January - June 2018

Accomplishments Report
Information Services

UMKC

Contents

Introduction

MISSION

We are a strategic asset for UMKC's missions of leading in health sciences; deepening and expanding strength in the visual and performing arts; developing a professional workforce and collaborating in urban issues and education; and creating a vibrant learning and campus life experience.

2018 GOALS

- Infrastructure that delivers seamless, secure, reliable, anytime and anyplace user access
- User technologies and support that enhance and facilitate Teaching and Learning, Research, Service, and Economic Development
- Accurate, understandable, and accessible communication, documentation and resource use
- Continuous improvement in services, facilities and professional development
- Further automation of campus procedures to increase our efficiency as a campus

2018 IS PROJECT LIST & POINT PERSON

- Campus New Construction/Renovation – Guggenmos/Technology Management Services
  - Whole Foods Development (Student Disability Services, Student Health, Counseling Center)
  - Chemistry – Biology Renovations – Phase 2
  - SCE Educational and Research Center
  - Bloch Heritage Hall Building Renovations
- Academic Works – Guggenmos/Technology Management Services
- Center for Academic Development HCF Grant – Guggenmos/Technology Management Services
- Oak Place Water Damage – Guggenmos/Technology Management Services
- Performing Arts Center Infrastructure Upgrades – Guggenmos/Technology Management Services
- Campus Building Security – Guggenmos/Technology Management Services
- Rave Guardian Deployment – Guggenmos/Technology Management Services
- Smart City Kiosks – Guggenmos/Technology Management Services
- Scofield Hall Infrastructure Upgrades – Guggenmos/Technology Management Services
- ILE Classroom Lifecycle Upgrades Phase 4 – Guggenmos/Technology Management Services
- Active Directory Consolidation – Guggenmos/Technology Management Services
- Expansion of wireless coverage – Schonemann/Network Architecture
- Building Network Switch Refresh – Schonemann/Network Architecture
- Data Center Network Switch Refresh – Schonemann/Network Architecture
- Campus Core Network Switch Refresh – Schonemann/Network Architecture
- Implement Amazon Web Services Enterprise Firewall – Malyn/Security
- Distribution List Management – Kurup/Information Access
- Generic/Resource Account Management – Kurup/Information Access
- Academic Credentialing Database – Kurup/Information Access
- MySQL 5.7 Upgrade - Vishal Kurup/Information Access
- Filemaker 16 Upgrade – Vishal Kurup/Information Access

- Oracle 12.2 Upgrade – Vishal Kurup/Information Access
- SQL Server Upgrade – Vishal Kurup/Information Access

2018 Shared Services Project List

- Accounts Management – Goodenow/Reisenbichler/Kurup – Information Services
- Establish Enterprise Architecture – Schonemann/ Network Architecture
- UM Network Architecture – Schonemann/Network Architecture
- Implement Cherwell – Phase 1 – Reisenbichler/Support Services

Executive Summary

Information Services (IS) is a strategic asset for UMKC's missions of teaching and learning, research, service and economic development. We continued to make progress toward our defined goals and this document details the progress we have made during the first half of 2018.

Information Services has adjusted to changes in the overall approach to IT both at the UM System and local campus level. IS is moving towards a more remote based support model that has lowered our overall staffing level. The campus is moving towards a new base and custom services support model. Base services provided to the entire campus and custom services are specific to an academic, auxiliary or support unit.

During this past review period, IS Support Services over the last six months used Microsoft's SCCM product to install **27,564** pieces of software across campus. The campus also saw call volumes declining as a result of SecureAuth and the ability for uses to reset passwords by themselves using this tool.

Campus Technology Services completed technology upgrades to 23 ILE classrooms. The ILE classrooms received an upgrade package designed to improve student experience and add to/enhance the instructor's capability. These additions/enhancements include high definition cameras (used for lecture capture, synchronous online instruction and web conferencing {via software-based tools like Zoom, WebEx and Skype}), enhanced audio processing with acoustic echo cancellation (used to improve remote participants' audio quality in synchronous online instruction and web conferencing) as well as improved control over the technology in the room.
The Project Management and Infrastructure Services departments worked a number on over forty projects including the following:

- Whole Foods Development
- Law School Expanded Wireless Coverage
- Chemistry/Biology Building Renovation
- Clear Scholar Mobile Implementation
- Swinney Recreation Center Sound System Upgrade
- Active Directory Consolidation project

Efforts of the Information Access (IA) Division were notable for the improvements made in measurements of customer response times, despite a steady increase in requests for service. Internal applications developed a new Canvas Request System to support faculty using the new Learning Management System for the campus.   IA Supported over 40 pieces of custom software for the campus. The team also provided scanning services for 8 schools and almost 500 individual exams.

Foundation Services had notable achievements including starting a replacement project of the campus HPC teaching cluster, upgrading the VMWare virtual server environment including adding new servers and obtaining over a 99.9% uptime for our server infrastructure.

Academic Enhancement worked on over 50 live streaming or video events for multiple different units across campus.

The UMKC networking team continued work on the 10-year building-wiring plan. We replaced switches in eight campus buildings. The group also designed a new "Spine/Leaf" for the campus data center to be implemented over the next 6 to 12 months.

The IS Security Team started a project with Amazon Web Services hosting and firewalls attached to our campus print. Security continues to work ongoing scam and phishing management on Office 365 student accounts.

Looking forward, Information Services is establishing new long range staffing and budget planning processes. IS is exploring new services and offerings to streamline the service and offerings for students, faculty, staff and the entire UMKC community.

Computing Facilities

We had **12,088** distinct individuals use computing sites between 7/1/2017 and 12/31/2017. This represents a very large percentage of our student base and exemplifies the usefulness and importance of these student-computing facilities.

In addition to the physical computer sites, we had **1,458** distinct individuals who logged into Remote Labs 12,492 times.

Printing. Performed application upgrades on PaperCut across the student computer labs. This adds additional functionality to students and ensures we are up-to-date from a security perspective.   We also migrated mobile printing to PaperCut from a third party. This reduces both licensing and infrastructure costs while providing a seamless printing platform.

Residence Halls
- Supported student-printing needs in the Residence Hall computer labs by keeping printers ready for use. Over 10,550 print jobs were printed in the Oak Place and Johnson Hall computer labs, totaling over 56,400 pages.
- Assisted with shutting down the labs in the Oak Place buildings.
- 526 individuals used these Residence Hall computer labs during this time period:

Residence Hall Labs	Individuals
Johnson Hall	319
Oak Place North	20
Oak Place South	212

Special Events
Information Services assists the campus with special events that require computing resources. These resources may include guest accounts, specialized software, or access to wireless, printing, teaching, or other computer resources.

- Staffed registration sessions during ten new student orientations, including providing printing and guest account resources.
- Provided support and acted as liaison for an event at HSB.

Student Computing Facilities

The Lab Management Office maintained operations in five IS-managed general use student computer labs, eight restricted access labs, and supplied one associated computer classroom.

- Worked with CFM, outside vendors, and multiple other Departments and Schools to ensure lab environments were maintained at an optimal level. Conducted a deep cleaning of all sites over Spring Break.
- Updated and consolidated various computer lab lifecycle tracking spreadsheets to increase the efficiency and clarity of the information being tracked, as well as adding more descriptive text to improve understanding of the data included.
- Expanded select lab hours during peak usage periods, including over midterms and finals, to give students greater access to computing resources when they needed them.
- Maintained sufficient student employees to staff labs by processing over 100 applications for Student Assistant positions, conducting 99 computer skills tests, interviewing 51 prospective new hires, and hiring 21 new Student Assistants for IS-managed labs.
- Worked with HR to update hiring process in accordance with changes to policies and procedures.
- Conducted eight new hire orientations to train new staff.
- Processed 4,170 shifts and supervised over 11,770 Student Assistant person-hours.
- Completed reviews for 22 Student Assistants to keep employee performance at optimal levels.
- Supported student-printing needs in the general-use labs by keeping supplies on hand and printers ready for use. Over 108,000 print jobs were printed in IS-managed general-use student computer labs, totaling over 732,750 pages.
- Worked with the Information Access group to test and move the automated shift tracking system to a new server.
- Handled multiple unexpected closures caused by inclement weather.
- Modified back-office procedures to increase efficiency of resource use.
- Completed Activity Analysis Survey, including providing support for part time student workers who were within the scope of the survey.
- Conducted an extensive analysis of data trends and budget forecasts to develop a pilot program for reducing Student Assistant staffing in IS labs, resulting in a projected 31.4% reduction in costs and only a 4% reduction in lab access provided to students.
- 5,625 individuals used the general-use student computer labs during this time period:

Open-Use Labs	Individuals
Bloch Heritage Hall 110	678
Health Sciences 3304	747
Miller Nichols 2nd Floor	1,331
Royall Hall 303	2,483
Student Union 210	2,965

Totals and Trends in IT Procurement

- Purchased roughly $1,730,000 worth of IT hardware and software, including computers, tablets, printers, peripherals, specialty systems, software, web services, subscriptions, service warranties, maintenance agreements and usage fees
    - The lack of hardware orders specifically may be attributed to the tight budget UMKC faced in FY2018
- IS Support Services processed over $4,100,000 worth of IT purchases during the last fiscal year ending June 30, 2018
    - This represents a decline in almost 21% from the previous year
    - This is the first time the total IT spend declined year-over-year since FY2010
    - While the consolidation of IT purchasing for academic units over the last few years continues, this growth factor could not counteract the very conservative spending in FY2018 due to the economic strain of UM and state funding issues

IT Procurement Spend by Fiscal Year (2008-2018)

Legend: ■ Hardware Spend ■ Software Spend
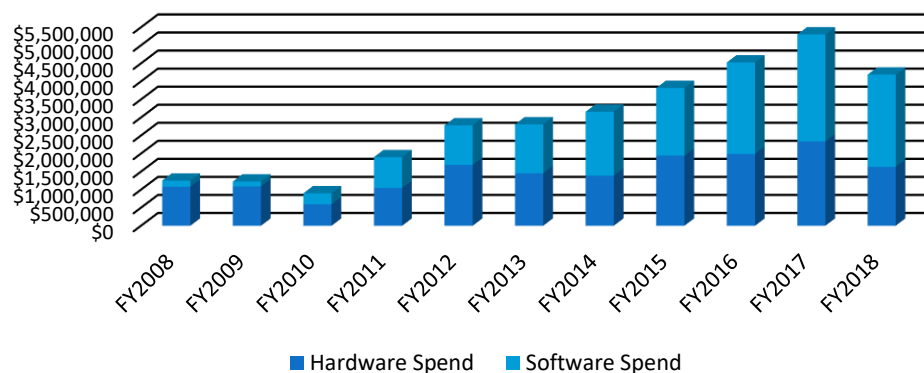
- While the spending is in decline, the overall activity and productivity of the IT Procurement unit with the last three years reflects a significant and sustained increase in activity over the previous fiscal years
- The software acquisition process increasingly involves coordinating and communicating with and through a complex review and approval matrix including Grant Program Managers, Departmental Fiscal Officers, UM Supply Chain, UM Legal, the UMKC Chief information Officer, the UMKC Information Security Officer, the UMKC Registrar and the Vice President for Information Technology
- The UMKC campus benefits from the strong commitment to standards as it reduces the campus costs and allows for volume discounts. A more streamlined process also reduces overhead and support costs.

IT Procurement Requests	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018
Total Requests Processed	1462	1473	1438	1595	2336	2099	2136
Average Requests/Month	122	123	120	133	195	175	178

IT Procurement: Distribution by Vendors and Units

- Dell and Apple remain the preferred computer providers for which UMKC has large-scale Volume Purchase Agreements and account for roughly two-thirds of the total IT hardware spend
- The following table lists the Top 5 IT hardware Vendors by total spend for the period and demonstrates the current mix of standard versus specialty vendors

Vendor	Spend
Dell	$185,084.83
Apple	$94,456.95
MU Bookstore	$52,062.75
Connection	$33,961.44
Amazon	$10,555.86

- The distribution of IT Software spending over primary vendors continues to demonstrate the extreme diversity of the market
  - The last fiscal year witnessed a total of 107 new vendors and 149 new product titles
  - The following table lists the Top 5 IT software vendors by total spend

Vendor	Spend
Blackboard, Inc.	$155,337.36
Civitas Learning, Inc.	$116,564.00
iParadigms, LLC	$109,000.00
Technolutions	$100,000.00
Academic Analytics	$71,200.00

  - To manage the diversity and increasingly complex nature of software acquisition, IS continues to improve our reporting capabilities to include the following records
    - Vendors – 681 (18.6% increase from 6/30/.2017)
    - Product Titles – 1342 (12.4% increase from 6/30/.2017)
    - Licenses – 10,564 (16.8% increase from 6/30/.2017)

- IT spending by division and academic unit provides a glimpse into the scope of the value IT equipment offers these units and the investment committed to lifecycle replacement and sustainability

IT Spend by Unit (January - June, 2018)

Unit	Amount
Administrative Affairs	$109,168.79
Advancement	$66,172.00
Athletics	$9,878.47
Bloch School of Management	$71,319.63
Chancellor's Office	$9,729.63
College of Arts & Sciences	$156,663.91
Conervatory of Music and Dance	$26,785.62
Information Services	$463,409.77
Marketing & Communications	$20,624.98
Provost's Office	$248,114.46
Research and Economic Development	$40,814.23
School of Biological Sciences	$36,197.39
School of Computing & Engineering	$67,827.64
School of Dentistry	$52,280.79
School of Education	$7,179.83
School of Graduate Studies	$283.00
School of Law	$20,344.84
School of Medicine	$32,585.72
School of Nursing and Health Studies	$44,786.95
School of Pharmacy	$9,449.41
Student Affairs	$187,239.63
UM System	$30.00
University Libraries	$6,294.93

Workstation Replacement Program

During this year's Workstation Replacement initiative, Desktop Support imaged, configured, and deployed 360 computers over a three-month time span. Included in the configuration this year was the Microsoft LifeCam HD 3000 and options to order a Jabra headset to encourage the use of virtual meetings and softphones.

