

The University of Kansas Medical Center

2016 Annual Report of Information Resources at the University of Kansas Medical Center

Optimize, Align, and Transform

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Welcome to Information Resources' first annual report! In 2016, we faced significant challenges and opportunities, and we experienced much change and improvement as a result. This report captures our major projects and accomplishments, and it presents our plans for an even better year in 2017. Our report is organized around three central themes: Optimize, Align, and Transform.

Under the leadership of Steffani Webb, Vice Chancellor for Administration, we developed our first IR Strategic Plan: Partners in Progress to guide our work and priorities (Appendix A: IR Strategy Map). Based on that plan, Information Security (IS) was formed into a separate department, apart from Information Resources, and John Godfrey was promoted to Chief Information Security Officer (CISO) to lead this new department. At the same time, Dave Antonacci was promoted to Chief Information Officer (CIO) to lead Information Resources.

Optimize

In KUMC's current environment of tight financial resources and continually increasing demand for information technology (Green, 2016), organizational optimization was an important focus in 2016. Significant financial resources are required to maintain the existing IT infrastructure and deliver technical services. Renewal of all large hardware and software agreements were renegotiated with guidance from our Gartner consultants, resulting in savings of almost \$100K. In 2017, we plan to continue this cost reduction strategy, and we will further reduce IT expenses through system rationalization—identifying technology systems that can be eliminated or replaced with newer systems better meeting our current and future needs. Also, we will be evaluating and improving our key business processes, and helping our staff work more efficiently and effectively.

Align

To further improve information technology at KUMC, we began meeting with our key customers. As we better understand your needs and priorities, we can better align our work and priorities. We began regular meetings with major academic areas: School of Health Professions, School of Medicine (both Medical School and Graduate Programs), School of Nursing, and Continuing Education. Additionally, we began regular meetings with our research areas: Cancer Center, Research Institute, and Faculty Assembly Research Committee. These meetings reflect our strategic focus on "partnerships." The meetings are a two-way exchange where faculty and researchers also learn about trends and developments in information technology that intersect teaching and research and that may spark innovation around learning and discovery. In 2017, we plan to expand our meetings to include business areas that also rely on our technology services.

Transform

Although optimizing and aligning are critical activities to ensure we are working hard on things that matter, information technology also has a unique and critical role in transforming KUMC (Grajek, 2016). Many campus initiatives require information technology. However, some paper-based processes still exist at KUMC. While some processes have been translated to electronic equivalents (e.g. pdf files and email), digitalization can transform our processes by adding workflow automation, artificial intelligence, and analytics. Similarly, digital workplaces are transforming where and how we work with

each other. Smart medical and health devices are another exciting area. In 2017, Information Resources will begin offering presentations and workshops on emerging information technologies and explore connections to medicine and healthcare (Gartner, 2016).

In the remainder of this report, you will learn more about the challenges and opportunities within each area of IR, as well as projects and activities to meet these challenges and actualize opportunities. Major accomplishments include our network upgrade, storage expansion, and intranet, as well as much preparation for our new Health Education Building (HEB). Moreover, we will identify our current challenges and opportunities, and we will describe our plans for 2017.

In closing, I would like to thank you for your continued support. I truly appreciate your understanding and guidance as we optimize and align information technology at KUMC, so we can help prepare our great university for its great future.

David M. Antonacci, PhD
Chief Information Officer
Associate Vice Chancellor of Information Resources

Enterprise Information Technology Architecture (EITA)

Director: Steve Selaya (sselaya@kumc.edu)

Associate Director: DeAnna Villarreal (dvillarr@kumc.edu)

EITA provides core infrastructure capabilities required by all campus information technology. This includes networking, servers, storage, telecommunications, identity and network account management, and database/data services.

Telecommunications and Networking

The Telecommunications and Networking teams spent a large portion of the year upgrading KUMC's aging network core, distribution, and access infrastructure. This included running new optic fiber, preparing telecom closets, and installing more than 380 network switches across 36 buildings and external locations. Outside of replacing hardware, the other top accomplishment was establishing gigabit (that is, 1gb per second bandwidth) to the desktop as a common standard in every building.

