

January – June 2019

Accomplishments Report Information Services



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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.

2019 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
- UM System IT integration where appropriate

2019 IS PROJECT LIST & POINT PERSON

- Campus Building Security – 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
- Google Cloud Platform – Magrone/Foundation Services
- Distribution List Management – Kurup/Information Access
- Generic/Resource Account Management – Kurup/Information Access
- IT Budget in the RIM model – Collins/Goodenow/Guggenmos/Administration

2019 Shared Services Project List

- Accounts Management – Goodenow/Reisenbichler/Kurup – Information Services
- Establish Enterprise Architecture – Schonemann/ Network Architecture
- UM Network Architecture – Schonemann/Network Architecture
- IT Transformation projects – Goodenow/All IS Departments
 - Security
 - Applications and Development (Cathy)
 - Finance (Beth)
 - Infrastructure (Andy)
 - Remote Work (Jane)
 - Research (Mark)

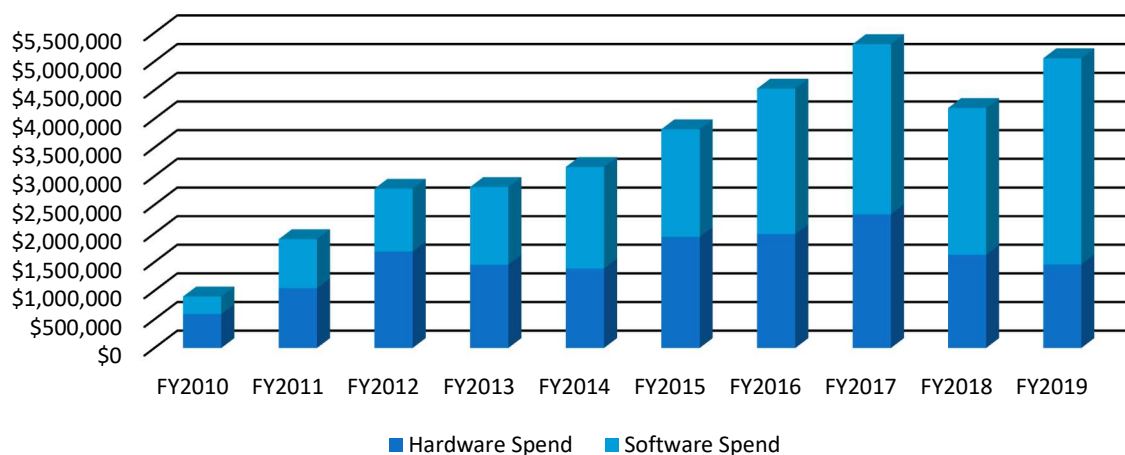
Executive Summary

Information Services 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 2019.

During this past review period, IS Support Services had an increase of more than 10% in distinct (11,450 individuals use IS managed computing sites (mainly computer labs) and over 10,100 logins to our remote lab options.

IS coordinated the purchase of over \$2.85M of IT hardware and software. This represented a 65% increase from the same time last.

IT Procurement Spend by Fiscal Year (2010-2019)



Support Services spent a great deal of time working on the UM-AD migration. This project involves moving every user account from a local UMKC domain to a shared UM System user domain. This effort will eventually reduce costs, strengthen the support infrastructure and increase security. The team is heavily involved in enabling Office 365 for faculty and staff.

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. 798 new streaming media entries (videos, images and audio clips), were added to Kaltura by faculty and/or students. 866 hours of ITV distance learning was supported during this review period.

The Project Management and Infrastructure Services departments worked a number of high profile projects including the following:

- SCE Educational and Research Center
- LENEL to CBORD transition

- Office 365
- Academic Works
- Achieve IT
- AD Consolidation
- Administrative Data Center Cooling System
- Oak Place Water Damage
- School of Pharmacy Video Distance Classrooms upgrade
- ILE Classroom Upgrades

Efforts of the Information Access (IA) Division were notable in many areas including research and software. IA spent significant amounts of time working the UM System AD projects, Oracle contracting and reviews, and rewriting upgrading custom applications for the campus with the latest technologies/frameworks.

Information Access continues provide scanning services for the campus supporting almost 500 different examinations for ten academic units. IT worked on 45 unique custom web application for the campus in the current timeframe of this report.

Foundation Services hosted over 400 servers in our local data centers or via Amazon Web Services. The same group resolved over 550+ tickets from the campus for system administration requests.

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.

Student Computing Facilities



We had **11,453** distinct individuals use computing sites between 1/1/2019 and 6/30/2019. 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 **1,311** distinct individuals who logged into Remote Labs **10,118** times.

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

- 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.
- Worked with CFM, outside vendors, and multiple other Departments and Schools to ensure lab environments were maintained at an optimal level.
- Maintained computer lab lifecycle tracking spreadsheets to assist departments in budgeting for necessary expenditures.
- Created detailed budget projections for staffing costs over the next five years to plan for the increase in Missouri's minimum wage.
- Handled multiple unexpected closures caused by inclement weather.
- Maintained sufficient student employees to staff labs by processing over 80 applications for Student Assistant positions, conducting 72 computer skills tests, interviewing 40 prospective new hires, and hiring 26 new Student Assistants for IS-managed labs.
- Adjusted hiring procedures due to government shut-down.
- Conducted 9 new hire orientations to train new staff.
- Processed over 3,100 shifts and supervised over 8,842 Student Assistant hours worked.
- Completed reviews for 23 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 82,400 print jobs were printed in IS-managed general use student computer labs, totaling over 594,330 pages.
- Connected people inquiring about computer classroom sites with potential resources to aid them in their searches. Assisted other groups with access and scheduling issues in multiple campus computing sites.
- Worked with various departments on campus to upgrade cameras in the computer labs.
- Assisted with expansion of documentation included in the new Knowledge Base.
- Modified back-office procedures to increase efficiency of resource use.
- Implemented new hours and staffing model to actualize the planned 30% reduction in lab staffing costs.
- 5,129 individuals used the general-use student computer labs during this time period:

Open-Use Labs

	Individuals
Bloch Heritage Hall 110	439
Health Sciences 3304	786
Miller Nichols 2nd Floor	1,088
Royall Hall 303	2,281
Student Union 210	2,503

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.

Residence Halls

- Supported student printing needs in the Residence Hall computer labs by keeping printers ready for use in the Johnson Hall computer lab. Over 3,000 print jobs were printed in the Johnson Hall computer lab, totaling over 18,650 pages.
- 278 individuals used this Residence Hall computer lab during this time period.
- Staffed registration sessions during eight new student orientations, including providing printing and guest account resources.

Lab 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.

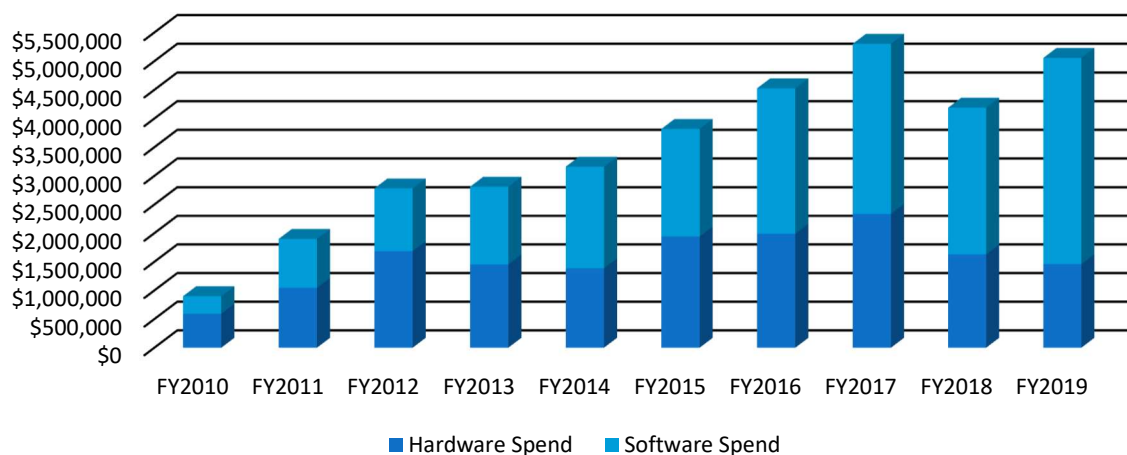


IT Procurement

- Purchased roughly \$2,850,000 worth of IT hardware and software, including computers, tablets, printers, peripherals, specialty systems, software, web services, subscriptions, service warranties, and maintenance agreements
 - This represents a 65% increase in total spend over the same period last year
 - This represents a 29% increase in total spend over the previous six-month period
- IS Support Services processed over \$5,000,000 worth of IT purchases during the last fiscal year ending June 30, 2019

- This is the second highest spend per fiscal year in the last 20 years and an increase in spend almost 23% from the previous fiscal year. This increase is attributed to the further centralization of IT Procurement processes across campus.
- This includes a 40% increase in software spending, but a 10% decline in hardware spending
 - The decrease in hardware spend was largely a result of changes in the Workstation Replacement Program, which saw participation rates at one-half the normal level
 - Note the replacement of desktop computers was deferred due to the tight budgets as we sought to leverage more value out of current investments
 - Some units were able to maintain their computer lifecycle priorities despite the lack of WRP funding with unit-specific funds later in the fiscal year, but most departments were unable to do this and find they are almost totally dependent on WRP funds for computer replacements.
 - The additional increase in software spend is due to increased activity from grant-funded areas of the enterprise as well as improved consolidation and record-keeping for software purchasing.