Support Services

## Highlights and Key Initiatives

Planning for a new IT support model

During the past six months, IS faced significant challenges with the budget reductions. Numerous technical positions went unfilled and the support team diligently worked to manage multiple IT priorities and complete service requests. Numerous reports were generated to analyze and forecast replacement costs for computing assets. Reports were distributed to departments to aid in budgetary decisions. Technology services were reviewed, prioritized and some cutbacks were made.

In the spring, an administrative review recommended a number of changes – one of which was to transition to a leaner support model. This new model would promote more remote technical support as opposed to onsite support.

Additionally, planning was underway for a new funding model for IT services. In the new model, the University would fund a base level of technology services for all departments. Academic units and others could then decide which specific IT services they could afford beyond the base services.

During the next fiscal year, IS will be reviewing the service level agreements currently in place and meeting with departments to gradually transition to the new model. Support Services will be transitioning to a new remote support model. The Call Center and Desktop Support will be consolidated into a new team within Support Services. The group will be called the Technology Support Center. It will have fewer staff and focus on providing remote support.
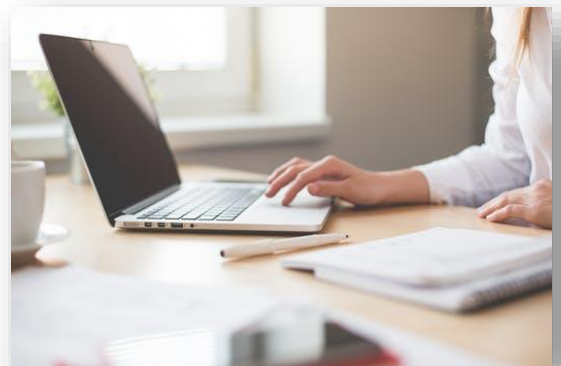
ITSM - Cherwell

During the last 6 months, we have worked on a u-wide initiative to plan and implement a new IT Service Management tool (ITSM) which will replace Remedy. The new system, called Cherwell was identified and purchased just prior to the end of 2018. Numerous initiatives have been completed thus far, including the design and development workshops, a new service catalog, governance policies, etc. Campuses worked together to configure the system with a goal of streamlining and standardizing many of our processes. We are on schedule to complete phase one with an estimated go live date of October 1, 2018.

Windows 10. Information Services is rapidly migrating to Windows 10 in anticipation of the scheduled end-of-life of Windows 7 on January 14, 2020. With thousands of computers to upgrade before then, this is a multi-year project. Over the last 6 months, we have migrated over 500 Windows 7 computers.

In addition to upgrading Windows 7 to Windows 10, we have successfully upgraded over 500 Windows 10 computers to newer versions. The goal is to upgrade another 2,500 systems this fall.

In order to provide more options for our faculty and staff, a self-service model was introduced for Windows 10 upgrades. This new option allows users to upgrade their computer and at a time that convenient for them.

Mac OS. Over the last 6 months, we expanded on our thin imaging project to include all of the campus Apple computer labs. This required packaging all the lab software in order to take advantage of the new process.

In addition, multiple JAMF upgrades were completed. JAMF is the solution used to manage and deploy software to campus Apple computers.

IS Support Services – Service Requests

Over the last five years, the amount of support requests for Support Services have fluctuated. During the last six months, we have seen a reduction in the number of support request numbers versus those in previous years.

The lower request volumes can be attributed to many factors, the most relevant are:

o   The new SecureAuth Password website enabled users to set passwords themselves without needing assistance.
o   The implementation of SecureAuth around myHR, which required employees to set their own passwords using SecureAuth and to use Two-Phase authentication to gain access.
o   Minimal system outages.

Customer Requests Per Month
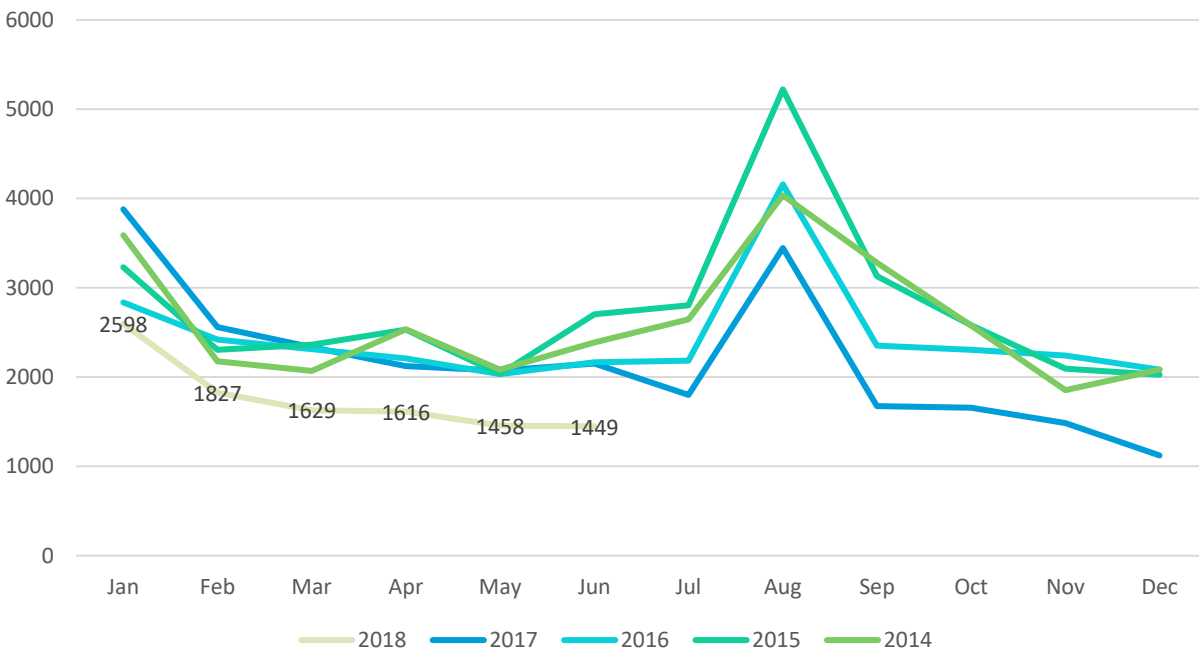
Customer Requests for Five Years

Year	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Total
2018	2598	1827	1629	1616	1458	1449							**10577**
2017	3879	2562	2335	2125	2072	2152	1799	3444	1676	1658	1487	1123	**26312**
2016	2837	2419	2314	2209	2034	2165	2183	4158	2354	2307	2241	2083	29304
2015	3231	2306	2364	2530	2035	2702	2805	5222	3129	2583	2093	2027	33027
2014	3590	2178	2070	2534	2084	2388	2646	4036	3281	2580	1854	2083	31324
Total	16135	11292	10712	11014	9683	10856	1123	1123	1123	1123	1123	1123	130544

- Customer satisfaction continues to remain extremely high. Over the last six months, Support Services has a **95%** Very Satisfied rating. The following chart represents customer satisfaction data collected from surveys closed by Support Services for the period of January 2018 through June 2018.

SUPPORT SERVICES - CUSTOMER SATISFACTION RATES

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755
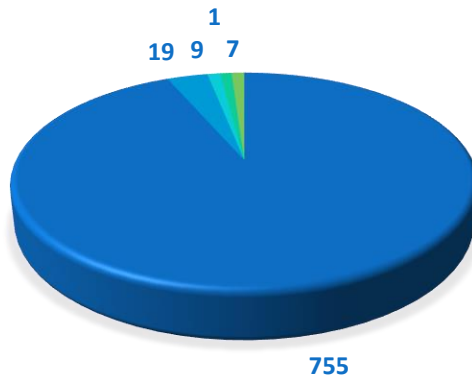
Call Center Metrics

- The Call Center created **7,839** support requests, resolved **6,267**, and escalated **1,572**.
- The Call Center's first-contact resolution rate over the last six months was **73**%.

Time Period	Total Number of Call Center Support Requests
Q3 & Q4 2015	14,176
Q1 & Q2 2016	12,300
Q3 & Q4 2016	14,183
Q1 & Q2 2017	13,504
Q3 & Q4 2017	8,627
Q1 & Q2 2018	7,839

- Support requests generated though our **online problem report tool** increased during this period. This tool allows users to submit requests 24 hours a day, 7 days a week, and the requests are generally addressed during business hours. However, we are able to spot trends in off-hours, when multiple users report problems with the same services.

| Time Period	Total Number of Web Submission Requests
Q3 & Q4 2015	542
Q1 & Q2 2016	491
Q3 & Q4 2016	549
Q1 & Q2 2017	469
Q3 & Q4 2017	504
Q1 & Q2 2018	627

Call Center Projects

- **Account Management**
    - Office 365 – The Call Center continues to be the primary support contact for students using the Office 365 email system
        - i. Set up **14** Office 365 email accounts for alumni in conjunction with the Alumni Association
    - Created **47** guest/ resource/ departmental accounts and worked with office of Operations and Administration to bill accordingly.
    - Worked with Admissions, Registration and Records and various UM IT groups to address SSO account creation and maintenance issues.
- **AIMS** – Account Management tool which is used by UMKC, MST, MU, and UMSL
    - AIMS updates that enhanced performance and efficiency were tested and approved to be installed to production in August, October, and November.
    - The Call Center tested and offered suggestions to help refine the new tool throughout the second half of the year.
- **ITSM** – IT Service Management tool used by UMKC, MST, MU, and UMSL
    - Created new templates for the Call Center to use when creating incidents
    - Worked with ITSM Steering Committee, Service Desk Committee and technical teams to test the SmartIT service management tool
- **SecureAuth** – Two Phase Authentication Toolkit
    - The Call Center directed all users requesting password help to go through SecureAuth; enabling users to set passwords themselves.
    - UM implemented SecureAuth around myHR on December 19, which required employees to set their passwords using SecureAuth and to use Two-Phase authentication to gain access.
    - Assisted with SecureAuth testing and offered suggestions to help refine procedures.
- **Box** – Cloud storage option for faculty and staff
    - Helped manage the provisioning and de-provisioning of accounts in conjunction with Foundation Services and Internal Applications.
    - The Call Center runs a provisioning process once every day.
- **RightAnswers** – Self-service knowledge base solution used by UMKC, MST, MU, and UMSL
    - Worked with UM and RightAnswers to correct problems.
        - i. RightAnswers solution links were pointing to the wrong host when sent via email.
        - ii. Feeds from our IS blog and outages on the portal page were not updating.
    - Approved and published RightAnswers articles created by Call Center staff.
- **Bomgar** – UMKC-hosted remote support solution used by UMKC, MST, MU, and UMSL
    - Performed other appliance and instance upgrades as necessary.
- Trained three technicians to be part of the Technology Support Center Desktop Support

Ticket Requests

- Responded to and resolved **3,433** Desktop Support requests. Breakdown of supported groups is below.

Employee-Student	118
Faculty	920
Generic	50
Retiree	36
Staff	1,672
Student	640
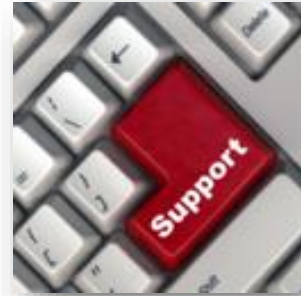
Desktop Support - Enterprise Support Projects

AirWatch. IS continued to leverage our Mobile Device Management solution, AirWatch. This tool is valuable for increasing efficiencies when managing mobile devices as well as protecting University data.

During this past six months, technicians completed a large mobile device replacement project for Campus Facilities that included over 68 devices. The project included transitioning to a new vendor and negotiating a contract, configuring numerous new devices and working with the department throughout the migration.   IS technicians also managed the secure disposal of the old devices.

SCCM. Microsoft's SCCM is the primary tool used for asset management and software installation. Over the last six months, we have used SCCM to install **27,564** pieces of software across campus. **1,786** of these were initiated via our software deployment webpage by IS technicians and IT liaisons. We also imaged **783** lab computers using the *Operating System Deployment* functionality of SCCM.

We have leveraged SCCM so that faculty and staff can now upgrade their Windows 10 computers via SCCM with just a couple clicks. The framework is in place to expand this functionality in the future.

License Servers. Updated over 25 individual license servers with updated daemons and/or license files.

Website. Updated the IS website throughout this period with meeting notes, new product information, new software and hardware options, etc.

Software updates. Planned, tested, and deployed several updates to all Windows campus computers to ensure software is up-to-date. This is done to both give our customers the latest products and tools but also to limit vulnerabilities as older software is often less secure. Over **150 Windows** packages and over **50 Mac** packages were created during this period. We also starting deploying Panopto to the entire campus to enable faculty to record classes from any computer.

Administrative Support

Student Affairs. Assisted with moving the Student Service Office of Counseling, Student Health, and Disabilities Services groups from 4825 Troost to the new 51 Brookside Building. This move included over 40 hours of dedicated support and the creation of a conference room to be utilized by all three groups.

With the closure of the Oak Place Lab, the hardware was moved to Hospital Hill Apartments to create a new lab space with four systems.

Campus Facilities. Worked with an external contractor to upgrade critical infrastructure, including two servers and nine workstations.