Gartner estimates organizations experience a staggering 35% annual growth for network bandwidth and 50% for storage (Cappuccio, 2015), and KUMC is no exception. Meeting our growing campus network bandwidth and data storage needs are recurring challenges for our EITA group, and consequently, the university invested capital funds to upgrade our network and expand our storage in 2016.

Other items accomplished:

- Doubled Internet bandwidth to the campus from 1 to 2Gbps to meet our growing needs.
- Installed additional wireless access points throughout the campus to increase coverage and capacity.
- Participated in the design and planning for the Health Education Building and Parking Garage #5.
- Installed 7 new telecom gateways and more than 400 new telephones for the UKCC Community Cancer Center.
- Expanded and upgraded the Avaya SIP (Session Initiation Protocol) infrastructure. SIP is a cost effective solution for integrating and connecting our phone infrastructure with different systems (e.g., voicemail, Acano audio and video conferencing, and the Hospital Voalte system).
- Partnered with Facilities Management department, wiring and installing more than 100 security cameras.
- Replaced the Avaya Conferencing Bridge with an Acano voice and video bridge to reduce license cost, increase capacity, and allow employees to easily schedule conferences.

Server and Storage Infrastructure

One of the main items accomplished by the Server and Storage team was the replacement of our aging Storage Area Network (SAN) infrastructure with Network Attached Storage (NAS). We now have an expandable 1 Petabyte EMC Isilon NAS installed on our main KUMC campus along with a redundant system for disaster recovery and backup located at the CRC/Fairway data center.

Additional accomplishments:

- Migrated all departmental shares (e.g., S: Drive) from the existing SAN to the new NAS.
- Replaced our aging VMWare virtual host servers with a high performance and scalable Nutanix hyperconverged solution.
- Implemented a new usage charge back model that better aligns with cloud-based pricing for storage and virtual servers.
- Retired the remaining SUN/Oracle Solaris servers, thereby reducing the operating system and hardware complexity in our data center.

Identity and Data Services

Towards the end of the 2016 calendar year, we combined the Database Administration/Data Services team with the Identity and Account Management team into one group. Both teams rely on each other for data going into and out of their systems and benefit working together as one team.

Other accomplishments:

- Played a key role in the joint KU Health System/KUMC Rave alerting project. This included a process enabling all KUMC and Hospital employees to enroll in the Rave system from a single website, as well as provide a daily feed to the hosted Rave system with the required information needed to alert faculty, staff, and students.
- Worked with Human Resources and the PeopleSoft Administrative teams to change our employee account creation processes, so employee accounts are created once they are available in the PeopleSoft system, rather than requiring requestors to enter personal information for new employees within an account request form.
- Implemented a process to automatically identify active students on a daily basis, moving away from a manual process that required running a 20th day report twice a year to determine inactive student accounts.
- Integrated DataCentral (a hybrid central data repository used to integrate systems) into almost 50 different applications, helping reduce data duplication and speeding application development time.
- Drafted a Data Administration policy.
- Automated KUMC separations with the Badge office.
- Automated Oracle Quarterly updates with Enterprise Manager, which significantly reduced patching time.

Outlook for 2017

- We will replace the required network hardware limiting our Internet bandwidth needs as we see more services move to either cloud or hosted systems external to our network. This will include adding redundancy to our Internet connection.
- Telecommunications and Networking will install and configure required components prior to the opening of the HEB and Parking Garage #5. This includes the wiring all of Parking Garage #5 for telecommunications, networking, and security cameras.
- Telecommunications and Networking will complete testing of softphones, giving employees options outside of physical phones for their telecommunications needs.

- Home/Personal folders will be moved to the Isilon NAS, expanding the space available to KUMC employees. We also will look at mapping employee “My Documents” folders to the NAS, allowing backup and recovery of data currently stored locally.
- KUMC and the KU Health System will be migrating authentication to a shared domain, reducing the complexity for those who log into both KUMC and KUHS workstations.
- Server and Storage Infrastructure will be working with a solutions provider to determine current services which may be candidates for migrating to cloud services.
- Identity and Data services will work with PeopleSoft Administration to automate the KUMC employee network account lifecycle.
- Work will continue to document and automate processes in the Identity and Data services area.