IT Procurement Spend by Fiscal Year (2010-2019)



- 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, UM Risk Management, the UMKC Chief Information Officer, the UMKC Information Security Officer, the UMKC Registrar and the Vice President for Information Technology
- IT Hardware procurement benefits greatly from strong commitment to standards and a more streamlined process with less variation and complexities in terms of security, legal and IT oversight and vendor/payment idiosyncrasies
- IT Procurement continues to demonstrate sustained and increased activity and productivity over the first part of the decade

IT Procurement Requests	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019
Total Requests Processed	1473	1438	1595	2336	2099	2136	2226
Average Requests/Month	123	120	133	195	175	178	186

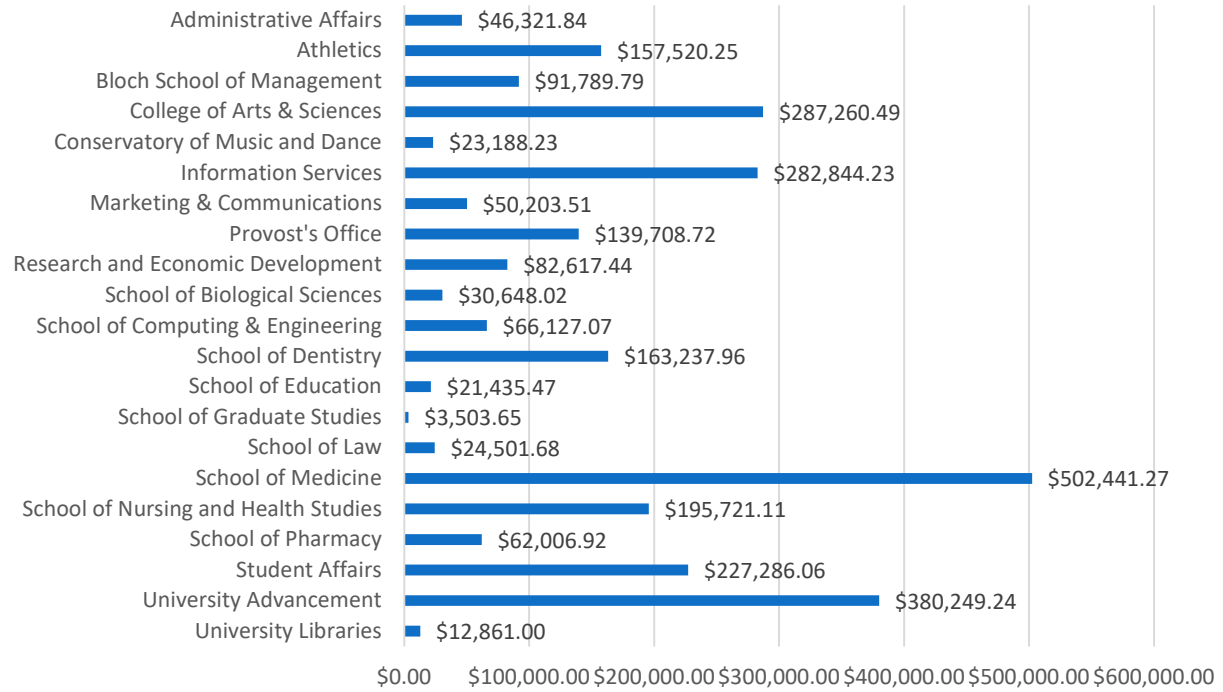
IT Procurement: Distribution by Vendors and Units

- The distribution of IT Hardware spending over primary vendors continues to demonstrate support for standards at UMKC
 - Dell is the preferred computer provider for which UMKC has large-scale Volume Purchase Agreements and account for roughly two-thirds of the total IT hardware spend
 - IT Procurement has built a strong relationship with MU Bookstore for the acquisition of Apple products saving departments nearly \$3,500 in special rebates and reducing some administrative overhead in the process
 - The following table lists the Top 10 IT Hardware Vendors by total spend for the period and demonstrates the current mix of standard versus specialty vendors

Vendor	Spend
Dell	\$428,091.11
MU Bookstore	\$165,198.95
Connection	\$41,588.49
Amazon	\$26,557.53
B&H Photo Video	\$19,825.39
Apple	\$17,686.00
SumnerOne	\$17,060.97
PAL Technologies	\$7,928.40
CDW	\$6,711.39
Shi	\$2,857.43

- Managing the dramatic growth of IT Software spending is a difficult challenge
 - In response to the diversity and increasingly complex nature of software acquisition, IT Procurement has implemented JIRA to track all facets of software requests and continue to improve and expand the Software Database to include the following records
 - Vendors – 766
 - Product Titles – 1452
 - Licenses – 12,372
- 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

Total IT Spend by Unit (January 1 - June 30, 2019)



Support Services

Highlights and Key Initiatives

UM-AD Migration

System-wide IT is currently engaged in a project to consolidate each of the University campuses user accounts into a single, shared domain. This is an effort that will reduce costs, strengthen support infrastructure, increase security, and result in a more efficient IT environment. This consolidation will ease the adoption of cloud services, off-the-shelf software, and promote the sharing of common resources system-wide. As part of this initiative Information Services played a key role in ensuring success at UMKC. A few of these activities include:

- Identified all applications and websites at UMKC that touch Active Directory and could be impacted by this consolidation.
- Updated applications and websites to support the new UM-AD domain
- Updated Group Policy to ensure compatibility with the new UM-AD domain
- Develop scripts on Mac OS to support the domain
- Creation of Active Directory Consolidation – User Migration FAQ
- Cleanup of Active Directory Accounts
- Develop targeted communication across Campus
- Performed targeted UM-AD migrations for executives across campus
- Expanded remote staffing levels by cross-training existing staff during the user migrations to assist Faculty, Staff, and Students.
- Participating in weekly System-wide calls

Moving forward continued work on this project will be required as we migrate workstations, servers, groups, and other non-user resources into UM-AD.

Office 365

While not directly tied to the UM-AD migration significant work was put in place to move forward with Office 365 across the campuses. Information Services worked with all campuses to define what O365 apps to enable, create a governance framework, and to develop support plans. Much of this work is ongoing with the expectation that O365 will be enabled for Faculty and Staff in the near future.



Re-aligning IT Services Agreements

Over the last 6 months IS completed the review process for IT service agreements for most Academic Units. Under the new model, IT services consumed by all departments would become centrally funded, standard services. Department-specific or custom IT services, such as departmental labs and discipline specific software would be paid for by the unit. A costing formula was developed for custom services to ensure that fees were consistent across departments.



Under this new model IS meets with each Academic Unit annually to review their current services and identify any gaps or services that are no longer required.

IS continues to work with Administrative units to implement RIM and have a consistent process across campus units.

Cherwell

After going live on October 1st there has been continued efforts locally, and with UM System, to further develop and utilized this new shared IT Service Management Solution.

Some of the work included planning an upgrade to 9.6 and developing additional forms to streamline processes. Toward the end of this period we started developing a solution to replace a custom ticketing system with Cherwell, this work is expected to complete by end of 2019.



In addition, the process to migrate knowledge to Cherwell has started and we expect that to continue into the next period.

Workstation Replacement Program

The annual Workstation Replacement Program (WRP) underwent significant changes during FY19 due to budget cutbacks. Despite these cutbacks we still purchased 263 Faculty, Staff, and Research computers through this program. This enables us to leverage bulk pricing and provide a streamlined deployment process.

Windows 10

IS continues to migrate to Windows 10 in anticipation of the end-of-life of Windows 7 in early 2020. Over the last 6 months we have upgraded 227 computers to Windows 10.



We continue to perform Windows 10 to Windows 10 build upgrades to keep our computing environment updated and stable. Over the

last 6 months over 2,200 computers were upgraded. These upgrades are done over the network with limited Faculty/Staff downtime.

Mac OS

Over the last period IS upgraded JAMF to provide support for the latest OS and feature set. This included a database migration from MySQL to InnoDB and a switch to OpenJDK 11. IS also migrated campus computers from Microsoft SCEP to ESET to ensure continued security protection on Mac OS.