Other Notable Activities

- Support Services is participating in the UM System Active Directory project with the other campuses. This project is working to lay the framework for the new domain, determing an appropiate shared governance policy, and starting to identify the technical requirements for the new domain. This is a large project that is expected to take multiple years to fully complete.
- Organized and chaired the IT Liaison meetings
- Regularly updated content on the FourWinds display at 4825 Troost.
- Participated in several u-wide committees includes the Standards Committee, Licensing standards, etc.
- Provided IT hardware and software product selection and configuration consultation in response to a myriad of different request scenarios in accordance with UMKC and UM standards contracts and approved processes
- Worked with vendors to create customized price quotes for multiple products and configurations
- Reviewed and provided IT approval for eProcurement orders input by other departments
- Worked with UM Supply Chain and fiscal officers to ensure IT and Procurement approval policies are followed, resolve budget errors and direct expense transfers as necessary
- Reconciled Pcard orders on a monthly basis providing written IT and fiscal approval statements from authorized personnel, invoice/receipt documentation, MoCode and PeopleSoft account code assignments for all transactions
- Strengthened business relationships with a number of vendor contacts, most notably Adobe, Datamax, Microsoft, B&H Photo, CDW, Apple, Dell, Verizon and GovConnection
- Successfully migrated to utilize the MU Bookstore for Apple purchases at some equipment cost savings at the institutional level and significant processing cost savings for IT Procurement staff

- Served as primary point of contact for cellular service and mobile device consultation and acquisition for all UMKC corporate accounts and lines of service, including the disengagement from a lease arrangement with Sprint on behalf of UMKC Facilities
- Communicated with IT and client constituents to provide information on software product updates, license expirations, device models, configurations and pricing for a range of UMKC standards on numerous site-licensed pieces of software, computers, tablets, printers and other IT-related items
- Served as central point of contact for all UM campuses for the Dell Tech Direct warranty parts replacement program. We resolved technical issues and liaised with a Dell representative as necessary. We responded to numerous questions and problems and made updates in the Dell portal as needed.

IS Project Updates

As a division, we have worked with several academic and business units to renovate, design, install and provide ongoing support for multi-faceted information technology (IT) and audiovisual (AV) systems. The following sections discuss the key IT/AV projects, by phase, that consumed a significant amount of IS resources' time during this last review period (January - July 2018).

Completed Projects

IS completed (6) IT/AV projects. The following projects were the most significant and time-consuming. *See Appendix "A" for individual project detail*.

- **P126-Whole Foods Development -** This project provided a new Whole Foods store, a new UMKC Student Health, Disability Services and Counseling Center, new luxury apartments, and a new parking garage. IT/AV scope was contained to all network infrastructure and a small conference room that will be used by all departments. IS did install a new network utility corridor in preparation for this project, which involved removing all existing overhead cabling and installation into an underground vault. During this review period, all equipment was installed and the project was completed. The departments were relocated into the new space and trained on the equipment.

- **P215- IP Address Management -** IT project to refresh our campus DNS/DHCP infrastructure. The new system will include an IP address management tool, DNS security features and will provide a consolidated management console for IP address functions. During this review period, we replaced our recursive Microsoft DNS servers with Infoblox servers. These servers provide DNS services to all campus computers. We enabled the DNS Firewall feature to block DNS requests for known malicious websites and configured the Infoblox reporting server.

- **P217 - Telepresence VCS-VCE -** IT Project to enhance video conferencing on and off campus by leveraging key components of our existing VoIP phone system and Telepresence video conference system. We plan to add new modules to greatly increase the number of video conference endpoints on campus. These new video endpoints are designed for a wide range of use cases from personal webcams, to conference rooms, to large classroom environments. The new modules will also integrate our existing H.323 Polycom, LifeSize, Tandberg and other room-based video endpoints into a streamlined dialing plan. During this review period, we installed telepresence video conference equipment in four new campus buildings: Atterbury Student Success Center, Newcomb Hall and School of Medicine to complete this project. These new systems are integrated with Microsoft Exchange for meeting scheduling. These systems can join any UM-System "Telepresence Meeting" or can place and receive calls from any SIP capable video system including WebEx and Zoom.

- **P264 - Law School Expanded Wireless Coverage -** IT project to relocate existing and install additional wireless access points to expand wireless coverage throughout the Law School building. During this review period, we facilitated installation of 17 additional 802.11ac wave2 access points in the School of Law and repositioned several existing access points to optimal

locations for wireless coverage. 43 access points are now providing high-speed wireless coverage to all corners of the Law School.

- **P265 – ILE Classroom Upgrades FY18-IS Funded -** IS Project to upgrade 23 ILE rooms in FY 18 to HD widescreen digital video and projection systems, enhanced audio processing with web conferencing, and voice over IP features. This is an effort to keep the highest quality student experience. During the last review period, we collaborated with the Registrar's Office to identify and schedule rooms to be upgraded, updated system designs to accommodate ILE spaces with more equipment than typical, and purchased equipment. During this review period, we worked with CFM and other units in IT to update all 23 classrooms on the identified list to complete the project.

- **P268 – Building Switch Refresh (BSR) FY18** - This project involves replacing the remaining access and distribution layer switches after BSR phases 1-3 are completed. These are buildings where we had previously installed Cisco 4506 series switches. UMKC Networking will be installing Cisco 4500X series distribution switches and Cisco 3850 series access switches. The new switches will increase the building backbone from 2 GB to 20 GB. The access switches will also provide 802.3 at (60 watts) Power over Ethernet, PowerStack & M-Gig Ethernet ports for next-generation wireless access points. During this review period, upgrades to the building switches were completed in Cockefair Hall, 4747 Troost, Berkley Child Care & Family Development Center, Whole Foods office space and the Fine Arts Building.

- **P287 – Wireless Network – HHA -** This project involves the purchase and installation of approximately 12 new Wireless Access Points to improve the wireless coverage and bandwidth in the student living spaces at Hospital Hill Apartments. During this review period, all access points where installed and the project was closed.

Current Projects – Implementation Phase

IS progressed in implementing (27) IT/AV projects during this review period. The following projects were the most significant and time-consuming. *See Appendix "A" for individual project detail*.

- **P171 - Chemistry/Biology Building Renovation -** Multi-year CFM building renovation project. The IS scope includes demoing and replacing building network infrastructure and installing new IT closets and network switch gear on Biology floors 2-4 and Chemistry floor 2, as well as with updating (9) classroom/lab environments, (2) conference rooms and (9) collaboration/student spaces. During this review period, IS developed an existing IT closet with new network switch gear and upgraded the Chemistry building with new 10GB network infrastructure. We also completed the installation of the AV gear in the classroom/lab environments as well as the conference space for the Biology Building. We plan to complete the Chemistry Building during the next review period.

- **P274 – Scofield Hall Infrastructure Replacement -** This project is to bring the building infrastructure in Scofield Hall to current standards by rewiring the voice and data jacks on all floors in the building. This process involves ongoing infrastructure improvement efforts, but we are managing each building as individual projects to better track costs/materials/timelines. This building has five floors and is being rewired one floor at a time. During this review period, the fourth and third floors have been rewired. We hope to finish ground through second by the end of the calendar year.

- **P284 - CourseLeaf (CLSS) -** Institutional Effectiveness project to implement CourseLeaf, which is an online class scheduling and reporting module that streamlines the academic course planning and scheduling process for all constituents in one central tool. The CourseLeaf Section Scheduler (CLSS) module provides an end-user friendly interface for academic units and departments to determine their class offerings each term, including inputting, editing, validating, approving and updating course section information. It provides mechanisms for departments to achieve required class distribution, identifies both intradepartmental and interdepartmental class section schedule conflicts, and visualize and modify course section schedules. These additional tools will allow departments to create their schedules more holistically and deploy resources more efficiently, gaining efficiencies in the units and the Registrar's Offices. During this review period, we facilitated the project team in building meeting patterns, rules, testing, and filters.

- **P298 – Cherwell Planning -** This program is to oversee the series of projects necessary to investigate options for replacing our service management solution, Remedy; to implement and migrate from Remedy to the selected cloud-based solution, Cherwell Service Management; and to decommission Remedy. During this review period, the IS project team was identified and we kicked off the project. This project has a quick implementation so we worked to stay on track by attending multiple weekly meetings. We also collaborated with intra-campus partners to develop a customized web portal.

- **P316 – Clear Scholar -** ClearScholar uses an approach called personas when coupled with the Civitas analytics insight make it a differentiator product. Other mobile solutions can provide content in a similar manner but usually to strictly defined groups. The algorithm and overlapping approach make it unique. During this review period, we kicked off the project, scheduled weekly meetings with various project teams and mapped out our timeline.

Current Projects – Development Phase

IS has made good progress working with units to plan (12) IT/AV projects during this review period. The following projects were the most significate and time-consuming. *See Appendix "A" for individual project detail*.

- **P174 - SCE Educational and Research Center -** CFM/SCE project to build a new multi-story building addition to Flarsheim Hall. IT/AV scope is undefined at this point but the project has

been approved by the Board of Curators (BOC). During this review period, the current area of focus for IT has been the elimination of the Old Maintenance Building (OMB), which is within the project footprint. IT worked with CFM to find a new/suitable location for Classroom Technology Services staff located in OMB. The new space will be located in Flarsheim Hall Room 270 with the addition of the Rock Lab during winter break. IT/AV to be defined and the CTS staff to be moved in new space during the next review period.

- **P289 - 600MHz Microphone Replacement -** This project is looking into replacing all wireless classroom microphones that transmit on the 600MHz frequency as there is an FCC mandate to remove them. We have identified all affected classrooms and worked with the manufacturer to develop a budget for replacement. During this review period we are worked with internal budgets to fund replacements.

- **P293 - ILE Classroom Upgrades FY19 IS Funded -** As part of our continual process of keeping the highest quality student experience, IS plans to upgrade as many ILE rooms in FY 19 as the budget will allow to HD widescreen digital video and projection systems, enhanced audio processing with web conferencing, and voice over IP features. During this review period, we continued to partner with the Registrar's office to identify the rooms to be upgraded. We have also started the process of reviewing/updating AV system designs for these spaces, which will ultimately yield a bill of materials for the project. During the next review period, we plan to schedule rooms and order equipment to start the project.

- **P305 – AD Consolidation -** This project aims to consolidate UM System's Active Directory environment to a unified, single Active Directory domain and implement a persistent, non-changing electronic identity login. This project will establish the common architecture and policies for the new consolidated Active Directory environment and will include technical design, establish policies and procedures, and provide opportunities for campuses to review and provide feedback. In addition, this project will define the path to move forward with consolidation plans, including outlining the deliverables for the remaining program projects and include technical setup necessary to prepare for the remaining projects. During this review period, we participated in AD design and planning discussions. We designed and tested configuration changes needed for UMAD account user authentication to UMKC's VoIP services including Call Manager, Unity Connection, Contact Center and Jabber.

- **P318 – School of Pharmacy Video Distance Classrooms Upgrade -** This is a project to redesign and update current video classrooms to reduce overall operating costs while maintaining current functionality and support levels. During this review period, we have stood up the IT/AV project and scheduled the scope meeting during the next review period.

- **P319 – SRC Sound System Upgrade -** The project is upgrading the sound system on the Swinney Recreation Center courts. During this review period, we met with the client to define the scope to create an estimate and set a timeline. During the next review period, we are looking for an estimate approval to continue with the project.

TMS Support Client Experience

During this review period, TMS activated to resolve 564 reported client issues. Each resolved issue resulted in the client receiving a survey about their experience to complete. Below is both the monthly aggregate data and the Net Promoter Score (NPS) (calculated from the "average" scores).

- **Average NPS was 81.58**
  - 67 Promoter survey responses
  - 1 Passive survey responses
  - 6 Detractor survey responses
- ~13% of all Clients responded

TMS Support Average Survey Data
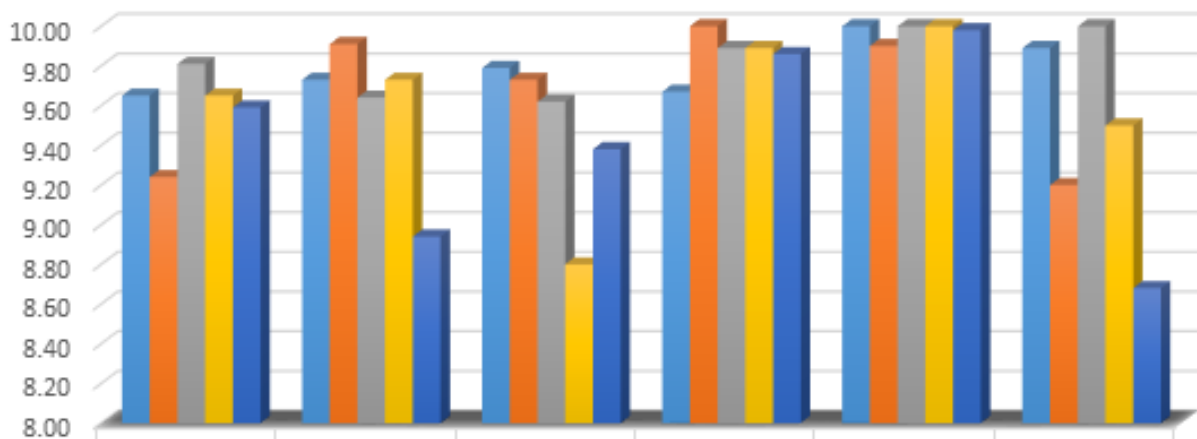
	January	February	March	April	May	June
■ Courtesy	9.65	9.73	9.79	9.67	10.00	9.89
■ Timeliness	9.24	9.91	9.73	10.00	9.90	9.20
■ Knowledge	9.81	9.64	9.62	9.89	10.00	10.00
■ Overall	9.65	9.73	8.80	9.89	10.00	9.50
■ Average	9.59	8.94	9.38	9.86	9.98	8.68