Administrative Systems

Director: Greg Smith (gsmith@kumc.edu)

Administrative Systems provides core system capabilities for the university to administer personnel and the resources they utilize. This includes Human Capital Management, Financial Resources Management, Customer Services Management, and their related sub-systems. Substantial activities in these systems include on-boarding and off-boarding, payroll, time and labor, absence, benefits, budget, purchasing and procurement, accounts payable, billing and accounts receivable, expensing, asset management, grant management, general ledger, workflows, control and reporting, system security, and service requests and management.

Making the shift to cloud software applications and “Software-as-a-Service” (SaaS) were major trends for organizations of all sizes in 2016. KUMC participated in the shift by investing in several SaaS services. Administrative Systems spent much of 2016 supporting the launches of cutting-edge cloud software applications produced by ServiceNow, iLab, PeopleAdmin, Life Technologies, and Accenture. With more organizations going the cloud route with software being purchased with SaaS contracts, IT is shifting from being the sole infrastructure owner to a trusted advisor, partner, consultant, and integrator to the organizations we serve (Boudreau, 2016; McAfee, 2011).

DevOps (a clipped compound of “DEvelopment” and “IT OPerations”) is a term used to refer to a set of practices that emphasize the collaboration and communication of both software developers and IT operations professionals (Agile Admin, n.d.).

Another innovative advancement in Administrative Systems was the deeper move into DevOps for its PeopleSoft Financials and ServiceNow systems, so building, testing, implementing, and administering software can happen rapidly, frequently, and be supported more reliably.

Key Activity Metrics for 2016

While we undertook the aforementioned major projects, Administrative Systems continued to be very active with many projects, both large and small, as well as daily operational activities. In 2016, we:

- Completed 45 projects including:
 - A second budget load implementation addressing certain budgetary items for the School of Medicine.
 - Configuration and integration of three new billing interfaces from iLab for the Cancer Center, Clinical Science Translational Unit, and Hoglund Brain Imaging Center.
 - Research Institute Interdepartmental Billing (IDB) configuration and integration to enable a second business unit (RINST) to use the IDB system to recognize revenue and update budgets.
 - Clinical Integration to allow certain KUPI functions to be absorbed by the hospital and other entities.
- Resolved 534 issues.
- Finished 16 system upgrades.

Outlook for 2017

As innovative and busy as 2016 turned out to be, 2017 looks to be as remarkable for KUMC with major projects coming from multiple business areas. A number of them are:

- PeopleSoft Financials PeopleTools upgrade will lay the foundation for connected software platforms of nVision reporting and the Market Center to be upgraded.
- PeopleSoft Financials process improvements in response to the KUMED audit.
- PeopleSoft Financials process improvements in response to the Research Institute audit.
- PeopleSoft Financials future options including considerations for upgrading the PeopleSoft Financials System to the current software release or implementing a SaaS vendor solution.
- PeopleSoft HCM (HR & Payroll System) integration with Identity Management will serve as an automated exchange of identity data.
- PeopleSoft HCM process improvements in the Additional Pay process will provide a better way forward by separating the payments into a payroll off-cycle dedicated to compensation for things like work above and beyond an employees' regular duties as well as other activities.
- PeopleSoft HCM Resident Hire process improvements will enable resident personnel to be hired into PeopleSoft sooner enabling the provisioning of network accounts and email earlier in the fiscal year preparation process.
- ServiceNow upgrade to the current release will enable the capability for exciting process improvements in IT Operations, Service Management Reporting, Project Management, and Asset Management.
- ServiceNow Change Management System will launch in the spring enabling the LANDesk Change Control System to be decommissioned.
- ServiceNow Project Management System evaluation as the central repository for IR projects and related information.

Teaching & Learning Technologies (TLT)

Director: Phil Wilhauk (pwilhauk@kumc.edu)

TLT supports the technologies which enrich and transform the teaching and learning experience at KUMC, both online and in the classroom. Services include scheduling, classroom support, media production, testing services, system administration, and instructional design. Supported systems include Blackboard, Adobe Connect, TLC, ExamSoft, and TechSmith Relay.