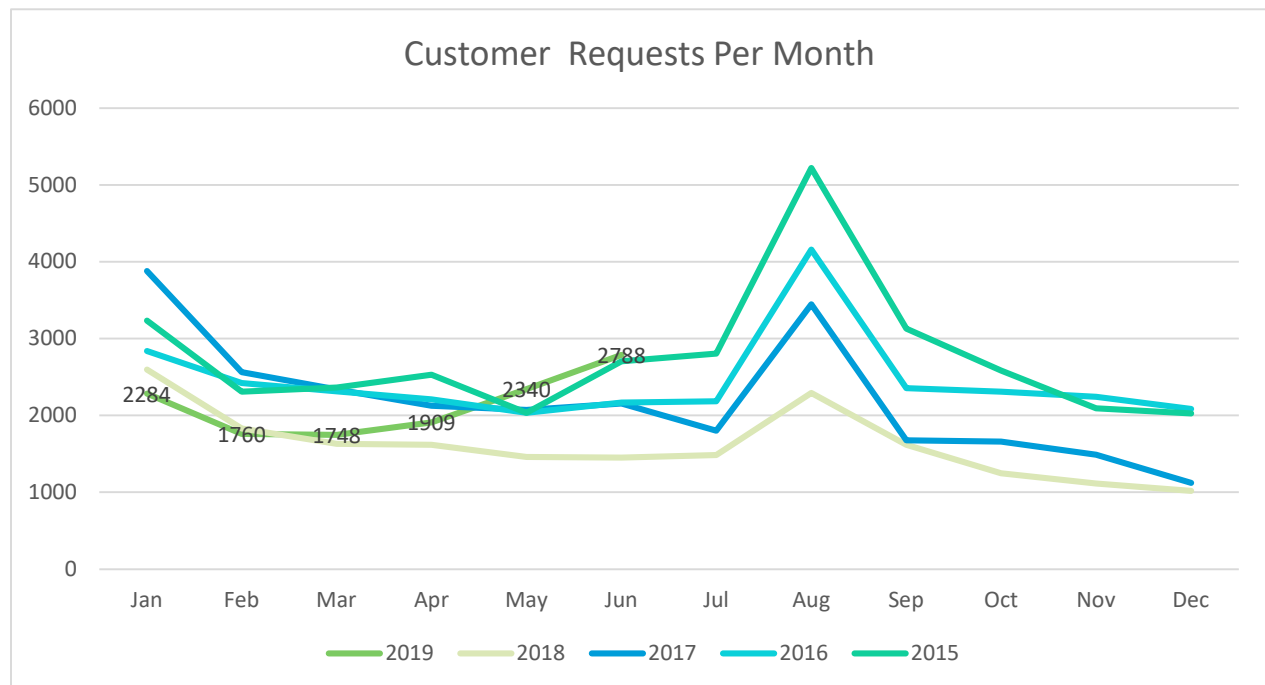
Customer Requests

During the first six months of 2019, the amount of support requests for Support Services fluctuated based on system-wide projects.

The first 4 months of the year were lower than in years past due to:

- SecureAuth usage for self-service password resets.
- Minimal outages of mission critical services.

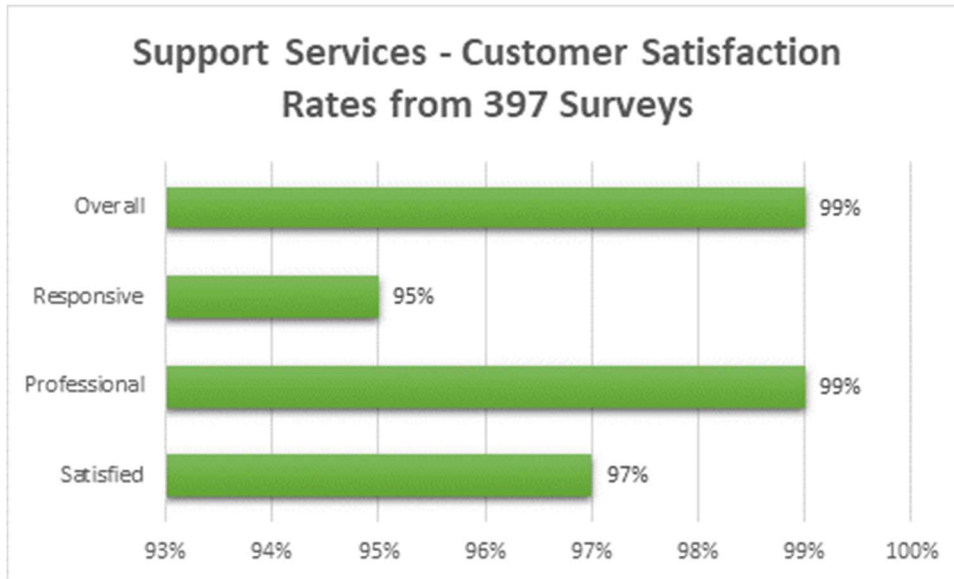
During May and June, we saw a significant increase in the number of support request numbers versus those in previous years because of the migration of employee and student accounts from the UMKC Domain to the UM-AD domain during the AD Consolidation project.



Customer Requests for Five Years

Year	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Total
2019	2284	1760	1748	1909	2340	2788							12,829
2018	2598	1827	1629	1616	1458	1449	1485	2291	1616	1244	1111	1019	19,343
2017	3879	2562	2335	2125	2072	2152	1799	3444	1676	1658	1487	1123	26,312
2016	2837	2419	2314	2209	2034	2165	2183	4158	2354	2307	2241	2083	29,304
2015	3231	2306	2364	2530	2035	2702	2805	5222	3129	2583	2093	2027	33,027
Total	14829	10874	10390	10389	9939	11256	8272	15115	8775	7792	6932	6252	107,986

- Customer satisfaction continues to remain extremely high. Over the last six months, Support Services has a **97% Very Satisfied** rating. The following chart represents customer satisfaction data collected from surveys closed by Support Services for the period of January 2019 through June 2019.



Remote Support Metrics from January 2019 through July 2019

- Remote Support fielded **12,829** requests for help via phone, emails, and online web submissions.

2019	Phones	Emails	Online	Totals
Jan	1521	604	159	2284
Feb	1149	500	111	1760
Mar	1137	526	85	1748
Apr	1240	560	109	1909
May	1623	603	114	2340
Jun	2018	647	123	2788
Totals	8688	3440	701	12829

- Support requests generated through our **online problem report tool** maintained a high level 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 2016	549
Q1 & Q2 2017	469
Q3 & Q4 2017	504
Q1 & Q2 2018	627
Q3 & Q4 2018	791
Q1 & Q2 2019	701

Remote Support Projects

In addition to provide remote support to Faculty, Staff, and Students this team provides significant work on accounts and other key systems. Below are a few of those key accomplishments.

Account Management

- The TSC continues to be the primary support contact for students using the Office 365 email system. The TSC set up 54 Office 365 email accounts for alumni in conjunction with the Alumni Association
- Created 33 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 for production in February, April, and May.
- The TSC tested and offered suggestions to help refine the new tool throughout the first half of the year.

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 Technology Support Center runs a provisioning process once every day.

Bomgar – UMKC-hosted remote support solution used by UMKC, MST, MU, and UMSL

- Performed appliance and instance upgrades as necessary.

Desktop Support

Academic Support

School of Computing and Engineering (SCE)

Information Services worked with the School of Computing and Engineering's IT Ops Committee Chair throughout the semester to ensure we were effectively communicating IT changes and address the needs of faculty, staff and students. These meetings also give us an opportunity to discuss new projects and IT changes. 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 include.

- Worked extensively with SCE and EON Reality to assist with the configuration of a new Virtual Reality Computer Lab and Showroom. The computer lab consists of 21 high performance computers with dual monitors and specialized software to meet the needs of this program.
- Relocated the SCE computer lab in FH 463 to 458, including site design, moving computers and other equipment, updating security systems, and updating internal and external reference materials, as well as managing high level communications regarding the project.
- Worked with CFM to ensure the lab environments were maintained at an optimal level.
- Assisted with upgrading cameras in several computer lab sites.
- Prepped computer labs for planned power outages related to construction of new building.
- 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.
- 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 43,750 print jobs were printed in the SCE computer labs located in rooms 364, 458, 460, 462, and 464, totaling over 317,380 pages.
- 1,222 individuals used the general-use student computer labs during this time period:

Departmental Labs	Individuals
SCE 364	468
SCE 458	367
SCE 460	655
SCE 462	817
SCE 464	736

College of Arts and Sciences (CAS)

Over the last 6-month period Information Services worked with the College of Arts and Sciences to support their technology needs and assist with many projects.

One of the larger projects was the support of the Caruso research group which includes over 60 people, ranging from full time employees to guests whose members utilize over 80 desktops and laptops. We worked with the group to identify, procure, and configure many software applications specific to their group's needs. Each person is also given Exchange and Box accounts, which we manage from the creation of those accounts at the beginning of their association with UMKC to deprovisioning their accounts when they leave. Each guest account is also manually added to SecureAuth, ensuring their data is secured behind two-factor authentication.

Several computer labs were revamped as well. In many of these labs not only did the workstations get replaced but also software was updated and new images deployed.

- Architecture and Urban Planning, 9 new Dell workstations
- Fine Arts 104, 21 new high-end iMac workstations
- Geosciences, 30 new Dell workstations
- Communication Studies, 20 new high-end iMac workstations



Many of the other accomplishments over the last period are listed below.

- A new Operations Committee Chair, Beth Vonnahme was identified in 2019.
- This summer Arts and Sciences was able purchase out of cycle Workstation Replacement computers. The purchases were done in 3 phases and totaled 82 computers.
- IS installed 7 new non-standard Dell Precision Workstation Research Computers for the Center for Economic Information.
- Worked with Geosciences to support ArcGIS Pro's new named licensing model and configure their labs.
- Decommissioned the Language Resource Center Lab. Repurposed usable computing equipment and surplus equipment that was past its useful life.
- Cherry Hall network switches were replaced. All networked printers IP addresses had to be modified to work with the new configuration.
- Worked with each department to clean up old or outdated Exchange Distribution Lists.
- Supported Geosciences hosted Summer High School Conference.
- Coordinated several Windows 7 upgrades throughout the College
- Setup testing environment for Economic Qualifying Exams that take place every fall semester
- Worked with each department to update their Distribution Lists

University Libraries (UL)

Information services worked with the Library IT Ops Committee throughout the semester to discuss ongoing and new projects. Over the last 6 months a couple of the larger projects that were completed included:

- Worked with library staff on procedures, budget, and staffing necessary to match operations in the second-floor computer lab to the library's new hours.
- Worked with library staff on scheduling procedures for Student Assistant staff and options for scheduling software.
- Merged EZ Proxy resources with the School of Law to reduce duplication of services.