NPS

NPS	January	February	March	April	May	June
NPS	82.35	83.33	71.28	100.00	100.00	63.63
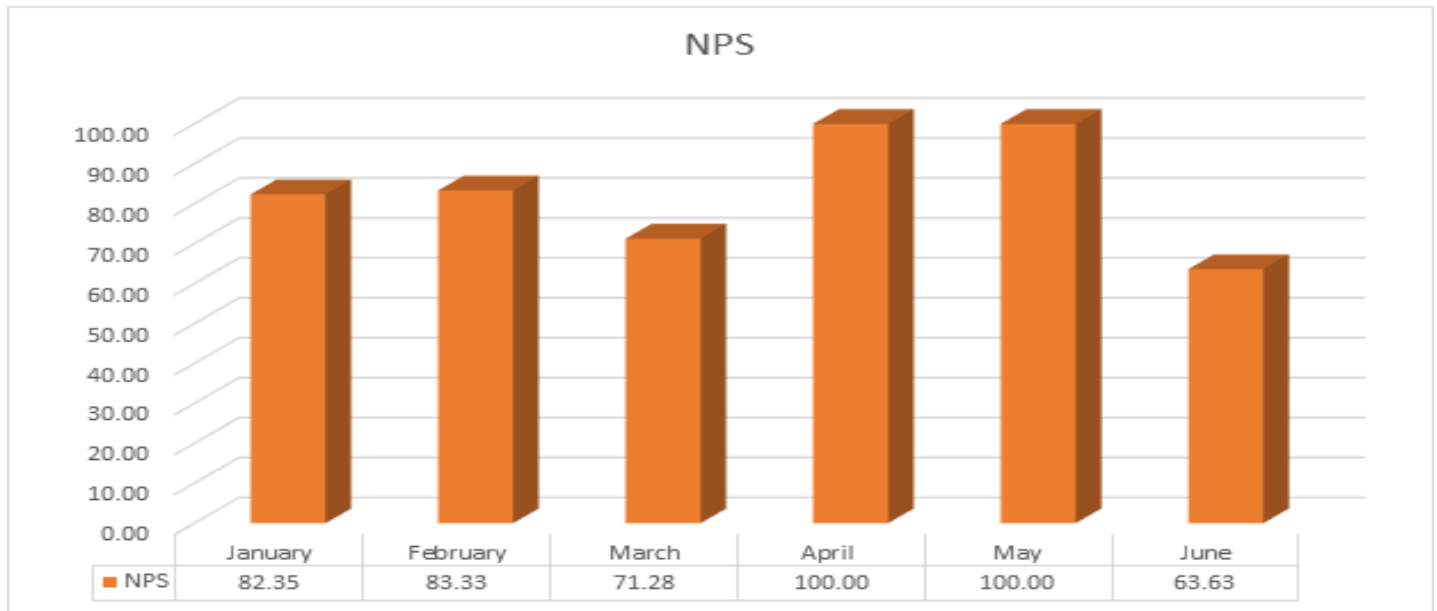
ILE Classrooms, Video Conferencing, Distance Ed, and On-Demand Video

Information Services made significant progress on our ILE classroom upgrade initiative during this review period while continuing to maintain efficient issue resolution times, minimizing downtime and the subsequent impact on students, faculty and staff. Highlights are outlined below.
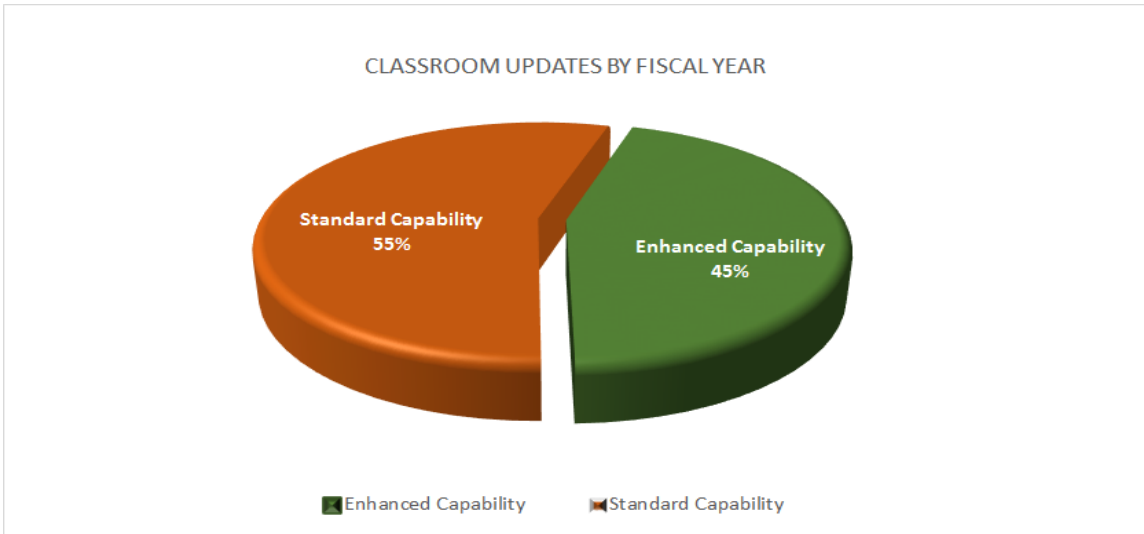
- IS completed technology upgrades in 23 ILE classrooms. As of June 30, 45% of all ILE classrooms received an upgrade package designed to improve student experience and add to/enhance the instructor's capability. These additions/enhancements include high definition cameras (used for lecture capture, synchronous online instruction and web conferencing {via software-based tools like Zoom, WebEx and Skype}), enhanced audio processing with acoustic echo cancellation (used to improve remote participants' audio quality in synchronous online instruction and web conferencing) as well as improved control over the technology in the room. The remaining ILE classrooms (55%) will receive these upgrades as the ILE upgrade project moves forward.

CLASSROOM UPDATES BY FISCAL YEAR

Standard Capability 55%

Enhanced Capability 45%

■ Enhanced Capability   ■ Standard Capability

- From Jan-Jul, 44% of all ILE/Classroom related support issues were resolved within 1 hour of being reported while 77% of all support issues were resolved within 24 hours of being reported.

CLASSROOM ISSUE RESOLUTION TIME

23%

33%

44%

■ < 1 Hour   ■ 2 - 24 Hours   ■ > 24 Hours
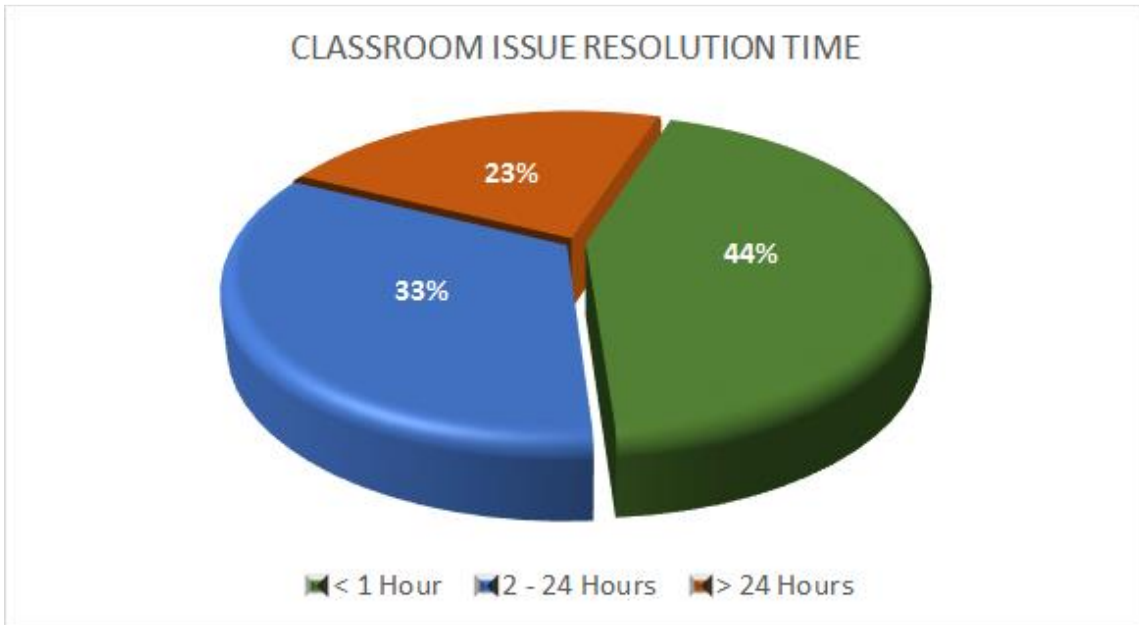
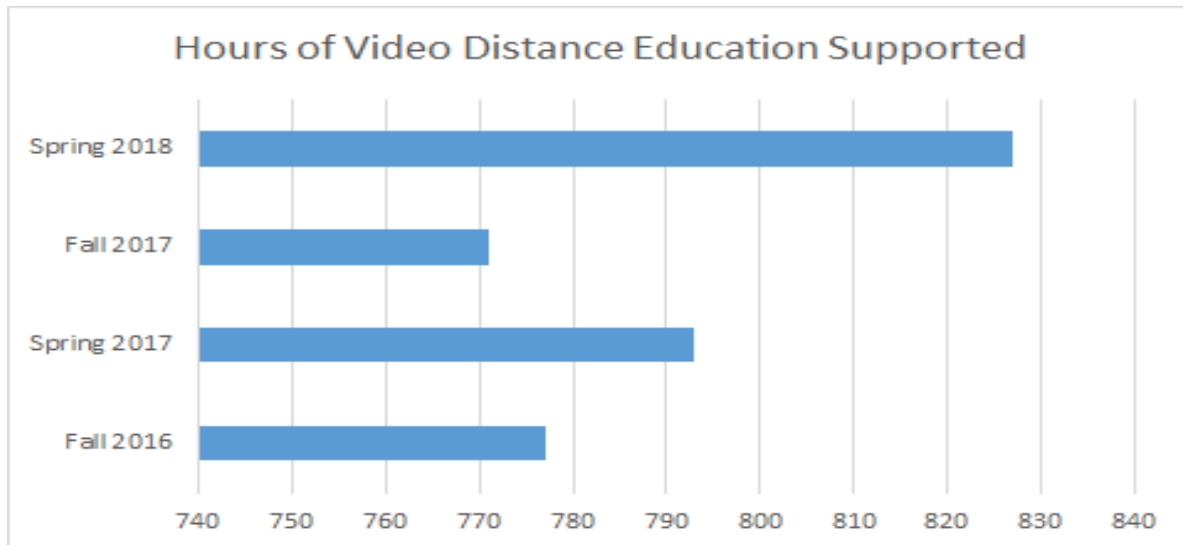- From Jan-Jul, 19% of all Hospital Hill specific ILE/Classroom related support issues were resolved within 1 hour of being reported while 81% of all support issues were resolved within 24 hours of being reported.

CLASSROOM RESOLUTION TIME CLASSROOM HOSPITAL HILL

- < 1 Hour
- 2 - 24 Hours
- > 24 Hours

19%
31%
50%
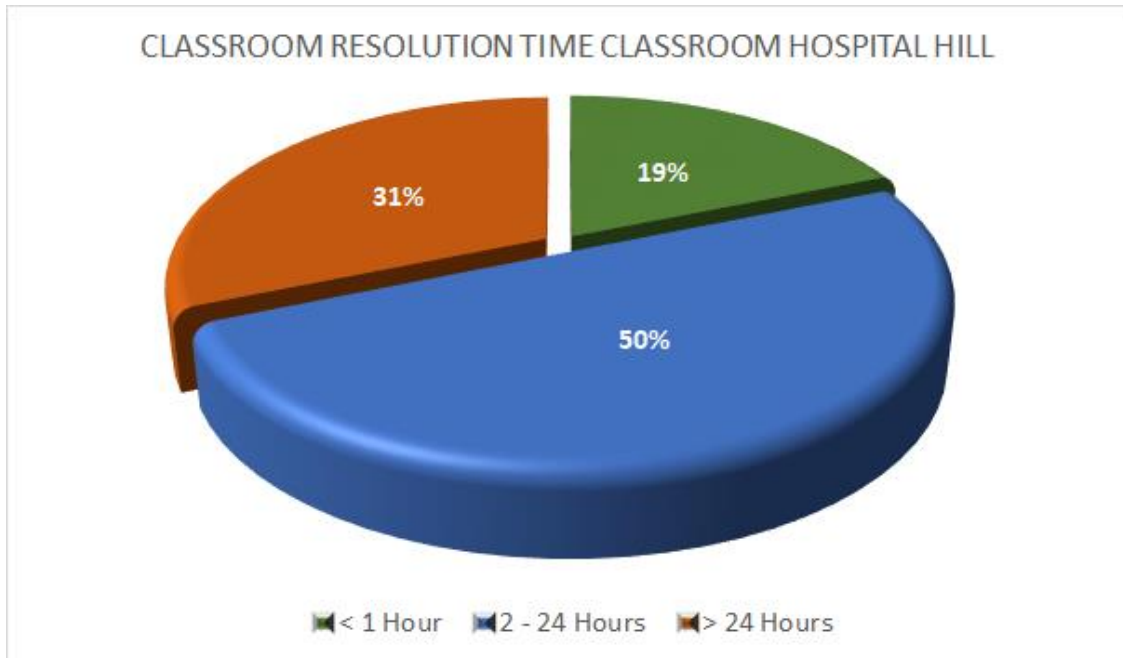
- TMS worked closely with Desktop Support to replace 27 ILE desktop computers as part of the university's desktop replacement program.
- TMS successfully supported and maintained well over 350 ILE/AV systems. These systems include classrooms, conference rooms, performance spaces, collaboration spaces, teaching labs and signage systems.
- 323 new streaming media entries (videos, images and audio clips), were added to Kaltura by faculty and/or students.
- Supported 827 hours of ITV distance learning during this review period. The chart below tracks support over the last two years.

Hours of Video Distance Education Supported

Spring 2018
Fall 2017
Spring 2017
Fall 2016

740 750 760 770 780 790 800 810 820 830 840

- During this review period, TMS provided support for 8.5 hours of recorded HSB Simulation Center events. The chart below tracks support since the Assessment Lab was installed.

