Information Technology
2019-2020 Annual Report
September 2020
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A LETTER FROM THE VICE PRESIDENT

I am pleased to provide this annual report from the Office of Information Technology for the 2019-2020 fiscal year. As we ventured into unchartered territory a few months ago, our IT departments have worked diligently to support students, faculty and staff by providing and supporting information technologies that have allowed us all to work, learn, teach and conduct research remotely. I have witnessed incredible dedication from our IT staff who continue to go above and beyond the call of duty, not hesitating to work on the frontlines when needed.

Not only have we marshalled our teams to meet critical needs during COVID-19, we have done so, like everyone else, during a financial crisis, with fewer people and less ability to invest in new capabilities. What sets IT apart is the increase in demand from our customers. When financial times get tough, our customers need more technology solutions, more automation and more data. Our IT departments across the System continue to be challenged, supporting ongoing operations with little elbow room to take on new projects, innovate or rationalize often duplicative services and applications we collectively support.

The value of IT is often on the ground in offices, classrooms, labs and other facilities, assisting our faculty, staff and students. Our core administrative systems, while critical to the institution, should not be our primary focus. When we pay attention to the needs of our students, faculty and staff, we gain an understanding of how to proactively meet their needs and the needs of the institution. Thus, the emphasis of this report is less on central, administrative computing and more on the IT departments that support all of our Universities - I have included objective information but also my opinions, providing highlights of accomplishments as well as challenges and opportunities.

Since little can be accomplished without information technologies, IT capabilities should be viewed as strategic assets and the IT organization as a strategic partner. Our job going forward is to ensure we live up to that billing – IT as a critical component that delivers value to our customers which in turn, supports the institution itself. Now is the time to re-envision and invest in IT. In order to warrant investment, IT needs to be organized and led in a manner that allows such investments to be fully and effectively utilized. I believe we are up to the challenge!

Beth Chancellor
UM Vice President for Information Technology
MU Chief Information Officer
OVERVIEW AND BACKGROUND

Information Technology (IT) services are provided across the University of Missouri (UM) by five IT departments, one at each University (S&T, MU/UM, UMKC, UMSL) and MU Health Care. This report provides information about the state of IT for all of our Universities, including MOREnet, but excludes MU Health Care.

IT services are broad and often complex with linkages and dependencies such that one service can impact multiple other services. As an example, if authentication services fail, a number of other tools and applications become inaccessible. To add to the complexity, our customers increasingly use services provided or managed by IT units on other campuses. These are a couple of reasons why standardization, consistency and sound operational processes are so important within and across our IT units.

Over time, the number of supported technologies has grown considerably with rare occurrences of service retirement. This is especially true in the area of software tools and applications (referred to from this point on as “applications”). Adding an application without retiring one, is the normal state of affairs. Why? Because a) each IT unit fields requests from their customers independently from the other IT units and b) requests for new applications come to us without enough time to rationalize them. Everything is “urgent” and, according to our customers, needs to be purchased and implemented quickly. The list of applications, home-grown, commercial on-premise and cloud-based, is quite long with overlap in functionality across many applications. This may be the single biggest opportunity for IT standardization and savings.

Appendix A provides a listing of the collective systems and services our IT units provide. The list does not represent each and every deliverable or component that goes into IT service delivery.
INFORMATION TECHNOLOGY BY THE NUMBERS

THE BUDGET

The FY21 centralized administrative systems budget (ASB) is $15.8 million while our Shared Services budget is $18.3 million. The ASB includes our enterprise resource management (ERP) applications (i.e., PeopleSoft HR, Student, Finance and Advancement) and associated applications and services. Shared Services include email, Box, a number of information security services, several recruitment and academic tools, identity management, mass notification, the intercampus network, iModules and more. These budgets also include infrastructure on which the applications run and personnel to manage and support them.

In addition to ASB and Shared Services, the IT units at each University have their own budgets to provide core IT and specialized services to their respective campuses. Overall, IT budgets have declined from FY18 to FY21 with the largest decline of 29% at UMKC. S&T and MU have seen 19% reductions and UMSL has seen a reduction of 10%. The UM Shared services budget has grown by 8% over the past 4 years, which is logical since more and more services are being added to the Shared Services program.

See Appendix B, Table 1.

Overall, IT budgets have declined from FY18 to FY21.