School of Education (SoE)

- Installed numerous WRP workstations throughout the Spring
- Provided additional training to SoE faculty and staff on how to use Box to store financial documentation for SOE.
- Worked with SOE Faculty and Staff to identify, procure, and configure many software applications.

School of Biological and Chemical Sciences (SBC)

Over the last 6 months IS worked with the School of Biological Sciences and Chemistry to support their merger. As part of this change IS started providing first and second tier technical support for Chemistry. IS absorbed this additional support without any additional staff.

- Performed inventory of all computing equipment in Chemistry
- Assisted with project to clean up and re-organize N: drive for the merger of Biology and Chemistry.
- Setup new general use computing lab with Dell All-in-One workstations.
- Consulted, procured, and assisted with the setup of a new research "Fly Lab". This included a high-end workstation, 12 video cameras, and multiple pieces of specialized software.
- Performed many Windows 7 to Windows 10 Upgrades
- Presented IT Topics at the Biology Boot Camp
- Setup new Grad Student Lounge using existing equipment to meet student needs.
- Worked to create and update many room reservations.



Bloch School of Management

While our partnership with the School of Management has been in place for a couple years we still meet with their IT Ops Committee on monthly basis. 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.
- Assisted with the technology requirements to support Bloch's new Professional MBA program which consists of multiple methods of reaching, both in person and online. This was expanded to include additional demos and training over the last 6 months.
- Provided technical support for 38 events over the first half of the year, including the Entrepreneur of the Year conference. This is a very large event, hosted at Bloch Executive Hall, with over 250 participants.
- Supported student printing needs in the BHH 005 computer classroom by keeping supplies on hand and printers ready for use. Over 525 print jobs were printed in BHH 005, totaling almost 5,610 pages.
- 240 individuals used the BHH 005 computer classroom during this time period.
- Removed all computing equipment in Madison location.



The School of Law

Support Services regularly meets with the Law School to ensure service needs are being met and to stay updated on current technology needs within the Law School. There were several key projects that IS and Law collaborated on, including:



- Merged EZ Proxy resources with the School of Law to reduce duplication of services.
- Started the process of automating the student, instructor and class import for Exam 360. Exam 360 is the testing software used by the Law Students to take exams.
- Started the process of using Shibboleth for students to log in to Exam360 using their UMKC Username instead of having a separate password for the exam-taking software.
- Held meetings and completed the plans to upgrade the Arthur H. Stoup Courtroom. The technology is outdated and when finished with the update will be a state of the art digital Classroom.
- The Law School video recording system, Mediasite, was migrated from a 4 server campus hosted system to the vendor-hosted cloud version. It is used for recording various classes, live streaming Continuing Legal Education, and various other events.

School of Nursing and Health Sciences 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. As new projects come up this allows us to provide guidance and technical resources to ensure their goals are met. Below are some of the projects IS was involved in.

- Performed on site visits to Brick City to upgrade multiple computers to Windows 7 to Windows 10. Five new workstations were deployed and general cleanup was performed.
- Worked with Nursing to procure virtual cadaver.
- Supported the INXPO Virtual Conference

- Supported ExamSoft for the School of Pharmacy
- Provided IT support and procurement services for The Collaborative (formally known as ATTC).

Conservatory

- Procured and configured multiple end printers and 3d printers
- Performed 20 computer/office moves within Grant Hall and the Performing Arts Center

KCUR

IS continues to support KCUR and their growing staff. Over the last 6 months we have supported multiple membership drives ensuring these critical events are running smoothly.

IS assisted and supported the launch of KWJC, a new radio station that is expected to go live in April.

IS has also worked closely with KCUR and other groups to overhaul their streaming solution and provide a redundant solution to ensure maximum uptime for their listeners. IS is also working to provide redundant network streams to further reduce the chance of downtime.

Supported the Radioactive Gala on June 14th, which was an important event for KCUR.

Administrative Affairs

- Assisted with ProRoos setup of multiple workstations and printing for student workers.
- Assisted with HR computer moves in the Admin Center
- Created and distributed flyers for the Residence Hall move in days

Campus Wide - Enterprise Support

AirWatch

Leveraged our Mobile Device Management solution, AirWatch to manage numerous mobile devices across the campus. This tool is valuable for increasing efficiencies when managing mobile devices as well as protecting University data. As part of these efforts we upgraded AirWatch to version 9.7 to take advantage of the new version of iOS.



IS also completed a mobile device project for HR, which are used to help facilitate their search committees process.



SCCM

Continue to use Microsoft's SCCM as our primary asset management tool and our preferred method of software installation. Specifically, over the last 6 months we have used SCCM to install **18,164** pieces of software across campus. **956** of these were initiated via our Software Deployment webpage by IS technicians and IT liaisons. We also imaged **18** lab computers using the Operating System Deployment functionality of SCCM.



Universal Image

Updated Windows 10 Universal Image to support current desktop and laptop standards. This also included updated software and security patches.

Creation of a new PCI compliant image based on Windows 10 1809 Long Term Services Branch.

Creation of a new beta image of Windows 10 1903, which will receive continued testing with University applications over the next period.

License Servers

Updated **25** individual license servers with updated daemons and/or license files. IS also built a new license server as part of a migration plan off of Server 2018 R2. This is done to ensure systems remain secure and we are able to provide the latest features to Faculty, Staff, and Students.

Website/Reports

Performed regular website updates and maintenance, including the creation of Adobe FAQ.

Many reports were updated and created during this period, including software licensing, Remote Labs, and Budget/lifecycle planning.



Lab Packaging

Over the last 6 months, considerable time was spent updating all of the software applications used in the computer labs. Over 150 applications were updated, packaged with SCCM, and tested to ensure compatibility. This ensures that Faculty and Students have the latest versions of software.

Software

Adobe Creative Cloud

Support Services worked with UM System and Adobe to renew our Adobe ELTA license agreement. This was a long and complicated process that directly impacts a large portion of Faculty and Staff that utilize this software. As part of the new agreement there were many changes put in place by Adobe that we had to account for, the most noticeable being the shift from computer-based licensing to named user licensing. Some of the technical changes required to support this new process include:



- Creation of AD groups and the synchronization to Adobe's Sync Server
- Creation of new SCCM and JAMF packages to deploy this software over the network
- Revamped renewal process to account for changes in Adobe products

In the next 6 months we'll complete up the annual renewals and perform upgrades for roughly 1,000 Adobe installations across campus. This will take advantage of the new named user licensing and upgrade to the 2019 version of Creative Cloud.

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.



Software Renewals

Created a new process and web application/database to help facilitate the renewal of software. This enables Fiscal Officers across campus to view and renew select software online.

Zoom Migration

IS performed a campus-wide migration from WebEx to Zoom. This included multiple rounds of communication and back end planning. In addition, the WebEx client was removed from campus computers.

Microsoft Home Use Program

Updated support documentation to support Microsoft's new Home Use Program. The new program is subscription based and provides 1TB of OneDrive storage for personal use.

Support Services Projects

Police Department

IS worked with the Police Department, MO State Highway Patrol, and vendors to migrate to a new method to lookup license plates.

Counseling, Health and Testing

IS worked with CHTC and vendor to upgrade a key server and associated workstations.

Research Computing Project

IS reached out to researchers across campus to determine how we could better support their IT needs and what gaps currently existing. As a result of these conversations, IS procured and installed 8 high end color laser printers to help meet researchers printing needs.

Worked with multiple research groups to identify and procure specialized computing and research equipment.

Online Learning

Revamped the Royall Hall 310 Testing Lab with 37 new Dell All-in-One Workstations.

Other Notable Activities

- 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 credit card purchases via Expense Reports on a regular 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 numerous vendor contacts, including manufacturers and re-sellers
- 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

IS Project Updates

Individual Project Updates – 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.*

- **P292 – Network Core Refresh** - This project replaced 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. This project was completed and closed during this 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 the overlapping approach make it unique. During this review period, we facilitated the ordering, testing, and installation of scanners at 8 dining registers and transitioned this project to the Provost’s Office as operational.
- **P332 – Ad Astra Cloud Hosting** - The project is to move Ad Astra from an onsite server to a cloud-hosted service and upgrade to the latest software version. This project was completed and closed during this review period.