Hours of HSB Simulation Center Events Supported
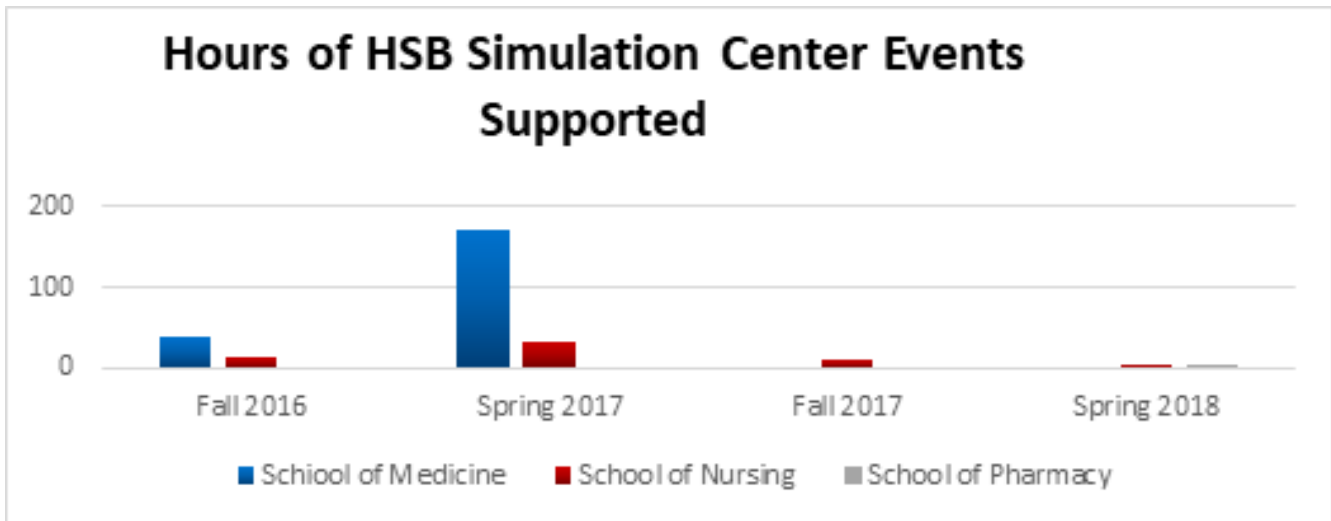
UMKC Operators

The UMKC Operator number (ext. 1000) handled 34,626 phone calls during this review period. Of those ~34.6K calls, users were able to self-route approximately 80% of the calls using our automated call routing tree. 20% of the calls required human interaction from campus operators.
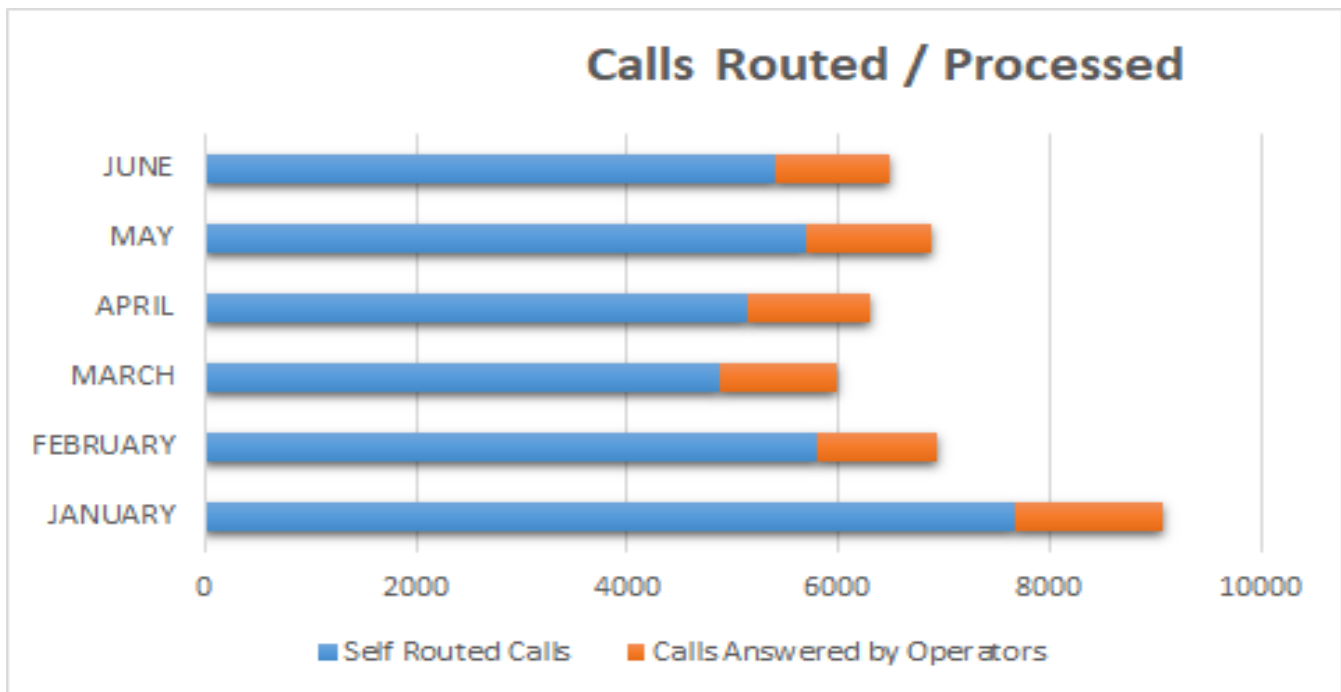
Building Network Infrastructure

IS made significant progress on ongoing infrastructure upgrade initiatives while supporting phone and data related add, move and change requests, a large number of buried cable marking requests, and support tickets. The highlights are summarized below. *See Appendix "B" for a 10-year snapshot of building wiring progress.*

- Completed 75% of the Category 6 planned infrastructure upgrades in Scofield Hall
  - We expect to complete the remaining 25% during the next review period

- Completed infrastructure upgrades to the new Category 6A 10 GB platform in Chemistry and Biological Sciences buildings as part of the renovation project (Installed switches, activated jacks, installed access points and IP phones {backbone completed in previous review period}).
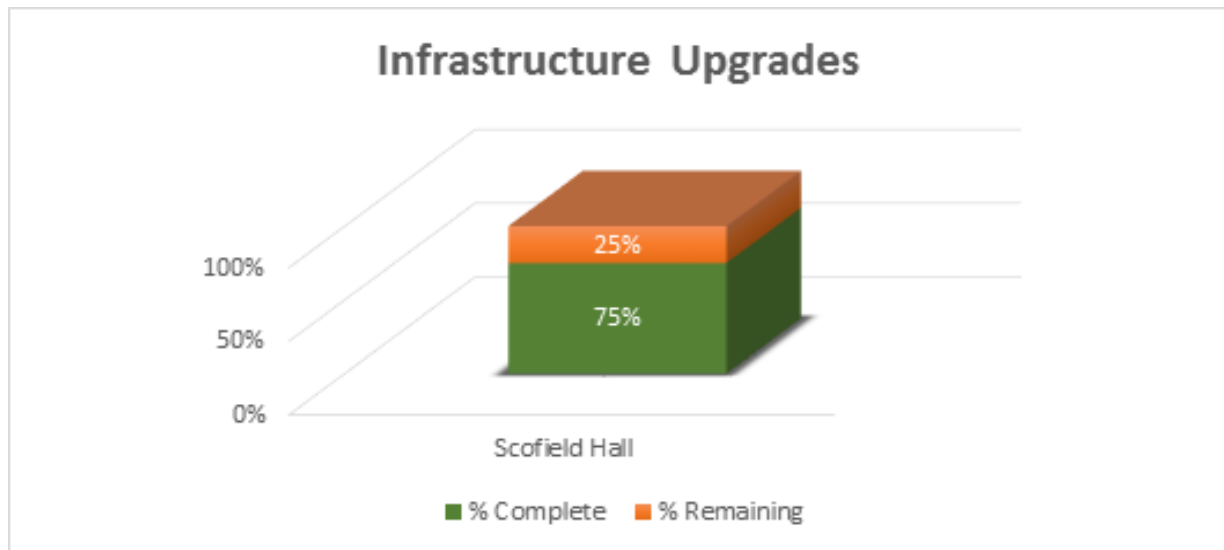- Completed infrastructure installation of the new Category 6A 10 GB platform as part of the Whole Foods office space construction. (Installed switches, activated jacks, installed access points and IP phones {backbone completed in previous review period}).
- In planning/design phase for the Downtown Arts Campus.
- Infrastructure Services staff attended over 88 hours of training.
- Completed 188 adds, moves and changes in voice jacks, data jacks, and phones.
- Resolved 243 infrastructure related trouble tickets recorded in ITSM (Remedy).
- Marked University buried cable plant locations as required by Missouri Law for One Call services 505 times.

Network Architecture

Network Activities

- Replaced network switches in the following buildings
    - Bloch distribution switches
    - Cockefair Hall floor 2nd & 3rd floors
    - Schofield Hall 3rd floor
    - Brookside51 Student Services Office
    - 4747 Troost
    - Fine Arts
    - Grant Hall
    - Performing Arts Center
- Designed "Spine/Leaf" data center network upgrade
- Worked with Cisco, Procurement and Key Government Finance to implement lease for network equipment
- Worked with vendor to replace the capacitors and fans in the Newcomb Hall data center UPS

Domain Activities

- Purchased .com domains registered / renewed = 2
- Purchased .org domains registered / renewed = 7
- Purchased Website SSL certificates = 3
- Migrated externally hosted Wordpress websites to UMKC servers

Security Activities

- Worked with vendor to upgrade Qognify video recorders to latest software version
- Replaced two Sodexo firewalls with newer Fortigate models
- Migrated Cashier's surveillance system to Qognify system
- Reconfigured video system at LARC

Voice Activities

- Reconfigured Ruffalo call center voice and data network to support more agents
- Implemented telephone hunt groups for CTS delivery notifications
- Installed to analog phone lines for Dental School cashier's office

Internal Applications

Database Server Design, Implementation & Administration

- Administration and support of all central campus Oracle servers
  - Upgraded Cloud Control monitoring to version 13.2 from 12.1 gaining enhanced monitoring and issue alert capabilities. This lowered the notification of urgent server issues to DBA team members from up to one hour to consistently less than 5 minutes.
  - Completed migration of all central campus shared Oracle servers from version 11g to 12c
- Administration and support of all central campus MS SQL servers
  - Worked with UMKC IS Security to patch all SQL Server instances around campus to enable TLS 1.2 support.
- Administration and support all central campus MySQL servers
  - Completed migration a critical central campus MySQL server from version 5.1 to 5.6
- Administration and support of all central campus FileMaker servers
- Administration and support of the central campus secured external facing Oracle server for third party vendor data collaboration
- Collaborated with DBA Teams at UMS&T, UMSL, and Columbia on DBA best practices and consulted with DBA team in Columbia on implemented solutions to several of their best practices
- Assisted UMKC Networking team in the upgrade and migration of the Verba software platform backend to a new database
- UMKC Center for Economic Insight (CEI) Health Care Foundation Grant
  - Significantly assisted CEI with technical details of their HCF grant proposal, which they were awarded.
  - This grant allows UMKC CEI to be the curator and cultivator of significant amounts of private and public data sets currently owned individually by several Kansas City institutions such as Children's Mercy Hospital, Mid America Regional Council (MARC), St. Luke's Health System and many others. The collection of this data to one accessible system owned and operated by UMKC CEI will then be available to a vast number of researchers at hundreds of organizations in the Health Care Coalition to help further their medical and/or geographical research.
- Support and maintenance of Registrar's Office room/event scheduling software, Astra Schedule
- Administration and support of all CHI/HealthFacts and RedCap database servers
- Administration and support of all School of Dentistry Axium and additional database servers.
  - Implemented a demonstration version of Oracle Data Guard solution using Axium data and delivered a tailored demo of Data Guard capabilities to the Dental School. When fully implemented, this will add failover capabilities to their important Axium dental student CRM platform.
- Administration and support of all UMKC Data Warehouse Oracle servers
- Administration and support of all UMKC OneCard Office's CBORD Gold Application Oracle server instances
- Administration and support of all UMKC Police Department database server instances

- Administration and support of the UMKC Center for Economic Insights database server instance which is the backend for their CityScope/MetroScope application
- Administration and support of the School of Computing and Engineering MySQL Server
  - Created student MySQL user accounts for SCE classes for the Spring and Summer semesters
- Worked with Data Warehouse DBAs in Columbia to implement and verify a consistent and reliable process for archiving student advising sessions stored in the U.Achieve software system

Software Design and Development

The following new software/solutions were rolled out during this period:

- Canvas Request System

Maintenance & Support was provided for the following software applications & websites during this period:

1. Advisor Sync
2. ALEKS
3. Blackboard Request System
4. Blackboard Snapshot/Data Feed
5. Blackboard Web Update Tool
6. Box Account Provisioning & Deprovisioning
7. Canvas Data Feed
8. Cashiers Fee Estimator
9. Cashiers Student Kiosk
10. Cisco WebEx Provisioning & Deprovisioning
11. Civitas Illume
12. Commencement
13. Consulting Activity Reporting
14. Distribution List Management
15. Diversity Free Event Registration
16. Retiree Exchange Mailbox Form
17. Exit Exams
18. Faculty Staff Lookup
19. Financial Aid - Pell Grant Enforcement Refresh
20. RooEval
21. uAchieve
22. Instructor Issues Report
23. Exam Scheduler
24. IS Change Management & Outages
25. Kasey Kudos
26. Leepfrog Catalog Navigator Data Feed
27. Orientation Registration website
28. Provost Policy Library
29. Property Registration Website
30. Roowriter

31. SEARCH & SUROP
32. SGS iPHD Tracker
33. Starfish Connect
34. Studio Abroad/Terra Dotta
35. UM Research Resources
36. UMKC Attendance
37. UMKC AZ Index
38. UMKC Homepage Admin
39. UMKC Polls
40. UMKC QR
41. MNL QR code scanner
42. SBS Points Calculator
43. **UMKC Libraries websites**

Software Administration

- Served as technical contact for the CourseLeaf Catalog software
- WordPress management, setup and administration.
- Trumba Calendar management, setup and administration.
- Regonline eCommerce.
- Weekly termination reports processing.

