN PROJECTS
JULY 2017 - JUNE 2018

2017

November 7, 2017
- New UK Directory Launched

November 8, 2017
- Finance & Administration Analytics Project Started

September 30, 2017
- myUK GPS Enterprise Phased Rollout Complete

NOVEMBER

August 9, 2017
- DMCA: Website, Policy, Student Letter, FAQs, & Infographic Developed

SEPTEMBER

July 1 2017
- Zoom Pro Contract Signed

July 20, 2017
- Cloud Community of Practice Series Launched

AUGUST

DECEMBER

JULY

OCTOBER

October 1, 2017
- Cybersecurity Awareness Month Campaign

December 18, 2017
- Secure Wireless Networks Launched

October 4, 2017
- Microsoft Contract Signed
- IT Security & Policy Advisory Committee Formed

October 26, 2017
- Estimated Account Statement Application Launched

2018

January 17, 2018
- University IT Strategic Plan Announced
- New download.uky.edu Launched

January 19, 2018
- "What You Want To Know Wednesday" Spring Series Announced for Faculty

March, 2018
- Office 365 Mailbox Migration Completed

March 26, 2018
- Advanced Threat Protection Launched

JANUARY

FEBRUARY

MARCH

APRIL

MAY

JUNE

April 1, 2018
- Adobe Contract Signed

April 10, 2018
- Two-Factor Log-In Implementation Started

IT STRATEGIC PLAN:
RECOMMENDATIONS

Recommendation 1:
Student Experience & Success

The University should provide and support plentiful IT resources in the living and learning environment that empower and enhance the experiences of students and contribute to student success when used effectively and profusely.

- Strategic Project Management Office continues to manage Salesforce implementation and Alcohol Abuse and Sexual Assault Prevention projects.
- Continued collaboration between Institutional Research and Analytics to complete Finance and Administration Analytics as well as establish data management standards across the University
- Wildcat ID photos have been integrated into course rosters, completed Fall 2017.

Recommendation 2:
Teaching & Learning Enablement

The University should develop and enhance IT resources that encourage adoption, through effective and widespread use by faculty in teaching, enabling students' academic achievement.

- Working with CELT to renovate new faculty collaboration space.
- CIO and Senior Director of Academic Technologies & Faculty Engagement serving on Provost Task Force for Distance Learning.
- Increased funding to provide additional Distance Learning awards and Quality Matters training to faculty.
- Established Technology Help Center partnerships across University and developed initial portal and content.

Recommendation 3:
Research Enablement

The University should develop, maintain, and ensure broad utilization of IT resources that empower and advance discovery, and support partnership, entrepreneurship, and innovation when effectively utilized by faculty in research.

- Condo Model for research infrastructure was established with funding from grants, administrative fees, or new faculty start-up funds.
- Center for Computational Sciences Advisory Committee established to develop procedures that engage the research community in determining and selecting appropriate, emerging, and leading-edge computing resources.
- Position of Director of Research Computing Infrastructure established with reporting lines to CIO, Director of Center for Computational Sciences (CCS), and Director of Institute for Biomedical Informatics.

Recommendation 4:
IT and the Enterprise

The University should develop and maintain plentiful IT resources and acquire (or develop) and arrange for (or deploy) applications, enterprise systems, and tools that facilitate the efficient and effective function of the University.

- Transitioned Drupal and web content management service to Public Relations to empower business operations and standardizations of practice.
- ARIBA contract management implemented for Central University Purchasing and Strategic HealthCare Contracting.
- Established data analytics and reporting for Central Purchasing, Housing, Facilities, Planning, Budget, and Policy Analysis.

Recommendation 5:
Governance & Communication

The University should cultivate engaging, active, and impactful communication methods as well as establish a strategic IT governance structure. These will enable continued engagement of the University community in the creation and deployment of strategic recommendations and subsequent projects, supporting ongoing operation of IT resources. Such structures should expand and transform the exchange of information between the central IT organization and the University community.

- ITS outage/alert communication protocols established and put into practice.
- ITS Social media accounts established on LinkedIn and Instagram.
- New ITS website protocols established to share timely news and announcements across articles, alerts, and calendar features.
- Continued monthly meetings are held between ITS and technology staff members from across the University. Traditionally these groups were facilitated by ITS and held at an ITS location. In 2017, meetings rotated locations and a Skype link was also provided for those unable to attend in person. University Technology staff were also provided to present and share information. Agendas, meeting notes, presentations, and meeting recordings are all accessible via a SharePoint site with this group.
- Committees with representatives from across the University were formed to evaluate contracts with Adobe and Microsoft including features and pricing resulting in newly established contracts established in 2017.

Recommendation 6:
Infrastructure

The University should construct and sustain a comprehensive, innovative, protected, and fruitful IT infrastructure (including but not limited to networks, software, facilities, and hardware) capable of supporting extensive and effective use by students, faculty, and staff.