Current Projects – Implementation Phase



IS progressed in implementing (28) IT/AV projects during this review period. The following projects were the most significant and time-consuming. *See Appendix “A” for individual project detail.*

- **P174 – SCE Educational and Research Center** - This is a project to build a new multi-story building addition to our existing Computer Science & Engineering building, Flarsheim Hall. The IT/AV scope includes building-wide network infrastructure, IT closets, a VR showroom and computer lab, a high-performance computing teaching data center and computer lab, a motion capture lab, and unmanned systems lab, and renewable energy lab and several smart classrooms and collaboration spaces, and building-wide digital signage, and a new CBORD access and surveillance system along with the conversion of existing Lenel systems to CBORD in Flarsheim Hall prior to construction. During this review period, IS worked to refine the design and to create a high-level estimate. During the next review period, IS will create a finalized estimate for the project.
- **P248 – Lenel to CBORD Transition** - This project is to replace the existing Lenel Card Assess system in 11 buildings with CBord Card Access. Buildings include 4747 Troost, Cherry Street Garage – Mail Room, Cherry Street Garage – Police, School of Education, Flarsheim Hall, General

Services Building, Hospital Hill Annex, Administrative Center, Building #71, Cherry Street Hall and Health Science Building. During this review period, we worked on setting flat component pricing for each component of card access, which will ultimately drive unit costs once we shift to that model. CFM partnered with the CBORD office to develop a detailed transition estimate to move all buildings to CBORD and individual CFM estimates for each building. During this review period, we worked with all Lenel owners to identify which systems would be converted to CBORD and/or decommissioned and began scheduling conversion for summer and fall 2019.

- **P273 – Office 365** – This project is led by UM System and will integrate current AD into O365 functions. Users will then have access to all files and servers will live in the cloud. The base requirement is that we can authenticate against current user names, meaning AD is the authoritative user name and password. During this review period, this project became active, communications planning began and we completed the method for compliance scrutiny.
- **P304 – Academic Works** - This project involves and implementation of AcademicWorks Scholarship Management and Donor Reporting Platform for both Enrollment Management and the UMKC Foundation. AcademicWorks serves as a catalyst to improve student access to scholarships, enhance cross-functional visibility throughout the process, and revolutionize donor reporting. This platform allows colleges and universities to house information on all scholarships and scholarship recipients while allowing all users to have real-time access to the information needed to streamline the scholarship and donor reporting process. During this review period, we kicked off the project for the Stewardship Management team, began Phase II for the Awards Management Team, negotiated with the vendor to procure a module add-on at no cost, and completed sync of the Awards Management and Stewardship Management data and began implementing Phase II of the Awards Management go live for all academic units with a targeted date of October 2019.
- **P305 – AD Consolidation** - This project 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. Finally, this project will include technical setup necessary to prepare for the remaining projects. During this review period, we migrated all accounts across the four campuses to the umsystem.edu domain as a necessary step to roll out Office 365 in Fall 2019.
- **P336 – AchieveIT** – This project includes the UM System mandate for all campus partners participation and documentation of the progress of the Strategic Plan over the course of a 19-year period (2018-2028). These strategic plans will be tracked in the AchieveIT software. The plan consists of five pillars to be managed by pillar committees. In addition to committee members, each pillar will include a project manager (PM). The PM will be the point of contact between UMKC and System regarding AchieveIT. The PM will also update the metrics as indicated and ensure that all other data input in a timely manner. It is recommended that each chair enlist his/her Executive Assistant or similar role, to act as the Pillar Coordinator. This person will provide administrative support to the committee; note-taking, scheduling, data

entry, etc. This person will work closely with the PM and will also be responsible for entering pillar goals, strategies and tactics updates. During this review period, we attended vendor training and plan overview at UM System's Office of the President in Columbia. We also coordinated with the Chancellor's and Provost's Chiefs-of-Staff and the President's Office to formalize metrics and frequency of updates.

- **P346 – AC Data Center Cooling System** – This project is to alleviate temperature control issues at the Data Center located in the Academic Center of the UMKC Campus. The air conditioning units in the Administrative Center Data Center are approaching their maximum age and are beginning to fail. This project will see Information Services, CFM, and InSite engineering teams develop an immediate, temporary solution, and, once that is in place, will develop and implement a permanent cooling replacement solution. During this review period, IS approved moving forward with the engineering design, purchase, and installation of Spot Coolers and began the design process and installation of a temporary solution.

Current Projects – Development Phase



IS has made good progress working with units to plan (4) IT/AV projects during this review period. The following projects were the most significant and time-consuming. See Appendix "A" for individual project detail.

- **P300 – Oak Place Water Damage** - This is a project to remove and replace IT Networking & Telecommunications equipment so renovations/repairs can be made to the water damaged Oak Place apartments. Scope included removing all in-room access points from students' rooms, demoing and removing all equipment in IT closets, then reinstalling all the same after renovations are finalized. During this review period, we began meeting with CFM and the hired contractors and designed and finalized the IS estimate for IFS and Networking.
- **P318 – School of Pharmacy Video Distance Classrooms Upgrade** - This project involves the redesign and update of current video classrooms to reduce overall operating costs while maintaining current functionality and support levels. During this review period, presented a high-level estimate to the client and worked on a possible timeline. The next review period we plan to refine the estimate and create a budget.
- **P293 – ILE Classroom Upgrades FY19 IS Funded** - As part of our continual process of keeping the highest quality student experience, IS plans to upgrade 6 ILE rooms in FY19 to HD widescreen digital video systems with enhanced audio processing, web conferencing, and wireless collaboration features. During this review period, we ordered equipment to complete the project and partnered with campus facilities to install infrastructure for the systems.

Technology Management Services

TMS Support - Client Experience

During this review period, TMS and Network Operations activated to resolve 489 reported client issues. Each resolved issue resulted in the client receiving a survey about their experience to complete. Below is the aggregate data.

- **Overall Satisfaction was 92.59%**
 - 27 Promoter survey responses
 - ~6% of all Clients responded

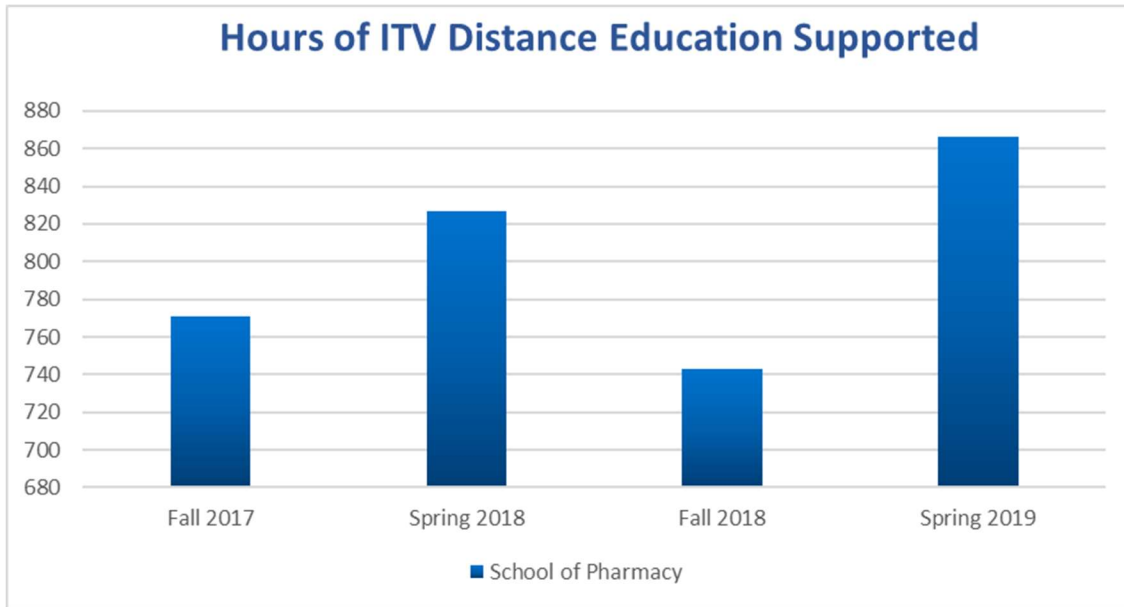


ILE Classrooms, Conferencing, Distance Ed, and On-Demand Video

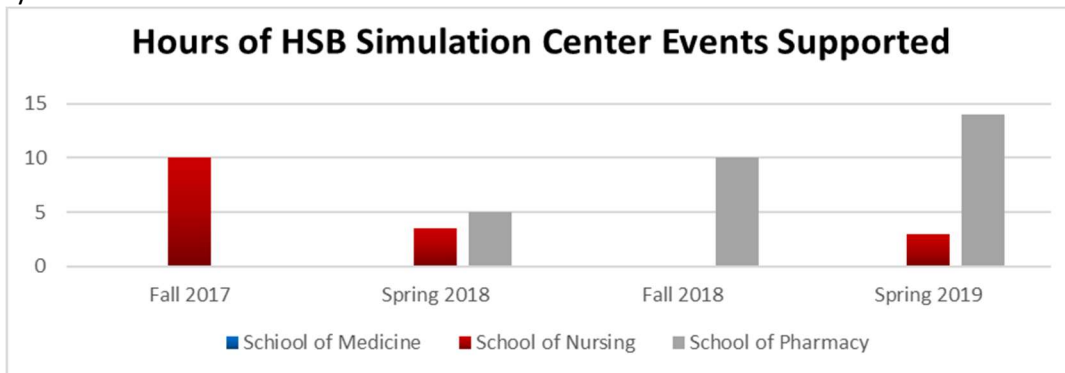


Information Services continued to support the hardware and software necessary to facilitate classes onsite as well as online (synchronously and asynchronously) while maintaining efficient issue resolution times, minimizing downtime and the subsequent impact on students, faculty, and staff. Highlights are outlined below.

- 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.
- 798 new streaming media entries (videos, images and audio clips), were added to Kaltura by faculty and/or students.
- 866 hours of ITV distance learning was supported during this review period. The chart below tracks support over the last two years.