Scanning Services

Generated several detailed reports for departments based on their evaluation scan data.

Scanning Services provided during this period include:

- Total exams scanned: 479
- Total evaluations scanned: 7,042 for 371 sections, in 4 scan requests

Exam Scans by School

- College of Arts and Sciences 240
- Henry W. Bloch School of Management 120
- Conservatory of Music and Dance 4
- School of Education 2
- School of Law 10
- School of Pharmacy 6
- School of Biological Sciences 82
- School of Computing and Engineering 1
- Anchor Courses   14
- **Total Exams Scanned: 479**

Evaluations Scan Requests by School

- School of Computing and Engineering: 3
- Henry W. Bloch School of Management 1
- **Total Evaluation Scan Requests 4**

Security

- Continued participation in multi-campus Active Directory consolidation project.
- Continued participation in multi-campus Office 365 project for Faculty/Staff.
- Project started for AWS hosting and firewalls hosted at AWS.
- Ongoing scam and phishing management on Office 365 student accounts.
- Assisted with changes for certain credit card handling departments, moving to more secure card-processing systems.
- Adjusted IPsec network security to match requirements for Active Directory consolidation project.
- Ongoing security review of new software and hosted web products prior to purchase.
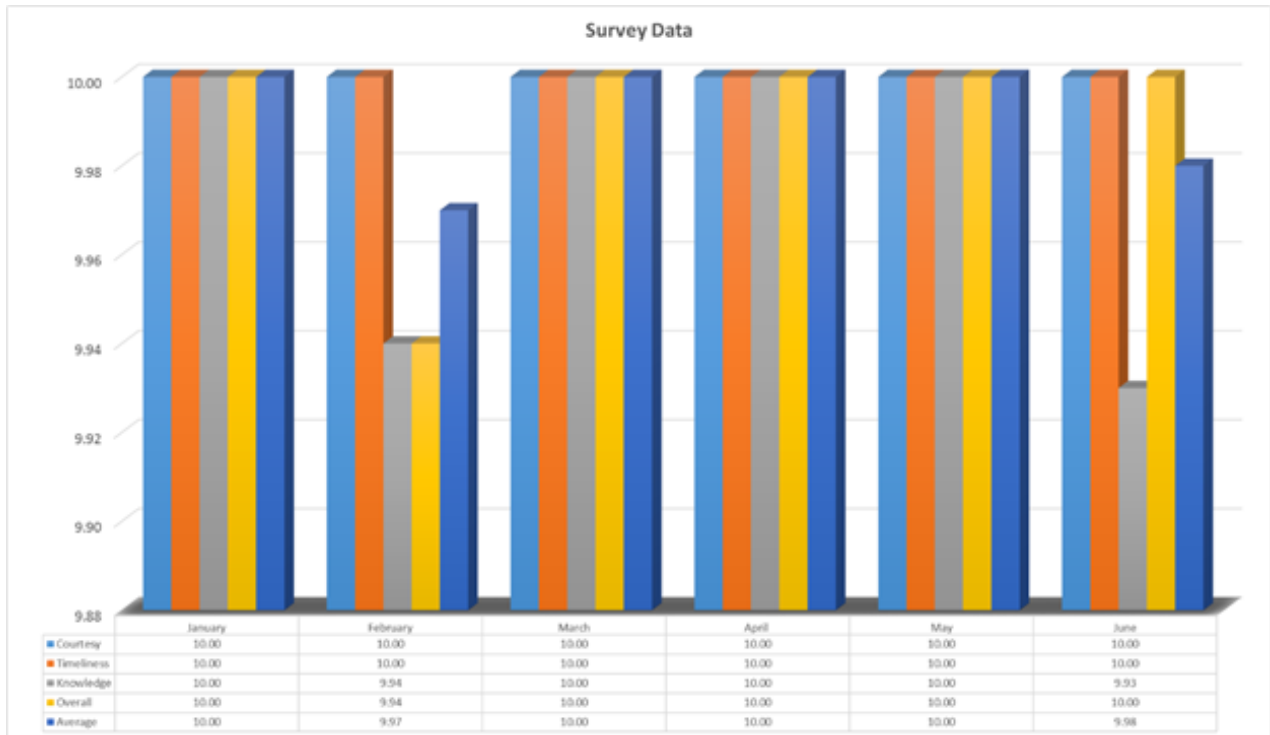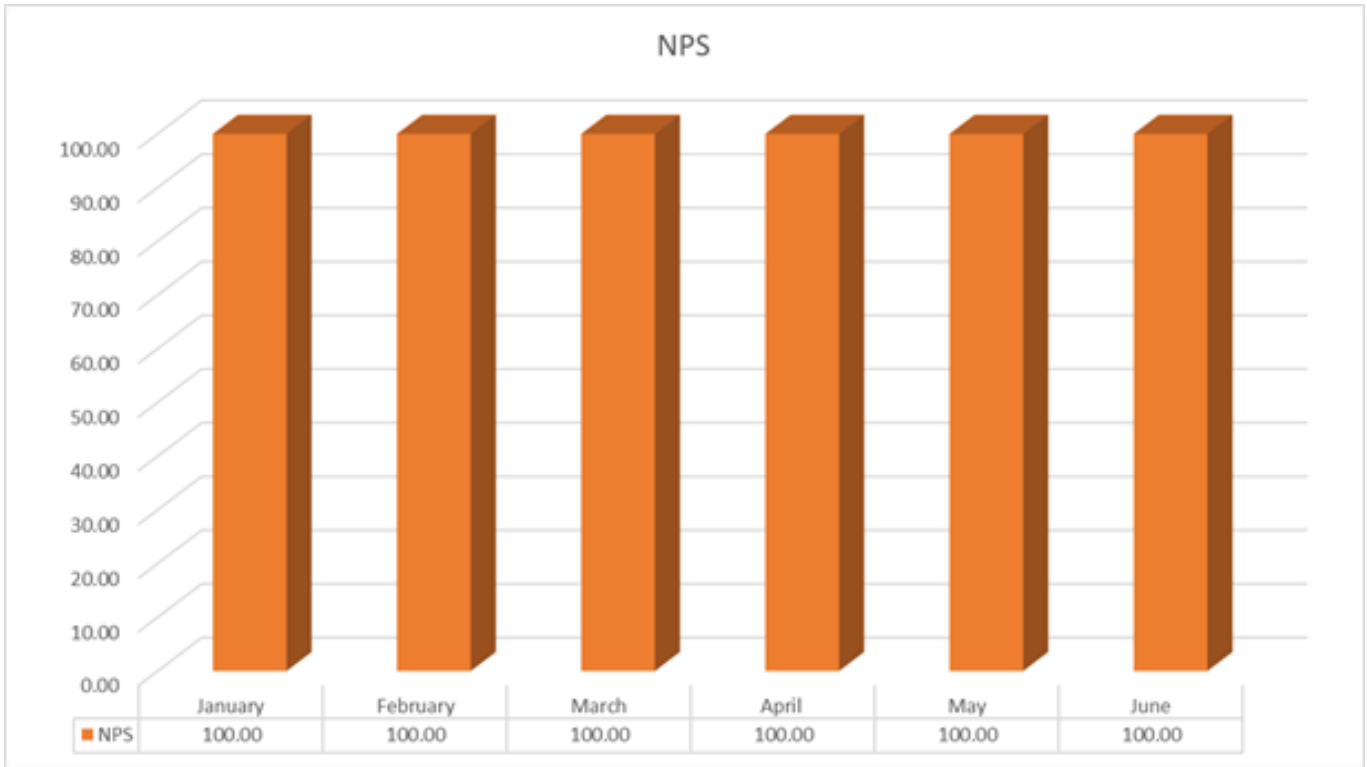
MOUs

Bloch School of Management

While our agreement for technical support with the School of Management has been in place since 2013, we continue to meet regularly with their IT Ops Committee chair. This allows IS to stay updated on the IT needs for Bloch and assist on new projects. Below are a couple of the projects IS has successfully completed over the last 6 months.

- Worked with Bloch faculty and staff to identify, procure, and configure many software applications.
- Configured and setup multiple computers at a new off-site location on 4325 Madison Ave. Performed regular visits to ensure their computers stay updated.
- Working to support the technology required for a new Professional MBA Program. This includes working with a variety of capture tools for online instructors.
- Provided technology lifecycle asset reports
- Updated numerous computers to Windows 10
- Worked with printer vendor to replace numerous multi-function devices
- Worked with Bloch to resize computing labs to make room for the Behavioral research lab
- Supported numerous special events at Bloch
- Updated Vbrick machines
- Supported student-printing needs in the BHH 005 computer classroom by keeping supplies on hand and printers ready for use. Over 1,360 print jobs were printed in BHH 005, totaling almost 8,190 pages.
- 455 individuals used the BHH 005 computer classroom during this period.
- Information Services worked closely with Bloch and UMKC Online on the rollout of the PMBA program.
  - IS provided training sessions for faculty and staff to ensure comfort with the tools associated with synchronous and asynchronous online education.
  - IS equipped two common rooms with equipment and software to facilitate synchronous online sessions.
  - IS assisted in facilitation of the PMBA program's orientation.
- Providing technical support for special events, conferences, career fairs, etc. has been and continues to be a primary function of full time dedicated Bloch IS and student staff.
  - Bloch Executive Hall averages 5 to 10 events each week (over 400 events have been scheduled so far for 2018).
    - 90% of events utilize AV/Room technology.
    - 20% of events request direct support from Information Services.
    - These events range in size from 10-200 attendees.
- Information Services continues to facilitate a projector lamp cost reduction plan on behalf of Bloch.
  - 100% of lamp assemblies in Executive Hall classrooms are replaced with rebuilt assemblies upon failure.
    - OEM raw lamps are ordered and failed lamp assemblies are rebuilt.
      - Rebuilt assemblies are currently yielding longer lamp lives than OEM assemblies.

- o Lamp cost has been reduced by $700 per replaced pair, per projector.
    - ▪ >$2000 in cost savings from Jan-Jul.
- Information Services manages the contracted relationship with SKC (Audiovisual integrator) and Bloch.
    - o SKC currently functions as an intermediary between UMKC and equipment vendors for replacement and repair.
    - o Notable pieces of equipment replaced/pulled for repairs from Jan-Jun included:
        - ▪ Crestron Touch Panel.
        - ▪ Crestron Scaler Power Supplies (6).
        - ▪ Tannoy Line Array Speaker.
- Information Services works closely with Bloch and Marketing for all of Bloch's Four Winds Interactive (FWI) displays.
    - o IS dedicated >40 hours of labor to these efforts from January to July.
    - o IS handles content editing and deployment to Bloch's FWI players.
    - o IS handles FWI hardware/software design, deployment, and maintenance.
- Information Services worked closely with Bloch to further reduce Bloch's PT Staff labor expenditures. Great care was taken to reduce operating expenses without negatively impacting the service level provided.
    - o Daily preventive maintenance checks were completed in all Bloch classroom spaces prior to the start of morning classes (daily) to minimize disruptions.
    - o Information Services and Bloch student technicians supported both Heritage Hall and Executive Hall and were available to assist Students, Faculty and Staff during all class hours.
    - o Technicians were scheduled in both buildings based on class schedule.
        - ▪ This ensured we met Client support expectations as well as our financial obligations in relation to labor spend.
    - o Technicians were scheduled on weekends when classes/events dictated.
    - o Bloch IS continued to put a strong emphasis on Client Experience.
        - ▪ NPS for Dedicated Bloch IS staff from 1/1/2017 to 7/1/2018 was 100.
        - ▪ 25% of closed tickets resulted in a survey submission by the Client.

- Bloch's dedicated IS staff has maintained an NPS of 100 for 24+ months.

NPS

	January	February	March	April	May	June
NPS	100.00	100.00	100.00	100.00	100.00	100.00

Survey Data

	January	February	March	April	May	June
Courtesy	10.00	10.00	10.00	10.00	10.00	10.00
Timeliness	10.00	10.00	10.00	10.00	10.00	10.00
Knowledge	10.00	9.94	10.00	10.00	10.00	9.93
Overall	10.00	9.94	10.00	10.00	10.00	10.00
Average	10.00	9.97	10.00	10.00	10.00	9.98

School of Nursing and Health Sciences (SoNHS) and School of Pharmacy

IS continues to work with both Nursing and Pharmacy to support their IT needs, including regular meetings with the IT Ops Committees at each school. This provides an opportunity to review current systems and solutions to ensure goals are being met. Below are some of the projects IS was involved in.

- Completed project to utilize Box as the primary storage space for faculty at Nursing.
- Supported ExamSoft for the School of Pharmacy
- Provided numerous Windows 10 upgrades
- Installed several Workstation Replacement systems
- Discussed the use of jabber and softphones
- Provided lifecycle hardware and software asset report for budget planning
- Consulted and procured numerous new software apps for ATTC
- IS has provided daily room checks and as-needed technical assistance via ITSM, phone and direct reports in ILE spaces.
- IS provided scheduled operational assistance for the fifth Floor "Simulation Lab", including the operation of AV system and Laerdal "SimView" software.
- IS provided on-demand technical support via ITSM, phone and direct report for the "Simulation Lab", for the AV system, Laerdal "SimView" software, and hardware, and IS designed data network.
- IS staff have provided support on demand via ITSM, phone and direct report for the "SoNHS Dispensing Lab" ILE, KBport and Gaumard systems, and the IS custom network.
- IS conducted negotiations with Laerdal to establish a "SimView" server replacement program for approximately 10% the cost of original purchase price.
- IS has provided daily room checks and as-needed technical assistance via ITSM, phone and direct reports in ILE spaces.
- IS provided operational and immediate-response technical support for the School of Pharmacy's video distance learning program in HSB classrooms
- IS coordinated technical support of the SoP's video distance learning program with teams at the MU and MSU locations.
- IS provided daily coordination/support for distance courses between UMKC, MU, and MSU.
- IS explored using the SimView in a customized manner for the School of Pharmacy.   Faculty each logged in to observe student assessments
- IS coordinated with IA to resolve several Panopto recording issues.