UMKC - 29% decline
MS&T - 19% decline
MU - 19% decline
UMSL - 10% decline
IT STAFFING AND SUPPORT TRENDS

IT staffing, in accordance with budget deficits, have also declined. UMSL has 29% fewer staff since FY17. S&T, MU/UM and UMKC have reduced staff by 21%, 8% and 16% respectively (Appendix B, Table 2).

While budgets and IT staff numbers are declining, the number of supported faculty, staff and students are not declining at the same rate. From 2017 to today, for all employees (benefit eligible, part-time and student employees), S&T has seen a 16% decrease in headcount, MU/UM employees levels have decreased by 10%, UMKC has seen an 9% decrease and UMSL has remained relatively flat.

See Appendix B, Table 3.

From the fall of 2019 to the fall of 2020, student FTEs show a slight decrease at most Universities with a slight increase at MU.

See Appendix B, Table 4.
DECENTRALIZED IT

Pockets of decentralized IT staff continue to exist at all Universities – in total, 36.75 full-time equivalent (FTE) employees in IT titles are still not reporting to their respective IT departments. In some cases, decentralized staff in IT titles are not actually performing IT work and need to be retitled. Other decentralized IT staff are being paid fully on grants and spend all of their time supporting research faculty. In the end, the Chief Information Officers (CIOs) need to bring all IT staff into their organizations in order to ensure compliance with IT policies, IT standards and especially with information security standards.

See Appendix B, Table 5 for details.

On average 4.84% of IT staff is decentralized.

<table>
<thead>
<tr>
<th>University</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>UMKC</td>
<td>16%</td>
</tr>
<tr>
<td>MS&amp;T</td>
<td>8%</td>
</tr>
<tr>
<td>MU</td>
<td>15%</td>
</tr>
<tr>
<td>UMSL</td>
<td>23%</td>
</tr>
<tr>
<td>UM</td>
<td>1%</td>
</tr>
</tbody>
</table>

IT SPEND

EDUCAUSE is a nonprofit association and the largest organization of its kind whose mission it is to advance higher education through information technologies. The EDUCAUSE Core Data Service (CDS) provides data that helps higher education institutions identify their statistical peers and shares information about technology solutions, benchmarks and other insights.

The EDUCAUSE CDS data shows, within their peer group, each of our Universities is either last or second from last in IT spending per employee FTE. For IT spending per student FTE, S&T and UMKC are ranked last, UMSL is ranked second from the last and MU is ranked third from the last. We are also close to the bottom of total spend as a percentage of institutional budget. See Appendix B, Table 6.

Participation in CDS surveys is voluntary. In the past, each of our campus IT offices have submitted their own data via the CDS survey. It will be important that we continue to participate in the CDS survey but also coordinate submissions to ensure data consistency and accuracy.
MISSOURI RESEARCH AND EDUCATION NETWORK (MOREnet)

In the 1990’s, the state of Missouri charted a course to provide funding for MOREnet to connect higher education institutions, public K-12 schools and public libraries to the Internet. Missouri was one of the first states in the country to fund a comprehensive, cost-effective, shared state-wide network.

Today, MOREnet, a business unit of the University of Missouri System, is both a data network as well as a human network, providing Internet connectivity, access to Internet2, technical services, training, resources and support to Missouri’s public sector entities. MOREnet’s members include 488 public and private K-12 schools, 57 public and independent higher education institutions, 121 public libraries that serve 3 million Missourians, 15 health care entities, 5 state and local government agencies and 18 non-profit organizations.

The MOREnet network has proven to be an efficient and cost-effective approach to meeting the growing bandwidth demands of its members, and creates significant cost savings not only for the consortium, but for Missouri taxpayers as well. MOREnet is completely member funded and has not received a direct appropriation from the State of Missouri for the past 10 years.

Organizations MOREnet Serves

- **K-12**: 488
- **Higher Education**: 57
- **Libraries**: 121
- **Government**: 5
- **Non-Profit**: 8
- **Health Care**: 15
ACCOMPLISHMENTS

This past spring, as our faculty, staff and students pivoted to online work, learning, teaching, and research, the response from our IT units was a critical part of that equation. A multitude of activities were initiated in support of this effort including installation of network infrastructure for drive-through testing, classroom modifications, development of online processes for telework arrangements, laptop and hotspot deployment, security and compliance reviews of symptom tracking apps, expansion of remote access and remote software services, as well as support for Zoom and Microsoft Teams.