Among the prominent trends in educational technology is the shift to next generation tools and more flexible instructional spaces which facilitate active learning and promote collaboration (Kelly, 2017). To this end, TLT spent much of 2016 planning the design and support of our new cutting-edge Health Education Building, which will open later this year. This building will feature many innovations such as wireless high-definition presentation systems in every learning space, expanded options for small group collaboration, and greatly enhanced support for “Bring Your Own Device” (BYOD) including tablets and other mobile devices.

Innovation extended to our online systems. Another broad trend in higher education is the move to cloud-based services (Schaffhauser, 2016). In 2016, TLT began work with Blackboard to migrate our academic LMS to a SaaS deployment model. When this project is complete in May 2017, students and faculty will experience greatly reduced downtime for updates and a continuous improvement delivery model giving KUMC access to the latest features sooner.

2016 also saw the completion of significant improvements to existing spaces on campus. The Beller Conference Center underwent a major upgrade including control systems, much brighter projectors, and new videoconference and recording equipment. Battenfeld Auditorium received a much-anticipated update including new carpet and paint, a refinished stage and balcony lounge, and more. Testing Services installed new personal storage spaces for students in the Computerized Testing Center (CTC) and replaced 61 workstations with new models. Still other classrooms received upgraded audio-visual equipment and new furniture.



TLT also continued to explore emerging technology trends such as 3D Printing and Virtual or Augmented Reality including our work piloting the Microsoft HoloLens (at right above).

Key Activity Metrics for 2016

While we undertook several major projects, TLT continued to be very busy with daily operational activities. In 2016, we:

- Scheduled 21,433 events in TLT-Managed spaces
- Provided Media Tech support for 1,269 events
- Supported 281 electronic exams in the CTC and processed 354 paper exams
- Delivered 1,076 online courses in Blackboard
- Successfully processed 3,702 TechSmith Relay recordings

- Supported 7,260 meeting minutes in Adobe Connect sessions across 871 meeting rooms
- Delivered online compliance training to 8,120 individual users in TLC

Outlook for 2017

As busy as 2016 turned out to be, 2017 looks to be a historic year for KUMC. Foremost among the anticipated events will be the opening of the HEB this summer and the launch of the new ACE curriculum for the School of Medicine.

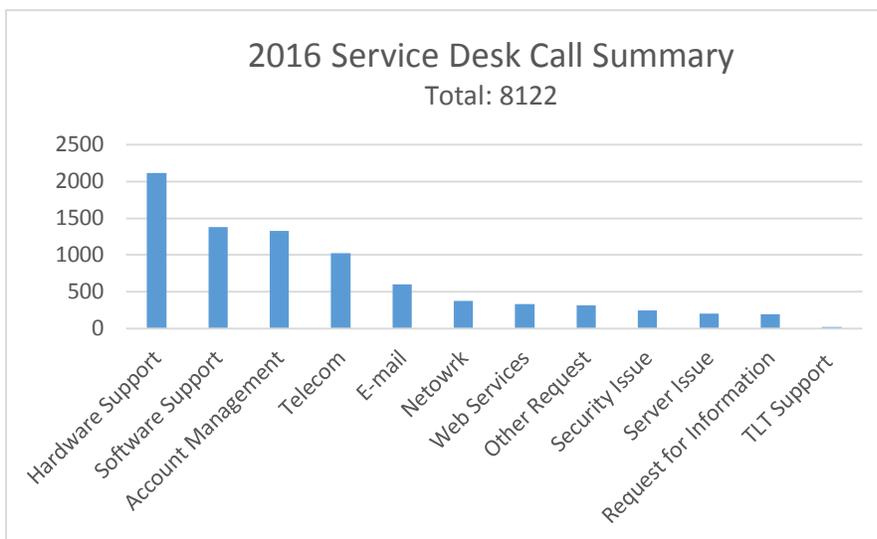
We expect the use of video to expand in 2017 along with the need for better ways of delivering videos to our students (Gibson & Burriel, 2016). Later in the year, TLT will open a new Content Development Studio in the HEB. This facility will offer both full-service and self-service options for faculty to create high-quality instructional video content using professional-grade equipment. To deliver this video content to students, TLT is exploring a new video content management system (VCMS) which will provide us with greatly improved analytics and better ways to target delivery of content to users. New lecture capture appliances in the larger rooms of the HEB will give users the ability to pre-schedule jobs and record content from multiple devices during a single recording.