- During this review period, TMS provided support for 17 hours of recorded HSB Simulation Center events. The chart below tracks support since the Assessment Lab over the past two years.



Building Network Infrastructure



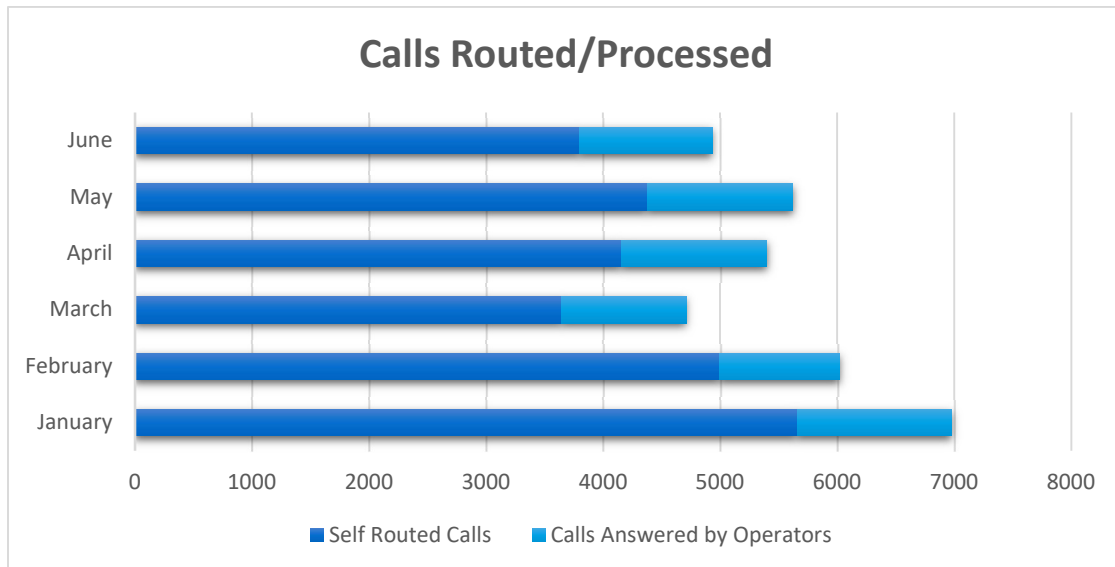
IS made significant progress on ongoing infrastructure upgrade initiatives while supporting phone and data related add, move and change requests, a large number of buried cable marking requests, and support tickets. The highlights are summarized below. *See Appendix "B" for a 10-year snapshot of building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

- Began planning for planned infrastructure upgrades to the 5th floor of the Biology Building and the Swinney Recreation Center.
- Infrastructure Services staff attended over 50 hours of training.
- Completed 311 adds, moves and changes in voice jacks, data jacks, and phones.
- Marked University buried cable plant locations as required by Missouri Law for One Call services 375 times.

UMKC Operators



The UMKC Operator number (ext. 1000) handled 33,665 phone calls during this review period. Of those ~33.7K calls, users were able to self-route approximately 79% of the calls using our automated call routing tree. 21% of the calls required human interaction from campus operators.



UMKC Building Security Committee



The UMKC Building Security Committee is comprised of representatives from IT, Student Affairs, Police and CFM focused on developing campus security standards, ensuring campus wide involvement on security issues/requests and developing recommendations to UMKC senior leadership on the same. See the following projects/initiatives for this period.

CBORD Upgrade from Odyssey to Gold

- Scope: Investigate the advantages of upgrading from our current system, CBORD Odyssey, to CBORD Gold.
- Summary of Accomplishments: Coordinated with IS and OneCard office and provided a recommendation of upgrading our card access system due to the benefits of upgrading, such as instant real-time scanning and the fact that the last upgrade was performed in 2008.
- Completion: In Progress (targeted August 2019)

Lenel to CBORD Transition

- Scope: Replace existing Lenel Card Access, Alarms and Surveillance Systems with CBORD System and decommission Lenel System. Lenel systems are end of life and run on outdated software which has to be upgraded by Jan 2020. Most new buildings have been brought online with the new CBORD security system and it doesn't make sense to invest in Lenel going forward. The

goal is to migrate the 10+ existing Lenel buildings over to CBORD and decommission the Lenel system in Sept of 19

- Summary of Accomplishments: Inventoried existing Lenel systems that needed to be migrated to CBORD. Identified migration and ongoing related unit costs. Identified unit and admin funding for the transition, scheduled migration and are in implementation now.
- Completion: In Progress (November 2019)

IS Lab Cameras Upgrades

- Scope: Develop a new design and install cameras in IS Labs in order to replace end of life Lenel & Netbotz cameras and provide better quality surveillance. The initial design completed in 2016 but funded was not available.
- Summary of Accomplishments: Redesigned existing IS Lab cameras in 2019 with newer, better quality cameras for increased security in IS Labs.
- Completion: Expected August 2019

Mass Communication Tool for Campus Visitors/Vendors (Rave SMS Opt-in)

- Scope: Investigate a mechanism to alert campus visitors and surrounding community members of events or emergencies occurring on or around campus.
- Summary of Accomplishments: The Security Committee approved and implemented a trial of the Rave SMS Opt-in product. This was provided to MCOM for a potential trial run (i.e. graduation). MCOM requires at least a one-month lead-time for planning and implementation.
- Completion: Pilot In progress

Camera Install/Maintenance/Support Service Shift

- Scope: Need to identify a single service owner for all campus camera support as various departments are supporting this effort with no clear point of contact.
- Summary of Accomplishments: Committee decided that IS will own all camera support moving forward and Infrastructure representative was added to the committee and began attending monthly meetings.
- Completion: February 2018

Alertus Campus Communication

- Scope: Investigate an option for campus communication when there is no cell phone functionality.
- Summary of Accomplishments: Determined this wall-mounted IP alerting device provides audible and visual notifications such as fire alarms, PA announcements, etc. There are several variations of this and would need more information on potential funding.
- Completion: Unknown – actively investigating this along with other possible solutions for the

Network Architecture

No activity reported.

Information Access

Database Server Design, Implementation & Administration:

- Administration and support of all central campus Oracle servers
 - Streamlined Oracle Enterprise Manager Cloud Control monitoring text and email alert notifications for server outages to DBA staff.
- Administration and support of all central campus MS SQL servers
 - Migrated several critical campus databases from version 2008 to version 2016
- Administration and support all central campus MySQL servers
- Administration and support of all central campus FileMaker servers
 - Worked with Research Services to upgrade their critical lab application to the latest version of FileMaker
- Administration and support of the central campus secured external facing Oracle server for third party vendor data collaboration
 - Continual support for Civitas to enable required access to campus resources
- UMKC Center for Economic Insight (CEI) Health Care Foundation Grant
 - Worked with CEI team to implement the second phase (Year 2) goals establishing metadata and data warehouse for use in demonstrating the warehouse capabilities to new research institutions.
 - This grant allows UMKC CEI to be the curator and cultivator of significant numbers of private and public data sets currently owned individually by several 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
 - Assisted in the successful migration of Astra Schedule to the Astra managed cloud servers
- Administration and support of all CHI/HealthFacts and RedCap database servers
 - Loaded the latest HealthFacts 2018 data set (over 4TB) to CHI Oracle server for cutting edge research projects
- Administration and support of all School of Dentistry Axiom and additional database servers.
- 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
 - Worked with CBORD support on the migration and update to Oracle 12c
- 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 Spring and Summer semester SCE classes

Software Design and Development:

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

1. ALEKS
2. Blackboard Request System
3. Blackboard Snapshot/Data Feed
4. Box Account Provisioning & Deprovisioning
5. Business Travel Request
6. Canvas Data Feed
7. Canvas Request System
8. Cashiers Fee Estimator
9. Cashiers Student Kiosk
10. Civitas Illume
11. Commencement
12. Database Tracker
13. Distribution List Management
14. Diversity Free Event Registration
15. Retiree Exchange Mailbox Form
16. Exit Exams
17. Exam Scheduler
18. Faculty Staff Lookup
19. Financial Aid - Pell Grant Enforcement Refresh
20. HIPAA Exam
21. HLC Accreditation Site
22. IS Change Management & Outages
23. IS Labs Shift Tracker System
24. Kasey Kudos
25. LACH – LMS Access Checker
26. Leepfrog Catalog Navigator Data Feed
27. MNL QR code scanner
28. OSI Appointment Scheduler
29. Provost Policy Library
30. Property Registration Website
31. RooEval
32. RooRequest (Chancellor Appearance Request)
33. Roowriter
34. SBS Points Calculator
35. SEARCH & SUROP
36. SGS iPHD Tracker
37. Starfish Connect
38. Studio Abroad/Terra Dotta
39. UMKC Attendance
40. UMKC Libraries websites

41. UM Research Resources
42. UMKC Polls
43. UMKC QR
44. WordPress Request Management
45. Zabbix Monitoring

UM System IT Consolidation:

- An Information Access representative serves as the chair for the Applications & Development committee.
- Provided campus representation on the following working groups:
 - UMS IT Integrations working group
 - UMS IT Custom Applications working group

Software Administration:

- Served as technical contact for the CourseLeaf Catalog software
- WordPress management, setup and administration.
- Trumba Calendar management, setup and administration.
- CVENT 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: 461
- Total surveys scanned: 1

Exam Scans by School

- College of Arts and Sciences 212
- Henry W. Bloch School of Management 125
- Conservatory of Music and Dance 4
- School of Education 2
- School of Law 16
- School of Biological Sciences 96
- School of Nursing 6
- **Total Exams Scanned: 461**

Security

No updates this period.