- Early engagement program created by Infrastructure Project Management Estimation Team.
- Identity Management research and Proof of Concept underway.
- Secure WiFi established on campus for students, faculty, staff, guests, and visitors. Eduroam and UK-Guest launched in Spring 2018.
- NSF Grant awarded and was utilized to established a software defined network.
- Computers are "recycled" and sold to other UK units and/or public auction/sale via UK Surplus.
- ITS is moving as many physical architectures to the cloud as possible, utilizing less hardware.

Recommendation 7:
Security & Policy

The University should provide a secure, resilient, policy-based information and infrastructure environment to protect the security, integrity, and privacy of data. The environment should also ensure the stability and continuity of the institution's IT resources and repositories in the face of potential catastrophic events.

- IT Cybersecurity and Policy Advisory Committee was established and is composed of college and department faculty and staff from across the University. The group is actively reviewing IT Administrative Regulations. Administrative Regulation 10:1, 10:7 Security of Data and 10:8 Security of IT Resources have been submitted to UK Legal for Review and are in the final approval phase.

Recommendation 8:
Support & Enablement

The University should grow and sustain a robust, multi-tiered support environment that meets both the diverse knowledge base of customers and specific needs of the University community so that stakeholders can appropriately utilize IT resources.

- Vacant University Design for Learning Specialist position in CELT posted and filled. Collaborates with ITS to increase focus on accessibility in courses and software.
- Staff Learning Community/Working Group launched focusing on accessibility that resulted in multiple presentations lead by staff and faculty from across the University.

Recommendation 9:
Strategic Funding

The University should adopt an understanding that IT resources are strategic assets. Models for funding (both centrally and distributed throughout the University) should be developed to ensure effective, efficient, and holistic investments in IT.

- Implemented detailed financial analysis to review total cost of ownership and return on investment on IT projects that fall into one of the following categories:
  - Expected to cost $100,000 or more.
  - Incur new recurring annual contract or maintenance cost.
  - Replacing existing systems that will need to be decommissioned for savings to be realized.
  - Requires associated Network & Infrastructure work activity.