Customer Support

Director: Elam O'Renck (eorenick@kumc.edu)

Delivering solutions via self-service tools and shortening incident resolution times were major priorities for Customer Support in 2016, as trending user expectations in IT are about reducing the number of steps users must follow to get help. Forbes recently noted that as tech-savvy millennials have entered the workforce and become major consumers of technology, they respond most favorably to service models that involve less wait time (Hyken, 2016). Moreover, self-service has become a major priority in IT customer care (Leggett, 2016), certainly in line with Gartner's prediction that 85% of customer interaction with IT by 2020 would be via self-service portals (Gartner, 2011).

Customer Support aimed to answer those needs in both the hardware and software support areas. To improve hardware repair turnaround, our technicians began earning HP certification to repair hardware



onsite and get quicker access to replacement parts. Likewise, to better support Apple products, in Q4 we began the rigorous application process to become an Apple Self Servicing entity.

We improved software support by acquiring or further exploiting our existing remote management tools. Microsoft SCCM for

Windows and Jamf Casper for macOS let us automate many of the tasks that used to make customers wait for an in-person visit by a technician. For instance, we now deliver software via the network, and in some cases, we empower customers to install it on their own, using the Software Center app in Windows or the Self Service app in macOS. The same remote management tools for both platforms also let technicians identify and fix many problems regardless of the customer's location on or off campus. We also began using SCCM's User State Migration Tool to let users retain their software customizations whenever they get a new PC.

Other important projects this year:

- Large-scale hardware rollouts:
 - Neis Lab – Replaced 25 computers used in simulations for clinical care and patient record management, and created a new software image for them to improve both security and user experience.
 - Computer Testing Center – Replaced 61 computers and updated the software image.
 - Dykes Library – Replaced all first- and second-floor computers, with the total number increasing to 60.

- SCCM Distribution Point additions – Created new distribution points to improve software delivery to remote locations: Salina, Project Eagle, and Insight Labs.
- Windows 10 – Began testing and developing standards for a Windows 10 configuration.
- Third-party software patching – In Q4 we began evaluating tools and processes to help keep most common third-party software apps up-to-date on both Windows and macOS systems.

Operational changes/improvements:

- Service Desk staffing – Fieldwork is now assigned on a rotational basis, so all Service Desk technicians maintain familiarity with customer work environments.
- Systems Integration Team – Increased the personnel responsible for software image development and other enterprise management tasks from one to a manager-led team of three (total). As a result, we have made faster progress developing our remote management capabilities.

Outlook for 2017

- Health Education Building:
 - Neis Lab – Computers will be relocated to new space on the third floor.
 - ZEIL Lab – New computer hardware to be purchased and installed will be loaded with custom Windows 10 based images.
- Windows 10 will become the default operating system for all new HP computers.
- Microsoft Office 2016 for Windows will become the default productivity suite in both the Windows 7 and Windows 10 software images.
- Third-party software patching for the commonest non-Microsoft or Apple apps will be automated to improve app security and reliability.
- HP printer standardization will be implemented via a selection of supported models available in the Insight portal in Market Center.
- PaperCut print management is planned for student printers in Dykes Library. This implementation will serve as a pilot case for replacing the existing iPrint system currently used for network printers elsewhere on campus.

Project Management Office (PMO)

Director: Shannon Hennessy, retiring (shennessy@kumc.edu), Becca Grube (rgrube2@kumc.edu)

The Project Management Office (PMO) is a team of two Project Managers. The team primarily manages projects associated with Information Resources and/or technology.

In 2016, Information Resources created a strategic plan. One focus of the strategic plan was our customers as “Partners in Progress.” The PMO worked on several projects in 2016 that were foundational for KUMC and demonstrated adoption of the IR strategic goals:

- Assisting the faculty in completion of an update to the Faculty Handbook. Dr. Sandra Bergquist-Beringer was the champion of the Handbook.
- Implementing a KUMC version of RAVE gave the University and the Hospital a way to be more collaborative with emergency management. RAVE is a software product that provides for text messaging and email communication during an emergency. Kelly Dunn was the champion of the RAVE implementation.
- Creating a support model for the Health Education Building was a priority for all of the schools with Information Resources and Information Security. Drs. Giulia Bonaminio (SOM), Cynthia Teel (SON), and Jeff Radel (SHP) were the champions for the schools.