Academic Enhancement

PROFESSIONAL DEVELOPMENT

- UVA Drone training
- NAB
- Siggragph

CONSERVATORY

- Record guess speaker Matteo Magarotto
- Spring Opera 2 nights
- Jazz at the Folly
- Conservatory final concert at Kauffman

GRADUATE STUDIES

- 3-minute thesis video

SCHOOL OF EDUCATION

- Union Station Single cam event coverage / Livestreaming
- IUE video footage -Kendra Holliday
- IUE Video-Hannah VanAusdal
- IUE Video footage-Katie Bruns
- IUE Video Footage-Harrison Neal
- IUE Video-Irvin Parga
- SOE Early Childhood Awareness
- IUE Video Footage-Susana Elizarraraz

FaCET

- 4-Record 2-4 speakers graduate development program
- FaCET spring conference

PROVOST'S OFFICE

- 4-Academic Council, Chairs and Directors Monthly Meeting event coverage
- Student Success Module Presentation

ATHLETICS

- Athletics department update video

DIVERSITY AND INCLUSION

- Martin Luther King Jr. Lecture Keynote
- Chavez Lecture
- Women of Color Conference

INTERNATIONAL STUDENT AMBASSADORS

- 2019 Culture Night

BLOCH SCHOOL

- Guest speaker Professors Williams Course
- First Wednesdays, Feb, March, April, May
- Tenth Annual Case Competition program

CHANCELLOR'S OFFICE

- A Special Invitation from the Chancellor
- Spring Commencement

MCOMM

- Orientation Leaders - thank you video
- Pride breakfast video
- Caring for Our Communities

SWINNEY REC CENTER

- Swinney Seniors

SUPPLEMENTAL INSTRUCTION

- Record Dr. Yoder Lecture

UMKC ONLINE

- Orientation video for online students

LINDA HALL LIBRARY

- Record announcements to recipients of scholarships

SCHOOL OF DENTISTRY

- Dental Procedures Video
- White Coat ceremony

KC SCHOLARS

- Record announcements to recipients of scholarships

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, providing assistance and technical support for campus IT Liaisons, as well as supporting research computing needs.

Server Virtualization

- Upgraded vSphere primary cluster hosts to ESXi 6.5 U3
- Provisioned approximately 12 new virtual servers

Storage/SAN/Backup

- Upgraded firmware on Nimble
- Upgraded CommVault deduplication database to allow for quicker performance of weekly full backups

Miscellaneous

- Remedied and closed 550+ support tickets. Ticket completion times continue to be held low, and customer surveys show very high ratings
- All Windows WordPress instances migrated to Linux for uniformity, performance, and security
- Multiple server OS (Windows and Linux) and application upgrades including AIMS, CBORD, Cadence, Synopsys, Titanium, TutorTrac, TMA, Redcap, Bitbucket, RooBox, Confluence, and JIRA
- Shibbolized multiple websites and new services allowing single sign-on
- Continued migration of Microsoft Windows Server 2008/2008R2 systems scheduled to go end-of-life in January 2020 to a more modern version of Windows (85% complete)
- Worked on many aspects of the AD Consolidation Project including testing application compatibility with users spanning domains
- Simple Linux Enterprise Deployment System (SLEDS) put into production for Linux desktop imaging including support for Ubuntu and CentOS
- Facilitated several HPC basic and advanced training sessions with MU RCSS and UMKC research groups
- Expanded capabilities of the Linux developer shared environment (Sirius) to provide MySQL command-line tools
- Developed framework to upload data to AWS S3 buckets on a schedule
- Performed HealthFacts storage provisioning and raw data load for latest version, in conjunction with the Center for Health Insights (CHI)
- Assumed responsibility for Biology and Chemistry NMR Linux workstations, performed security and OS release upgrades including migration from RedHat to CentOS
- Upgraded Bomgar virtual appliance to new Virtual Machine and upgraded/migrated all 5 sites to 19.1.5
 - UMKC
 - UMSL
 - MS&T

- Columbia
 - UMKC Dental
- Integrated Linux workstation/server login and startup/shutdown tracking with Users and Computers Activity Report
- 2 staff attended MU Cyberinfrastructure Day
- Deployed Omeka-S web application for University Libraries
- Implemented new user storage quota on the Tux cluster to help control space usage
- Upgraded ColdFusion servers to ColdFusion 2016

Appendix A

Individual Project Updates – Completed Projects

P292 – Network Core Refresh

This project replaced 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. This project was completed and closed during this 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 the overlapping approach make it unique. During this review period, we facilitated the ordering, testing, and installation of scanners at 8 dining registers and transitioned this project to the Provost's Office as operational.

P319 – SRC Sound System Upgrade

The project is upgrading the sound system on the SRC courts. During this review period, the project was completed and then closed. The project was completed during this period and the client's 90-day warrant period begun.

P332 – Ad Astra Cloud Hosting

The project is to move Ad Astra from an onsite server to a cloud-hosted service and upgrade to the latest software version. This project was completed and closed during this review period.

P333 – Child and Family Law Clinic Conference Room

The project is adding a conference/collaboration space to Law Child and Family Services Clinic Office (Rm: 1-522). During this review period, the project was completed and the client was trained.

P338 – KC Sourcelink 4747 Troost Rm114

This is a project to add a Unified Communications/Presenter Space to 4747 Troost Rm: 114. During this review period, the equipment was installed and the client was trained. The project was then completed and closed.

Individual Project Updates – Implementation Phase

P174 – SCE Educational and Research Center

This is a project to build a new multi-story building addition to our existing Computer Science & Engineering building, Flarsheim Hall. The IT/AV scope includes building-wide network infrastructure, IT closets, a VR showroom and computer lab, a high-performance computing teaching data center and computer lab, a motion capture lab, and unmanned systems lab, and renewable energy lab and several smart classrooms and collaboration spaces, and building-wide digital signage, and a new CBORD access and surveillance system along with the conversion of existing Lenel systems to CBORD in Flarsheim Hall prior to construction. During this review period, IS worked to refine the design and to create a high-level estimate. During the next review period, IS will create a finalized estimate for the project.

P205 – SU401 Wall Plate Upgrades

At the request of Student Affairs, IS is proposing technology upgrades to Student Union 401 that will overhaul the video and control system and adjustments to the audio section. The upgrades will include new projectors, a video switcher and wall plates. During this review period, IS finalized functionality of the space and trained the client, the project was then closed.

P220 – Data Center Switch Refresh (DSR)

This project will upgrade the existing Administrative Center and Newcomb Hall data center networks. The new networks will utilize a “spine and leaf” design allowing us to purchase the needed number of interfaces while allowing for easy expansion for the future. The new network equipment will greatly increase the number of available 10 GB copper and fiber interfaces and support 40 GB & 100 GB interfaces where needed. The new “spine” switches will be geographically separated across the two data centers. This equipment will also allow us to implement a software-defined network (SDN) features as needed in the future. The switches have been purchased and were installed during this review period and we are currently cutting over to this new equipment.

P248 – Lenel to CBORD Transition

This project is to replace the existing Lenel Card Assess system in 11 buildings with CBORD Card Access. Buildings include 4747 Troost, Cherry Street Garage – Mail Room, Cherry Street Garage – Police, School of Education, Flarsheim Hall, General Services Building, Hospital Hill Annex, Administrative Center, Building #71, Cherry Street Hall and Health Science Building. During this review period, we worked on setting flat component pricing for each component of card access, which will ultimately drive unit costs once we shift to that model. CFM partnered with the CBORD office to develop a detailed transition estimate to move all buildings to CBORD and individual CFM estimates for each building. During this review period, we worked with all Lenel owners to identify which systems would be converted to CBORD and/or decommissioned and began scheduling conversion for summer and fall 2019.

P251 – IS Lab Upgrades

This is a project to develop lab-specific designs and associated costs for converting all (14) IS computer lab environments from the Netbotz surveillance system, which is end of line, to the CBORD NICE platform, which is the current campus standard. During this review period, we redesigned the lab spaces and consolidated the number of cameras needed, ordered the camera equipment, and ordered the camera licenses necessary for these labs.

P273 – Office 365

UM System is to integrate current AD into O365 functions. Users will then have access to all files and servers will live in the cloud. The base requirement is that we can authenticate against current user names, meaning AD is the authoritative user name and password. During this review period, this project became active, communications planning began and we completed the method for compliance scrutiny.

P284- CourseLeaf CLSS

CourseLeaf 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. During this review period, we completed a module setup and formed a pilot group that began testing the system. This pilot group will continue to test in the fall with a targeted go-live in October 2019.

P289 – 600MHz Microphone Replacement

The FCC auctioned off their 600 MHz frequency band to cellular companies to use for wireless communications. Wireless Microphone systems on campus that use that band have to change no later than July 13th, 2020, to prevent interference in ILE spaces. This project is to develop a plan to replace all wireless classroom microphone systems that transmit on the 600MHz frequency by July 13th, 2020 or as needed after. During this review period some replacement hardware was ordered. It plans to replace impacted systems as interference surfaces.