MOREnet provided important services for their members in response to COVID-19. MOREnet staff created more than 200 new Zoom sub-accounts for member organizations and assigned more than 16,000 new Zoom accounts. MOREnet also partnered with the Missouri Telehealth Network to provide over 100 free Zoom accounts for telehealth purposes for qualifying health agencies and clinics. In addition, staff provided technical support and guidance to schools and libraries as they enabled greater remote network access and extended their wireless networks beyond their buildings and into their parking lots to support local community members.

Throughout FY20, in addition to COVID response, our IT units accomplished a number of important infrastructure and service improvements, namely active directory domain consolidation (the migration to umsystem.edu), multifactor authentication for email, and office productivity services, specifically, Microsoft 365 and Google Suite.

Many of our accomplishments have been due to cross-campus IT transformation teams that were formed in late 2018 to promote collaboration, standardization and operational effectiveness. The teams are comprised of IT experts from 5 domains; infrastructure, information security, application development, research and finance/administration. The most productive groups have been the Infrastructure, Applications Development and Information Security teams.

The accomplishments from those teams and other IT accomplishments are available in Appendix C.
A LOOK FORWARD

From a strategic perspective, in the coming months and years, IT will be focusing on several important projects including, improving system-wide IT governance, creating a timeline and project plan for our next generation ERP system (i.e., PeopleSoft replacement), moving more services to the cloud, designing and supporting the platforms needed for data management and analytics (support for Institutional Effectiveness), developing a cyberinfrastructure plan for research computing support, evaluating an enterprise-wide customer resource management (CRM) platform and managing reductions in on-campus infrastructure as a result of our new, remote work model that will likely continue into the future. These projects are in addition to any number of initiatives that will be introduced by HR, Finance and academic units.

As mentioned earlier, application rationalization is an area that needs to be tackled. As specific examples:

- At least 10 different event management applications
- At least 5 different applications are in use for social media management
- In the area of document management, at least 5 different solutions are in use
- For project management, 7 known applications are in use

While there may be niche functionality provided by a given application, it stands to reason that we don’t need such a broad variety of applications in each sector.

We also need to focus on a reliable IT funding structure. Currently, each University is called upon to pay for their allotted share of licensing and support, but this can be a barrier to moving to more efficient, effective and secure solutions. As an example, many of our vendor licensing processes are handled at the System level for all Universities. Examples include Microsoft, Google, Oracle, Dell and Cisco. When we negotiate with Microsoft for security enhancements, if one University can’t fund the enhancement, then we are handcuffed. This example is real – we are indeed facing this exact issue right now. Negotiating with each campus to fund their portion of a critical, core service is time consuming and unproductive. IT needs to make the cost/benefit case to leadership then, with their support, we should be able to move forward together.

There are additional opportunities to consolidate, expand shared services and distribute responsibilities across our Universities. Help desks, network monitoring, data centers, server management, cloud management, telecommunications and IT procurement and compliance are a few IT domains that are areas to investigate. We need to establish opportunities for any of our campus-based IT units to provide services to all. To accelerate this process, consideration needs to be given to the unification of all IT units across our
Universities with initial attention given to governance, financial models and budgeting. Different budgets and financial models for each of our IT units is a significant hurdle as noted previously.

Most IT systems and services are, or should be, homogenous across all campuses with an acknowledgement that some legitimate differences will exist. Consolidation of IT into a single organization does not mean that IT will be unable to support specialized services on a given campus. Nor does it mean that all services must be provided from Columbia. It does mean that an opportunity exists to make more, faster progress in standardization and in reducing the number of systems and applications that do the same thing, which should lead to better service and support and lower costs for everyone. Without consolidation, progress will still be made but at a slower pace.

Over the past several months, the CIOs have been working together to develop a new set of strategic objectives and goals. While that work is incomplete, we have written our mission and vision statements as well as the core tenets that will guide us.

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**MISSION AND VISION**

It is our responsibility to support the missions of all our Universities and the UM System through information technologies that advance learning, research and teaching.

It is our vision to be leveraged as a strategic asset, critical to the institution's success, using our collective capabilities to provide innovative information technologies across all campuses while helping to preserve the unique capabilities of each of our Universities.