Key Activity Metrics for 2016

- 42 projects
- 20 projects completed or canceled
- 16 projects remain in progress

Outlook for 2017

In 2017, the PMO team will be working to implement a central repository for IR projects. This is the first step to improve communications with our customers regarding project status. This is also a needed element to begin a governance process to ensure IR is working on projects most impactful to KUMC.

Leadership of the PMO team will change with Shannon Hennessy’s retirement on April 7, 2017. Her replacement, Rebecca Grube, has been hired and started February 6. This overlap time allows Shannon to transition not only her projects, but as much institutional knowledge to her replacement as possible.

A coming trend in project management is a closer integration with business goals. This trend could see strategic planning partnering more closely with project management to better ensure goals are achieved. The Project Management Institute’s Talent Triangle (2017) reinforces the importance of technical project management, leadership, and strategic and business management skills for project managers of the future.

A challenge for the PMO in 2017 will be to find the appropriate project sponsors for those projects that would be of benefit to the institution, and where responsibility is decentralized and/or distributed. A key example of this is Electronic Signature. Many staff and faculty have a need for it, but no one at KUMC has responsibility for Electronic Signatures.

A goal for the new PMO Director in 2017 will be sharing project management concepts with others at KUMC, both those with and without the project manager title. Many staff and faculty at KUMC could be even more successful with the use of project management principles.

Internet Development (IDU)

Director: Jameson Watkins (jwatkins@kumc.edu)

Internet Development is responsible for the majority of custom application development on campus, which is primarily web-based. IDU also maintains the KUMC web presence, both the public site and intranet site, as well as collaboration tools like SharePoint and the document imaging system ImageNow.



A key trend in IT is a move from the concept of “portals” to “digital experience platforms” that provide a uniform foundation of engagement and interaction for a variety of audiences (Murphy & Phifer, 2016). The Internet Development team launched the myKUMC intranet in June 2016, after 18 months of work to move and reorganize key content from the public KUMC web site to the cloud-based SharePoint Online platform. In the six months in operation, we have rewritten and moved 1,200 web pages, 800 documents, 220 forms, and 400 news items.

The intranet hosts internally focused information in a private, secure site. It also serves as the campus hub for news, events, initiatives, leadership messages, and legislative updates, as well as offers a personalized dashboard of pay and benefits. Most importantly, our intranet is positioned to grow with our university as we transition to a digital-first mentality.

Key Activity Metrics for 2016

2016 www.kumc.edu

- 7,277,542 external page views
- 11,068,042 total view (external and internal)

Document Imaging

- 2,833,881 documents
- 939 users
- 40 workflows
- 301 scripts (automation or process improvement)

SharePoint (on premise)

- 35% increase in content in past year
- 2,427 sites
- 245,397 documents, 312,506 document versions
- 204 workflows

OneDrive for Business (students only)

- 13 TB of files, a 55% increase in past year
- 944 active users

Application Development

- 39 projects completed
- 156 products worked on

Outlook for 2017

Looking forward to 2017 trends in application development, we see the following happening:

- Continuing to migrate portlets from the uPortal framework into the new SharePoint Online-based intranet, as well as content from our public web site. Learn the new SharePoint Add-In development methodology.
- Redesigning our public KUMC web site to emphasize marketing and recruitment over information.
- Finding a third-party solution for event management and credit card payment requests.
- Releasing our first mobile application with an eye toward working with researchers on several more ideas.
- Addressing prioritization issues with a charge-back model for projects that are not directly tied to institutional goals and priorities.

Dykes Health Sciences Library

Director: Jameson Watkins (jwatkins@kumc.edu)

The library is a shared resource across the University and the KU Health System that is responsible for a 24/7 facility, managing a \$2.1 million dollar electronic resource collection, providing research and education assistance, and other library services. We are a strategic institutional asset that develops and delivers new methods of creating and supporting knowledge resources. We enrich teaching and learning and fuel research at KUMC and beyond.