P293 – ILE Classroom Upgrades FY19 IS Funded

As part of our continual process of keeping the highest quality student experience, IS plans to upgrade 6 ILE rooms in FY19 to HD widescreen digital video systems with enhanced audio processing, web conferencing, and wireless collaboration features. During this review period, we ordered equipment to complete the project and partnered with campus facilities to install infrastructure for the systems.

P304 – Academic Works

AcademicWorks Scholarship Management and Donor Reporting Platform serves as a catalyst to improve student access to scholarships, enhance cross-functional visibility throughout the process, and revolutionize donor reporting. This platform allows colleges and universities to house information on all scholarships and scholarship recipients while allowing all users to have real-time access to the

information needed to streamline the scholarship and donor reporting process. During this review period, we kicked off the project for the Stewardship Management team, began Phase II for the Awards Management Team, negotiated with the vendor to procure a module add-on at no cost, and completed sync of the Awards Management and Stewardship Management data and began implementing Phase II of the Awards Management go live for all academic units with a targeted date of October 2019.

P305 – AD Consolidation

This project 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. Finally, this project will include technical setup necessary to prepare for the remaining projects. During this review period, we migrated all accounts across the four campuses to the umsystem.edu domain as a necessary step to roll out Office 365 in fall 2019.

P311 - Dental School Camera Upgrades

This project will replace and upgrade approximately 23 old antiquated security cameras at the Dental School to work in the new Cbord/NICE security system. During this review period, replacement hardware was quoted, approved by the client and ordered.

P324 – UPS Battery Replacement FY19

This project will replace failing/end-of-life batteries and UPS's as needed in IT rooms around campus as well as some of the larger building UPS's where needed. During this review period, we began working on bids and plans for 3 different building UPS locations.

P325 – Pierson Auditorium Projector Upgrade

This is a project to upgrade the projectors in Pierson Auditorium as well as replace the user interface. During this review period, we completed the user interface upgrade for the Auditorium. The next review period will see the client operate the system to verify expected functionality.

P328 – Stoup Courtroom Upgrade

The project is upgrading the technology equipment in the Stoup Courtroom. During this review period, we finalized a design and ordered equipment. In the next review period, we plan to install the equipment and complete the project.

P331 – CEI HEF Grant (Year 2)

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) for a second year. The scope of this grant involves developing a large-scale database 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 by 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). During this review period, we worked on the Year 2 deliverables by completing setup of a Remote Desktop Server (RDS) that will be used by researchers to access the KC Health CORE data, and a new DBA was hired to work primarily on this project.

P335 – AC Visix Room Signage

IS is setting up the AC Conference Center as a test case to see if this product will work well to roll out campus-wide. We will install 8-10 Visix room signage signs that will pull data from Ad Astra and Outlook scheduling. These screen/displays for room signage are much less expensive, cost a few hundred dollars, compared to using an iPad or some other vendors' solution that can run over a thousand dollars per screen. During this review period, pilot software/hardware was ordered, configured for campus use, and installed. We are currently mounting the room signage screens and plan to pilot this solution for future consideration of expansion.

P336 – AchieveIT

UM System has mandated that all campus partners author strategic plans for 2018-2028. These strategic plans will be tracked in the AchieveIT software. The plan consists of five pillars to be managed by pillar committees. In addition to committee members, each pillar will include a project manager (PM). The PM will be the point of contact between UMKC and System regarding AchieveIT. The PM will also update the metrics as indicated and ensure that all other data input in a timely manner. It is recommended that each chair enlist his/her Executive Assistant or similar role, to act as the Pillar Coordinator. This person will provide administrative support to the committee; note-taking, scheduling, data entry, etc. This person will work closely with the PM and will also be responsible for entering pillar goals, strategies and tactics updates. During this review period, we attended vendor training and plan overview at UM System's Office of the President in Columbia. We also coordinated with the Chancellor's and Provost's Chiefs-of-Staff and the President's Office to formalize metrics and frequency of updates.

P337 – OCR Brainware

UM System has purchased a new product, Brainware OCR, for all four campuses. It will initially be used for transcripts. This product will be supported centrally by the Perceptive Content (ImageNow) team. During the review period, we began testing this software, trouble-shooting issues and preparing for deployment.

P340 – Project Online

UMS-IT is in the process of deploying O365 for faculty/staff. O365 offers Project Online at an annual cost of \$2,335 for all four campuses, versus the \$31,000 DoIT pays for PPM Pro today. In addition to cost savings, Project Online offers integration with O365's Kanban-like Planner tool and extra-cost PowerBI Pro. This project includes implementation for the four-campus IT departments to replace

Planview PPM Pro. During this review period, we ordered licenses, secured a vendor for implementation, Project Made Easy, and began customizing the tool for deployment with a go-live date scheduled for fall 2019.

P341 – Civitas Integration with Canvas

This project includes working with Civitas, and UMKC's departments of Academic Affairs, Information Access, UMKC Online, and Registration and Records to integrate Civitas with the Canvas LMS system. Civitas Illume is a powerful application that provides a compelling view of a given institution's historical and predictive student flow. Once integrated, Illume will apply state-of-the-art data science to identify useful insights through compelling visualizations. The intended outcome for UMKC will be the ability to try and test the impact of initiatives and grant programs. During this review period, we coordinated with Civitas to move the project into the modeling phase, set up Google accounts, tested modeling issues and prepared for LMS features and Powerful Predictors to be turned on and in Canvas in fall 2019.

P342 – CBORD Upgrade to Gold

This is a project to upgrade the existing CBORD ID Works card production system, which is 12 years old, with Datacard TruCredential and Datacard SD460 card printers. New features and enhancements include TruCredential, which provides flexibility to capture student images and date anywhere on campus using remote stations, tablets, or smartphones. This software also enables us to issue ID cards with smart chips, magnetic stripe, radio frequency or other machine-readable technologies. During this review period, we planned and implemented a new server setup and converted servers from CS Odyssey to CS Gold.

P345 - UMKC PD Mules

The UMKC PD is currently accessing the REJIS system to lookup license plates via a VPN connection between UMKC/KCPD. The KCPD is no longer supporting REJIS for local agencies and directly connecting to REJIS is too costly an option for UMKC. We will replace the existing system, REJIS, with a new system called MULES, connected to the Missouri Highway Patrol. During this review period, IS coordinated and facilitated MULES installation and completed the deployment in partnership with the Missouri Highway Patrol.

P346 – AC Data Center Cooling System

The air conditioning units in the Administrative Center Data Center are approaching their maximum age and are beginning to fail. This project will see Information Services, CFM, and InSite engineering teams develop an immediate, temporary solution, and, once that is in place, will develop and implement a permanent cooling replacement solution. During this review period, IS approved moving forward with the engineering design, purchase, and installation of Spot Coolers and began the design process and installation of a temporary solution.

P347 – Berkley Center Display Addition

This project is adding a display and computer to the lobby of the Berkley Center. During this review period, IS created a final design and ordered equipment for the project. For the next review period, IS plans to install the equipment and complete the project.

P348 – Building Switch Refresh

This project involves replacing old network switches in IT rooms around campus. Five buildings will be upgraded during FY20. This keeps the network up to current standards, provides greater bandwidth and more reliable end-user network connections. During this review period, we ascertained a formal quote and began the UM system procurement approval process.

P349 – Scofield 307 Conference Room Upgrade

This project is adding a conference space to the Deans Conference Room in Scofield 307. During this review period, IS created a final design and ordered equipment for the project. For the next review period, IS plans to install the equipment and complete the project.

P351 – Oak Hall Renovation

CFM is renovating the Oak Residence Hall to repair water damage and eliminate a mold issue. IS was tasked with removing network gear to allow the work to be completed and then re-install the equipment when the work was finished. During this review period, IS was able to remove all affected network gear. All the work should be completed during the next review period.

P357 – HR Conference Room Addition

This project is adding a conference/collaboration space for the HR department in AC 229C. During this review period, an initial design and estimate were created by IS and approved by the HR department. The project is planned to be completed in the next review period.

Individual Project Updates – Development Phase

P300 – Oak Place Water Damage

This is a project to remove and replace IT Networking & Telecommunications equipment so renovations/repairs can be made to the water damaged Oak Place apartments. Scope included removing all in-room access points from students' rooms, demoing and removing all equipment in IT closets, then reinstalling all the same after renovations are finalized. During this review period, we began meeting with CFM and the hired contractors and designed and finalized the IS estimate for IFS and Networking.

P318 – School of Pharmacy Video Distance Classrooms Upgrade

The project is the redesign and update of current video classrooms to reduce overall operating costs while maintaining current functionality and support levels. During this review period, presented a high-level estimate to the client and worked on a possible timeline. The next review period we plan to refine the estimate and create a budget.

P353 – SRC Scoreboard Addition

The Athletics department is adding (4) new scoreboards to the main basketball court in Swinney Recreation Center. During this review period, we have had several meetings to discuss a finalized design. The next review period, we plan to move forward with the project with approval.

P354 – School of Med 3rd Floor Addition

This project is adding ILE classroom-type technology to a newly renovated space on the 3rd floor of SOM. During this review period, we facilitated a scoping meeting and started the design. During the next review period we plan to get project approval and project completion.

Appendix B

Building Cable Plant Infrastructure Upgrades