School of Computing and Engineering (SCE)

Support Services worked with SCE and the IT Ops Committee Chair throughout the semseter to ensure the needs of faculty and students were being met. This also gives us an opputnity to discuss new projects. These committee meetings are vital, particularly with SCE's continually changing lab environments and their expanding curriculum. Some of the recent projects we've worked on for SCE include:

- Met with SCE's operations committee to review software and hardware for FY19. Identified several computers and labs that needed to be replaced. Updated the list of SCE software and provided usage data for all lab applications. Identified possible applications that could be retired.
- Setup 2 new high performance Alienware PCs (Windows & Linux) for dedicated research
- Purchased and configured new COMSOL license
- Installed Altair HyperWorks Suite for dedicated research
- Introduced Windows 10 self-service upgrade options
- Provided information on the Exchange Mobile device policy changes
- Worked with CFM to ensure the environments were maintained at an optimal level.
- Staffed School of Computing and Engineering labs for extended hours during Fall semester midterms and finals.
- Assisted with special events as needed, including facilitating communications about guest accounts, software requirements, and access.
- Analyzed new inventory ordering options for the leased MFD to determine the most efficient process to maintain toner levels.
- Supported SCE with closing multiple labs during Spring Break by providing usage data, communicating the hour change to students, maintaining the 24x7 site, and being available to coordinate color printing needs.
- Worked with personnel assigned to schedule labs to assist with tracking ad hoc and recurring classes held in the SCE labs.
- Supported student-printing needs by keeping supplies on hand and printers ready for use. Over 51,000 print jobs were printed in the SCE computer labs located in rooms 364, 460, 462, 463, and 464, totaling over 402,100 pages.
- 1,263 individuals used the general-use student computer labs during this time period:

Departmental Labs	Individuals
SCE 364	530
SCE 460	676
SCE 462	843
SCE 463	576
SCE 464	733

College of Arts and Sciences (A&S)

- Continued upgrades for the Geosciences lab in FH403 including all new monitors.
- Upgraded the Galaxy Evolution iMac Lab with new computers and a new image based on Mac OS 10.13. Due to the complex nature of their work, this is one of the more complex images.
- Consulted with the History department in the creation of the Digital History Lab. This space include three iMac's and a printer to be used for digital editing of media created by students

- Completed significant work for the Caruso research group, including setting up research storage for data backups and providing 30+ accounts to assist with sharing external resources using Box, etc.

University Libraries (UL)

In September 2017, Information Services and the University Libraries entered into an agreement to provide dedicated, on-site technical support. As part of this agreement, technical staff were moved to IS. Throughout the past year, IS has been working with the IT Ops Chair for the Library and the technical team to learn about Library processes and needs and streamline those processes wherever possible. Over the last 6 months, the following projects have been completed.

- Performed Iliad migration to hosted server at OCLC
- Co-termed all Scanners (BookEye) maintenance to streamline procurement and support
- Purchased, installed, and configured 3D People Counter assist with counts of patrons entering/leaving the Library.
- Performed a printer migration to campus servers. This reduces duplication of services and lowers infrastructure costs.
- Performed several tasks with EZProxy, including cross training with other units, migrating to a more modern stanza configuration, and a full updating of support documentation.
- Provided hardware and software lifecycle reports

School of Education (SoE)

In September 2017, Information Services (IS) and the School of Education (SoE) entered into an agreement to provide dedicated, on-site technical support. As part of this agreement IS worked closely with SoE to better understand their environment and needs.

- Installed numerous WRP workstations throughout the Spring
- IS hired a new technician last fall to provide support for the School of Education. We have been steadily working to cross train this technician throughout the year
- Inventory the computing equipment in SoE
- Develop Box cloud storage documentation
- Provide training to SoE faculty and staff on how to use Box to help with the adoption process
- Install and configure Box software on all SoE computers

- Provided a hardware and software forecasting report

School of Law (SoL)

Support Services regularly meets with the Law School to ensure service needs are being met and to stay updated on current technology needs. There were several key initiatives during the past six months that involved Support Services.

- The School of Law moved to a new version of RooLaw. IS worked to support this new portal and utilized existing automation to streamline this process.
- Supported the development of a new tool to facilitate online exams. ILG Exam 360 has replaced ExamSoft and the new application will align the Law's school exams with the Kansas and Missouri Bar Exams.
- Supported the VITA Tax program during this period. This program helps provide tax preparation services for low-income clients.
- Migrated multiple servers, including web and file, to Server 2016.
- Provided life cycle asset reports for budget planning purposes

School of Biological Sciences (BIO)

The School of Biological Sciences is undergoing a major renovation project that has a significant impact on their technology. During this period, IS worked on numerous IT initiatives including the following:

- Phase 1 of the remodel project was completed during this period and the vast majority of equipment has been placed in the newly renovated space. For IS this translated into numerous computer equipment relocations and the testing of an 800-megawatt generator. This change was coordinated to occur over a weekend and it required a complete shutdown of all non-essential systems in order to limit damage from a power surge. IS made sure that the equipment was disconnected and reconnected after the testing to avoid damage.
- Upgraded the computer that controls the departments Gel Logic 200 camera. This required moving the camera to a newer iMac and configuring the use of MicroManager, a software provided free of charge from NIH, in order to control the camera and the images.
- Coordinated with Chemistry for the replacement of a specialized Linux computer with a very specific set of components.
- Provided an introduction of UMKC IT for the Biology Boot Camp. This was prepared for new students that are majoring in Biology, instructing them where to find the technical resources they may need during their studies.

Conservatory of Music and Dance

With the support of Dean Petrella, IS was able to utilize existing equipment in the Conservatory and establish a small video editing lab.
- Completed various technical support requested
- Purchased and installed various software apps for the Conservatory
- Provided a number of OS upgrades

Residence Halls

- Supported student-printing needs in the Residence Hall computer labs. Over 17,700 print jobs were printed in the Oak Place and Johnson Hall computer labs, totaling over 101,000 pages.
- 694 individuals used these Residence Hall computer labs during this time period

- Information Services continues to support KCUR and their growing staff in multiple locations.
- Over the last 6 months, there has been continued effort to overhaul the Radio Data System (RDS). RDS data is usually the song and artist that is playing on your radio but for KCUR it has been a static generic message. In the past 6 months, technicians have been working to add additional software and hardware to provide real time updates to this data. KCUR will get updates from NPR on programing and send this RDS data out to the listeners. KCUR will be able to provide specific messages for local shows, newscasts, and membership drives. This part of the project has been completed.
- A second phase of this project called "Tornado Alley" is currently in progress and will enable emergency alerts to display via this system.

Academic Enhancement

Nursing

- Recorded Student POV speech

School of Education

- Met with SOE about Project/2 dates
- Recorded talking heads in studio for Project/2 dates
- Completed edit session for SOE/1 date
- Recorded/produced speech for C. Schlein
- Recorded ECON 202/1 date

FaCET

- Missouri Kansas State Authorization Network conference-recorded and streamed
- FaCET and/or FaCET/PFF sessions all day record/3 dates

Provost Office

- Chairs & Directors MTN recorded/4 dates
- Recorded event for Vice Chan's office
- Recorded candidates for Dean of Students/2 dates
- Recorded candidates for unknown/2 dates

Conservatory

- Recorded Piano Audition/2 dates
- Recorded Opera/2 dates
- Recorded Wind Symphony with guest Jennifer Higdon
- Recorded/live streamed Wind Symphony at Folly
- Recorded/live streamed Jazz Concert at the Folly

Diversity and Inclusion

- Recorded Martin Luther King Lecture
- Recorded Women of Color Lecture
- Recorded Chavez Lecture
- Recorded Women of Color Leadership Conference Keynote

School of Biology

- Reshot lab demo

Diastole

- Diastole Kiva presentation recorded/2 dates

School of Pharmacy

- Recorded/produced lab demo

Bloch School of Management

- 3 Minute Thesis/Recorded
- Recorded short lecture

Chancellor's Office

- Recorded/live streamed Chancellor
- Recorded audio/Fireside Chat with Chancellor Choi
- Recorded/streamed live fall commencement
- Recorded/live streamed vice chancellor honor recipients' breakfast

Swinney Rec Center

- Recorded/produced annual Swinney Seniors video/2 dates

School of Law

- Recorded/Streamed Law School Class of 2018 Awards Ceremony

Strategic Marketing and Communications

- Recorded audio

School of Computing and Engineering

- Recorded/live streamed/produced keynote speakers/3 dates

School of Dentistry

- Recorded and Live streamed transitioning ceremony

Misc.

- Scouted/recorded/edited program for McCown Gordon Const. CO./2 dates

Foundation Services

IS Foundation Services (ISFS) provides secure, professionally managed data centers to meet the growing information technology (IT) needs of academic and administrative units at UMKC. ISFS serves as the primary system administrators for 400+ servers as well as providing assistance and technical support for campus IT Liaisons.

ITSM (Remedy)

- As part of a UM System shared initiative, ISFS hosted the ITSM infrastructure and exceeded the goal of 99.9% uptime.

Server Virtualization

- Upgraded vSphere environment to 6.5u2 and began planning 6.7 upgrade for late 2018.
- Added a second high-performance host to the Center for Health Insights (CHI) compute cluster.
- Provisioned approximately 20 new virtual servers.
- Continued to target physical server infrastructure for virtualization by working with IT Liaisons to retire aging hardware.

Storage/SAN/Backup

- Upgraded firmware on EqualLogic file services SANs.
- Upgraded firmware on Nimble VM SANs increasing compression rate by 2%.

Miscellaneous

- Remedied and closed 659 Remedy tickets. Ticket completion times continue to be held low.
- Multiple server OS (Windows and Linux) and application upgrades including CBORD Odyssey, ARMS, Titanium, TutorTrac, AdAstra, TMA, Redcap, Bitbucket, RooBox (formally DropBox), Confluence, JIRA, and ColdFusion.
- Shibbolized dozens of websites and multiple new services allowing single sign-on.
- Major group policy object (GPO) cleanup to remove hundreds of unused/unneeded objects.
- Began migration of Microsoft Windows Server 2008/2008R2 systems scheduled to go end-of-life in January 2020 to a more modern version of Windows (20% complete).
- Built Joey2.0 HPC teaching cluster with the goal of replacing Joey by 11/2018.
- Contributed patch to Warewulf Cluster Manager open source Linux project.

Appendix A

Individual Project Updates – Completed Projects

P126-Whole Foods Development

This project provided a new Whole Foods store, a new UMKC Student Health, Disability Services and Counseling Center, new luxury apartments, and a new parking garage. IT/AV scope was contained to all network infrastructure and a small conference room that will be used by all departments. IS did install a new network utility corridor in preparation for this project, which involved removing all existing overhead cabling and installation into an underground vault. During this review period, all equipment was installed and the project was completed. The departments were relocated into the new space and trained on the equipment.

P215- IP Address Management

IT project to refresh our campus DNS/DHCP infrastructure. The new system will include an IP address management tool, DNS security features and will provide a consolidated management console for IP address functions. During this review period, we replaced our recursive Microsoft DNS servers with Infoblox servers. These servers provide DNS services to all campus computers. We enabled the DNS Firewall feature to block DNS requests for known malicious websites and configured the Infoblox reporting server.

P217- Telepresence VCS-VCE

IT Project to enhance video conferencing on and off campus by leveraging key components of our existing VoIP phone system and Telepresence video conference system. We plan to add new modules to greatly increase the number of video conference endpoints on campus. These new video endpoints are designed for a wide range of use cases from personal webcams, to conference rooms, to large classroom environments. The new modules will also integrate our existing H.323 Polycom, LifeSize, Tandberg and other room-based video endpoints into a streamlined dialing plan. During this review period, we installed telepresence video conference equipment in four new campus buildings: Atterbury Student Success Center, Newcomb Hall, and School of Medicine to complete this project. These new systems are integrated with Microsoft Exchange for meeting scheduling. These systems can join any UM-System "Telepresence Meeting" or can place and receive calls from any SIP capable video system including WebEx and Zoom.

P264 – Law School Expanded Wireless Coverage

IT project to relocate existing and install additional wireless access points to expand wireless coverage throughout the Law School building. During this review period, we facilitated installation of 17 additional 802.11ac wave2 access points in the School of Law and repositioned several existing access points to optimal locations for wireless coverage and completed the project. A total of 43 access points are now providing high-speed wireless coverage to all corners of the Law School.

P265 – ILE Classroom Upgrades FY18-IS Funded

IS Project to upgrade 23 ILE rooms in FY 18 to HD widescreen digital video and projection systems, enhanced audio processing with web conferencing and voice over IP features. This is an effort to keep the highest quality student experience. During the last review period, we collaborated with the Registrar's Office to identify and schedule rooms to be upgraded, updated system designs to accommodate ILE spaces with more equipment than typical, and purchased equipment. During this

review period, we worked with CFM and other units in IT to update all 23 classrooms on the identified list to complete the project.

P267 – UPS Battery Replacement
This project is to replace old batteries in the existing IT Closet (UPSs if possible). In some cases, the UPS will actually need to be replaced. During this review period, we replaced batteries or UPS' in the following buildings: Flarsheim Hall, Newcomb Hall, Cherry Hall, School of Medicine, School of Dentistry and School of Biological Sciences.