Academic libraries, and health science libraries in particular, are experiencing a radical shift from managing physical collections and study space to an emphasis on core library services that are accessed anywhere, anytime. While this trend has been happening for twenty plus years, a combination of new financial pressures and a premium placed on efficiently using campus space has brought it to a new height (NLM, 2016).

Dykes Library continues to be a national leader in information literacy and evidence-based education as a founding member of the New Literacies Alliance (NLA), with 5,000 education modules taken across nine institutions in 2016. The program won the Association of College & Research Libraries' Instructional Innovation Award for 2016.

Major Updates in 2016

- Completed deaccession of 85% of all print materials.
- Implemented Intota assessment tool to conduct cost analysis of collections based on usage.
- Distributed \$25,000 in Open Access funds to 23 researchers in FY2016 to publish in open access journals requiring author fees for accepted manuscripts. The fund heightens the visibility and accessibility of scholarship across our campus.
- Fulfilled 7,257 interlibrary loan requests.
- Published 17 articles and presentations in national journals and conferences.

Outlook for 2017

We see more emphasis placed on the library services that include research partnerships, instruction, and digital collections and less so on the more traditional model of library as a physical space. With the new Health Education Building becoming available in June, there is an opportunity to rethink what the library building's purpose is, while strengthening the marketing message about always-available electronic resources and our consulting role in education and research endeavors.

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Appendix A: IR Strategy Map

IR Department Strategy: *Partners in Progress*

BUSINESS STRATEGY	 	 	 	 																																																																
STRATEGIC OBJECTIVES	<ul style="list-style-type: none"> Develop and support a world-class workforce. Cultivate partnerships that fuel innovation. 	<ul style="list-style-type: none"> Provide network and secure storage options that meet customer needs. Create and maintain a secure IT environment. Provide flexible access to our infrastructure. 	<ul style="list-style-type: none"> Align to institutional mission, vision and goals to drive customer success. Provide leadership and guidance, in addition to technical direction and implementation support. Match delivery systems to customer needs and expectations. 	<ul style="list-style-type: none"> Use data and information to drive innovation and to improve performance. 																																																																
IT FOCUS	<ul style="list-style-type: none"> Colleagues Partnerships Collaboration 	<ul style="list-style-type: none"> Stability Capacity Security Mobility 	<ul style="list-style-type: none"> Service Catalog Custom Solutions Purchased Solutions Content Delivery 	<ul style="list-style-type: none"> Governance Classification Integration Integrity 																																																																
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METRICS	<ul style="list-style-type: none"> Customer satisfaction Employee engagement Staff turnover Training dollars/IR employee 	<ul style="list-style-type: none"> Security audit performance Available storage Access points/coverage HEB issues/complaints 	<ul style="list-style-type: none"> Revenue growth IR inclusion on grants Front-end consult v. back-end fixes Needs met w/ current solutions 	<ul style="list-style-type: none"> Report of activities supporting the strategic objectives 																																																																

Trends

- Increased security requirements, complexity, compliance, risk management
- Mobile applications / mobile-first strategies
- Hybrid IT environments: on-premise and cloud-based
- IT as a true service business
- Big data
- Data as a monetizable resource
- Critical role of IT in organization's strategy and success

Challenges & Risks

- Cybersecurity
- Talent acquisition and ramp-up
- Funding (changing availability)
- Demand and expectations for analytics
- IT enabling business, not driving it
- Rapid change
- Agility in meeting ever-changing customer needs/expectations
- Accurately understanding big data
- Shifting threat landscapes
- Talent lifecycle issues: competitive pay, acquisition, training, retention



**UNIVERSITY OF KANSAS
MEDICAL CENTER**

MISSION
To improve lives and communities
in Kansas and beyond
through innovation in education,
research and healthcare

VISION
To lead the nation
in caring, healing,
teaching and discovering

Information Resources

Partners in Progress

We bring our brand to life through daily interactions with our colleagues and customers by:

- ♦ **Being friendly and helpful**
- ♦ **Being present and engaged**
- ♦ **Being positive**
- ♦ **Demonstrating "I care"**
- ♦ **Sharing ownership**
- ♦ **Building relationships**
- ♦ **Thinking outside the box and inside the box, as appropriate**

We respect, value and support our colleagues and customers.