Information Technology Services

FUNDING OVERVIEW

FY2017 ITS BUDGET/REVENUE ACTUALS

JULY-JUNE

37.43%
GENERAL FUND
$19,348,497

10.89%
STUDENT TECH FEE
$5,628,416

0.11%
MISCELLANEOUS INCOME
$59,391

50.06%
SERVICE CENTER
$25,879,029

1.51%
DISTANCE LEARNING FEE
$780,558

FY2018 ITS BUDGET/ REVENUE ACTUALS
JULY-JUNE

0.01%
MISCELLANEOUS INCOME
$6,956

36.86%
GENERAL FUND
$19,966,413

51.19%
SERVICE CENTER
$27,728,424

10.48%
STUDENT TECH FEE
$5,678,766

1.46%
DISTANCE LEARNING FEE
$790,062

55
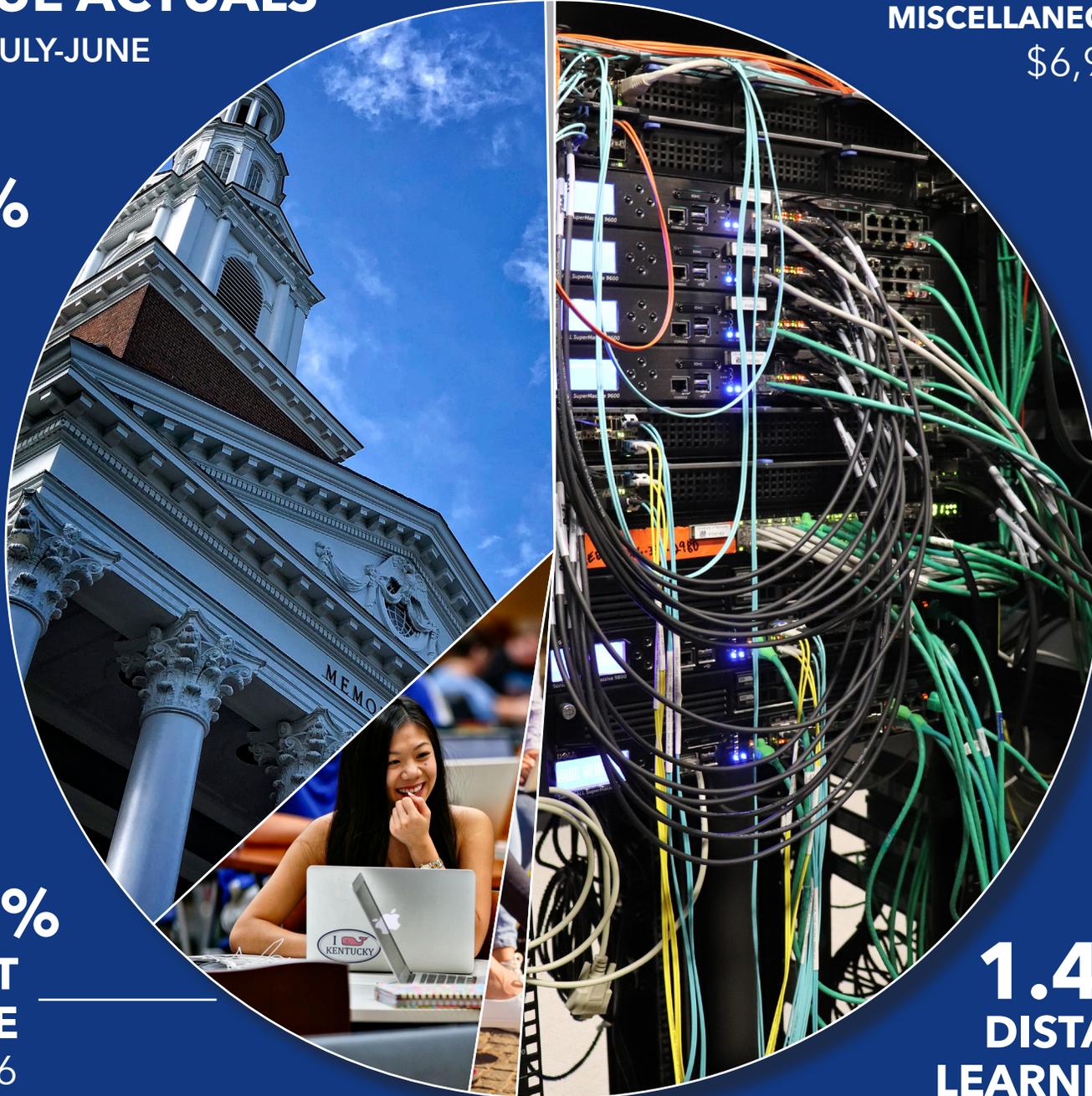
GIVING BACK

United Way Fundraising

ITS staff participated in Fall Festival fundraising events for United Way. The total amount raised from these events was $562.61. Combined with online donations and payroll deduction, the total amount that ITS raised for United Way was $4,848.61.

At the Hardymon Fall Festival, attendees enjoyed a potluck lunch and an impressive bake sale assortment. The chili cook-off included nine competitors, and guests had the opportunity to vote for their favorite chili. Leftover desserts were donated to the UK Police Department on Rose Street and Lexington Fire Department Station No. 6 on S. Limestone to show our appreciation for local police officers and firefighters.

Hurricane Harvey Relief

In September, ITS hosted a Hurricane Harvey donation drive and collected basic items needed such as bottled water, paper towels, and first aid kits to support relief efforts. Many individuals brought in their own contributions. We also were able to collect $130 and had volunteers shop for items needed most. ITS delivered contributions to North Limestone Donuts, a local business that partnered with other organizations to collect supplies.

Green Tree Plastics "ABC (A Bench for Caps) Promise Partnership"

ITS supports three local elementary schools in their effort to collect plastic caps, which are recycled into benches or picnic tables. Elementary schools include Northside Elementary (Midway, KY), Garrett Morgan (Lexington), and Stonewall (Lexington). Since April 2017, we have collected three grocery bags full of lids that we donated to Northside Elementary (Midway, KY), Garrett Morgan Elementary (Lexington), and Stonewall Elementary (Lexington).

Going Green by Drinking Water

ITS has saved waste from over 20,858 water bottles by encouraging usage of water fountains in the Hardymon building. The fountain shows a live count of water bottle waste saved while in use.

Women in IT Outreach

In Spring of 2018, the Women in IT group was founded, bringing the opportunity to capitalize on women's innovative thinking and leadership potential, and explore key activities or roles in shaping the organization's future.

On Saturday, April 21st, three members of the Women in IT Planning Committee participated in the Opportunity Fair during the 2nd Annual Expanding Your Horizons 2018 Conference. The members met with middle school girls and presented an overview of IT and highlighted three career areas along with skills necessary for such professions. Expanding Your Horizons Conference targets middle school girls across Kentucky to acquaint them with the STEM fields of science, technology, engineering and math. The conference provides hands-on science workshops and the opportunity to interact with professionals during the fair.

Networking Session for BSCTC Students

Joe Tietyen, of the ITS Network Engineering team, hosted Dr. Kathryn Miller and her students from Big Sandy Community and Technical College for a presentation on UK's network architecture. Joe discussed how the ITS network team programs and installs switches and routers around UK's campus, HealthCare facilities and UK facilities throughout the state. He provided a show-and-tell with cabling and hardware used by UK, discussed past and current network projects, and demonstrated the Orion network reporting tool. He also threw in a bit of network education and trivia which made the event a full learning experience for the attendees. The students, ranging from high school seniors getting a college head start to retired coal miners seeking a new career, plan to pursue professions in the computing and networking fields.