P268 – BSR Phase IV FY18
This project involves replacing the remaining access and distribution layer switches after BSR phases 1-3 are completed. These are buildings where we had previously installed Cisco 4506 series switches. UMKC Networking will be installing Cisco 4500X series distribution switches and Cisco 3850 series access switches. The new switches will increase the building backbone from 2 GB to 20 GB. The access switches will also provide 802.3 at (60 watts) Power over Ethernet, PowerStack & M-Gig Ethernet ports for next-generation wireless access points. During this review period, upgrades to the building switches were completed in Cockefair Hall, 4747 Troost, Berkley Child Care & Family Development Center, Whole Foods office space and the Fine Arts Building.

P280 – SOD 209 AV Upgrade
This project is part of the School of Dentistry expansion program at Missouri Southern State University in Joplin. For this phase two project, the IT/AV scope includes upgrading the Dental School selected SOD room #209 with similar distance Ed technology as the room upgraded in phase one. During this review period, SKC (AV Integrator) completed the installation then trained the client and user groups. The project was completed and the room is back online for regular use.

P281 – SOD FWI Signage Upgrade
The scope of this project involves adding 2 new FWI signage locations in the School of Dentistry. One 80" signage display will be in the main patient lobby on the first floor and one 70" signage display will be on the second floor outside room 209. During this review period, the IT/AV estimate was approved and installation was completed.

P285 – Student Union IPTV Upgrade
The Student Union is upgrading their signage distribution to IPTV boxes, allowing the ability to stream content over existing network connections. IS will be adding to (2) encoders and connecting existing TVs to the network. During this review period, we completed installation of the equipment and trained then turned the system over to the client for regular use.

P287 – Wireless Network – HHA
This project involves the purchase and installation of approximately 12 new Wireless Access Points to improve the wireless coverage and bandwidth in the student living spaces at Hospital Hill Apartments. During this review period, all access points where installed and the project was closed.

P302 – Miller Nichols Library People Counter
Miller Nichols Library was looking for a new hardware device that will accurately count the number of people entering and leaving the library. The device was identified, purchased and installed during this review period.

P313 – HHA Computer Lab

Computer lab setup with network jacks and other work needed for computers moved from the Oak Place lab.   The computers and security camera were installed; the lab is up and running without issue.

Individual Project Updates – Implementation Phase

P171-Chemistry/Biology Building Renovation

Multi-year CFM building renovation project. The IS scope includes demoing and replacing building network infrastructure and installing new IT closets and network switch gear on Biology floors 2-4 and Chemistry floor 2, as well as with updating (9) classroom/lab environments, (2) conference rooms and (9) collaboration/student spaces. During this review period, IS developed an existing IT closet with new network switch gear and upgraded the Chemistry building with new 10GB network infrastructure. We also completed the installation of the AV gear in the classroom/lab environments as well as the conference space for the Biology Building. We plan to complete the Chemistry Building during the next review period.

P216 – Fujitsu Optical

This project involves replacing UMKC's old optical gear with new Fujitsu gear. Extending the existing MOREnet optical network between Newcomb Hall and the 1102 Grand data center downtown includes a new optical node on UMKC's Hospital Hill campus. This new "Ring" will utilize Fujitsu 9500 DWDM equipment that can support forty-four 100 GB simultaneous "waves". UMKC will use some of these new waves to increase the Hospital Hill building network uplinks from 1 GB to 10 GB. The new equipment provides the possibility of creating dedicated research waves between the UMKC campuses or anywhere on the MOREnet network. During this review period, we cut over to this new equipment for the UMKC links and are now working on standing up some research connections.

P261 – Smart City Kiosks

This is a Kansas City project to install digital information Kiosks around the city, including several locations on the UMKC campus. IS' scope will include providing fiber and network connectivity to the UMKC Kiosk locations. During this review period, IT worked with vendors and CFM to plan the installation of eight Kiosk around campus. IT scope included cable marking and fiber optic connections to kiosks for data.

P266 – UMKC Online Toolkit

This project will define a comprehensive list of online tools for teaching and recommendations for users in a given situation. The goals include UMKC Information Services and Online groups consistently promoting the tools that are available and recommended in various use cases. This information will be posted online for staff and faculty to easily access. We will implement a process to maintain an updated list operationally moving forward. During this review period, we built a list of current online tools available, various use cases, links to the homepage information, preferred environments, various compatibility, the support group responsible and the dates we have rights to the tool. We have started identifying online/class scenarios and are moving toward a complete list to present to our campus leadership.

P274 – Scofield Hall Infrastructure Replacement

This project is to bring the building infrastructure in Scofield Hall to current standards by rewiring the voice and data jacks on all floors in the building. This process involves ongoing infrastructure improvement efforts, but we are managing each building as individual projects to better track

costs/materials/timelines. This building has five floors and is being rewired one floor at a time. During this review period, the fourth and third floors have been rewired.   We hope to finish ground through second by the end of the calendar year.

P284 – CourseLeaf (CLSS)
Institutional Effectiveness project to implement CourseLeaf, which is an online class scheduling and reporting module that streamlines the academic course planning and scheduling process for all constituents in one central tool. The CourseLeaf Section Scheduler (CLSS) module provides an end-user friendly interface for academic units and departments to determine their class offerings each term, including inputting, editing, validating, approving and updating course section information. It provides mechanisms for departments to achieve required class distribution, identifies both intradepartmental and interdepartmental class section schedule conflicts, and visualize and modify course section schedules. These additional tools will allow departments to create their schedules more holistically and deploy resources more efficiently, gaining efficiencies in the units and the Registrar's Offices. During this review period, we facilitated the project team in building meeting patterns, rules, testing, and filters.

P292 – Network Core Refresh FY18
This project will replace the existing two primary campus core routers that form the backbone of the UMKC network. Currently, each of these routers supports 55 building uplinks. The new core routers will be installed in geographically separated data centers on campus and will support high-density 10 GB and 40 GB uplinks to the campus buildings. The new uplinks will greatly increase the available bandwidth on UMKCnet. During this review period, we cut over Newcomb Hall and the campus firewalls.   We hope to cut over the rest of the campus buildings by the end of the calendar year.

P298 – Cherwell Planning
This program is to oversee the series of projects necessary to investigate options for replacing our service management solution, Remedy; to implement and migrate from Remedy to the selected cloud-based solution, Cherwell Service Management; and to decommission Remedy. During this review period, the IS project team was identified and we kicked off the project. This project has a quick implementation so we worked to stay on track by attending multiple weekly meetings. We also collaborated with intra-campus partners to develop a customized web portal.

P299 – CEI HCG Grant
The Center for Economic Information (CEI) has been awarded the Health Care Foundation of Greater Kansas City's Special Initiative Grant to support the development of the Kansas City Health Community Organized Resource Exchange (KC Health CORE). The scope of this grant involves developing a large-scale geodatabase that will aggregate a variety of social determinants and health data for the Kansas City community. The KC Health CORE initiative is designed to provide a HIPAA compliant, secure, centralized information architecture for micro-level health data resources for the purpose of coordinating health disparities research, to identify the key factors in targeted populations, and to leverage existing community resources toward sustainable solutions. The KC Health CORE system will be designed to facilitate regional health data exchange and interdisciplinary research projects in the first year – providing controlled access to the initial KC Health CORE geodatabase to members of participating research institutions, collectively referred to as the KC Health CORE Consortium (HCC). The establishment of the HCC is a crucial first year objective, and expansion of the HCC continues in subsequent years. UMKC Information Services' deliverable for this project (Year 1) is to implement a file server platform that facilitates data exchange between HCC members. During this review period, IS built

Jira and Confluence servers, a Windows File Server and provisioned storage on geospatial cluster. We also configured file server backups, setup FTP and created AD groups for managing and created an initial directory structure secure with AD group. We installed and configured a firewalled network where the HCC database and files servers are hosted and developed VPN instructions and configured a web portal for authorized researchers on and off campus can access the HCC tools.

P301 – Chancellor's Office AV Upgrade

This project renovated the existing Chancellors Office. The new system included a large display with the ability to present and use unified communication systems along with a Cisco Telepresence system. During this review period, the IT/AV scope was finalized and installed. The client was trained and the room became fully operational.

P307 – RankU

Implement Recruitment Platform Software, Wiley/RankU. The Recruitment Platform is an online predictive analytics software to assist universities with marketing and recruitment for online degree programs. The software allows prospective students to easily find schools and the degrees offered, as well as providing the ability for programs to showcase what they have to offer and what differentiates them from others. Wiley/RankU's software is comprised of three parts: The Marketplace, Editing Suite, and Analytics Dashboard. During this review period, we partnered with UMKC Online to quickly populate necessary data for the product, tested with the vendor, and prepared and submitted everything required by UM System and Wiley for a rapid go-live.

P315 – SU Robot Café Signage

The project is adding signage to replace the menu boards at the Robot Café in MNL. During this review period, IT/AV scope was finalized and the estimate was approved by the client. The project is planned to be completed during the next review period.

P316 – Clear Scholar

ClearScholar uses an approach called personas when coupled with the Civitas analytics insight make it a differentiator product. Other mobile solutions can provide content in a similar manner but usually to strictly defined groups. The algorithm and overlapping approach make it unique. During this review period, we kicked off the project, scheduled weekly meetings with various project teams and mapped out our timeline.

Individual Project Updates – Development Phase

P174 – SCE Educational and Research Center

CFM/SCE project to build a new multi-story building addition to Flarsheim Hall. IT/AV scope is undefined at this point but the project has been approved by the Board of Curators (BOC). During this review period, the current area of focus for IT has been the elimination of the Old Maintenance Building (OMB), which is within the project footprint. IT worked with CFM to find a new/suitable location for Classroom Technology Services staff located in OMB. The new space will be located in Flarsheim Hall Room 270 with the addition of the Rock Lab during winter break. IT/AV to be defined and the CTS staff to be moved in new space during the next review period.

P185 – Thompson Courtroom Upgrade

This is a project to upgrade all existing presentation, teaching, and recording technology in the courtroom to the current digital HD Video standards. Enhancements to the user interface, system

usability, and video recording quality are also included, as well as a possible redesign of the lighting systems throughout the space. During this review period, Initial scope meetings were held and the budget was greatly reduced. During the next review period, the new design and next steps meeting are hope to be completed.

P225- PAC Infrastructure Replacement

This project is to bring the building infrastructure up to current standards by rewiring all the voice and data jacks on all floors in the building. This building has five floors and will be rewired one floor at a time. This project is currently on hold until the status of the new downtown arts campus is determined.

P289 – 600MHz Microphone Replacement

This project is looking into replacing all wireless classroom microphones that transmit on the 600MHz frequency, as there is an FCC mandate to remove them. We have identified all affected classrooms and worked with the manufacturer to develop a budget for replacement. During this review period, we are worked with internal budgets to fund replacements.

P293 – ILE Classroom Upgrades FY19 IS Funded

As part of our continual process of keeping the highest quality student experience, IS plans to upgrade as many ILE rooms in FY 19 as the budget will allow to HD widescreen digital video and projection systems, enhanced audio processing with web conferencing, and voice over IP features. During this review period, we continued to collaborate with the Registrar's office to identify the rooms to be upgraded. We have also started the process of reviewing/updating AV system designs for these spaces, which will ultimately yield a bill of materials for the project. During the next review period, we plan to schedule rooms and order equipment to start the project.

P300 – Oak Place Water Damage

This project involves the IS Networking & Telecommunications equipment and work required as part of the water damage repairs in Oak Place apartments. During this review period, we have removed the wireless access points from all the rooms to prevent them from being damage during the renovation.

P305 – AD Consolidation

This project aims to consolidate UM System's Active Directory environment to a unified, single Active Directory domain and implement a persistent, non-changing electronic identity login. This project will establish the common architecture and policies for the new consolidated Active Directory environment and will include technical design, establish policies and procedures, and provide opportunities for campuses to review and provide feedback. In addition, this project will define the path to move forward with consolidation plans, including outlining the deliverables for the remaining program projects and include technical setup necessary to prepare for the remaining projects. During this review period, we participated in AD design and planning discussions. We designed and tested configuration changes needed for UMAD account user authentication to UMKC's VoIP services including Call Manager, Unity Connection, Contact Center and Jabber.

P309 – Katz Drafting Lab Upgrade

Upgrading a space in Katz Hall with data jacks and power for a computer-drafting lab. Current scope includes installing (3) new NICE surveillance cameras and data jacks for up to 18 new lab machines. During this review period, we provided cost to the department to complete this project so they could gather the necessary funding.

P310 – CEI Virtual Conference Room

This project is adding a display cart to act as a virtual conference room and work with any unified communications software. During this review period the IT/AV scope was defined, estimate was approved and the equipment was ordered. During the next review period, we hope to install the equipment and train the client bringing the project to 100% complete.

P311 – Dental School Camera Upgrade

Replace and upgrade approximately 23 security cameras at the Dental School to work with the NICE security system. During this review period, we provided cost to the department to complete this project so they could gather the necessary funding.

P318 – School of Pharmacy Video Distance Classrooms Upgrade

This is a project to redesign and update current video classrooms to reduce overall operating costs while maintaining current functionality and support levels. During this review period, we have stood up the IT/AV project and scheduled the scope meeting during the next review period.

P319 – SRC Sound System Upgrade

The project is upgrading the sound system on the Swinney Recreation Center courts. During this review period, we met with the client to define the scope to create an estimate and set a timeline. During the next review period, we are looking for an estimate approval to continue with the project.

P320 – Biology 5th floor Infrastructure Replacement

This project is to upgrade the cable plant on the fifth floor of Biology, both voice and data, to current campus standards, matching the recent upgrades on the other floors. We hope to begin this project early next calendar year.

P321 – Swinney Rec Infrastructure Replacement

The project will upgrade the cable plant in Swinney Recreation Center to current cable standards. We hope to start this project sometime in the 2019 calendar year.

Appendix B

Building Cable Plant Infrastructure Upgrades

UMKC IT Infrastructure Status — Building Cable Plant Infrastructure Upgrades timeline (2010–2020) showing completion status by building.