**Our services will be delivered with a commitment to...**

- **Accessibility** - Ensure that IT products and services are available and usable by people with the widest range of abilities, within the widest range of circumstances
- **Availability** – Ensure the ability of users to access information or resources when needed
- **Integration** – Ensure the connection of systems, data, applications, APIs and devices across our infrastructure to enable and drive data-driven decision-making
- **Mobility** – Focus on providing mobile-friendly IT solutions for faculty, staff and students to enable them the flexibility to work and learn from anywhere, from as many devices as possible
- **Security** - Enable proper cybersecurity strategies and techniques that prevent unauthorized access to organizational assets such as computers, networks, and data.

- **Self-Service** – Ensure that appropriate IT products and services are intuitive and foster faculty, staff, and students’ ability to access information or complete routine tasks without assistance.

- **Usability** – Ensure that IT products and services provide needed features (utility) that are easy and intuitive to use.

- **Utilization** – Focus on obtaining the most value and return on investment from enterprise solutions.

**Our operational principles** will include a commitment to customer service, data-driven decisions, governance, transparency, and fiscal responsibility.

Across the board, our IT staff are extremely dedicated and committed to serving their Universities and their customers. They take pride in the work they do and work tirelessly to ensure systems are up and running. Just last week, the UM System held their (virtual) annual staff appreciation awards. During those awards, employees are recognized for anniversary milestones. For the combined 15, 20, 25, and 30-year award categories, seventeen (17) IT staff were recognized out of a total of twenty-nine (29) individuals. This demonstrates IT staff dedication and how they believe in our University.

In the end, IT will be stronger as a single unit allowing us to leverage all our collective talents and expertise across the System and we will be better positioned to serve the mission of our Universities.
Appendix A - Products and Services

Infrastructure
- Back-up
- Data center
- Database support services
- Local area network services
- Metrics, monitoring & automation
- Middleware
- PeopleSoft infrastructure support
- Servers & storage
- Systems monitoring
- Telecom services
- Wide-area networking

Communication & Collaboration
- Cable television
- Email & calendaring
- Instant Messaging/Chat
- Two-way radios
- Unified communications
- Voice over IP
- Voicemail
- Video/audio conferencing
- Video streaming
- Web-based collaboration
- Website hosting

Research Computing Support Services
- Aerial systems
- Client consulting
- Cloud computing support
- Device prototyping
- Embedded systems
- Graphical processing units (GPU)
- High performance computing (HPC)
- High throughput computing (HTC)
- Instrumentation prototyping and support
- Programming/Software development
- Research networking
- Research storage
- Research training & outreach
- Visualization & data analysis

Information Security & Identity
- Authentication
- Directory services
- eDiscovery
- Federated identity services
- Forensics
- Incident response
- Identity management
- Security assessments
- Systems security

Public Safety
- Emergency notification
- Emergency phones
- Security Cameras

Data Warehouse & Reporting
- Enterprise data warehouse
- Data Integration
- Reporting & analytics
- Reporting tool management

Academic Technologies
- Academic software
- Classroom technologies
- Computer labs
- Course websites
- Digital Repositories
- Faculty support
- Learning management systems
- Lecture capture
- Plagiarism prevention tools

Enterprise Applications
- Alumni info systems support
- eCommerce
- Electronic signature (DocuSign)
- Imaging & document management
- PeopleSoft
- Systems & data integration
- A number of academic applications are not listed here
- Client Services
- Account management
- Adaptive computing
- Client support
- Departmental computing
- File services (Box, One Drive, Google Drive, file servers)
- Help desk
- ID cards
- POS services
- Network & telecom adds/moves/changes
- Residence hall support
- Software sales

Administrative
- Application rationalization
- Finance & HR
- General administrative
- Procurement & compliance
- Policy & procedure
- Printing support
- Project management
- Software licensing
- Vendor management

IT Professional Services
- Application development
- Audio/Visual services
- Computer peripherals
- IT service management
- Office productivity and cloud services support (e.g., MS365)
- Research support
- Software deployment
- Special event support
- Technology consulting & compliance
- User support
- Website application development
- Workstation deployment & management
- Workstation security
## Appendix B - Supporting Data

### TABLE 1 - IT Budget by University

<table>
<thead>
<tr>
<th></th>
<th>FY18</th>
<th>FY19</th>
<th>FY20</th>
<th>FY21</th>
<th>% Change FY18 to FY21</th>
</tr>
</thead>
<tbody>
<tr>
<td>S&amp;T</td>
<td>$9,408,984.00</td>
<td>$9,875,072.00</td>
<td>$8,695,041.00</td>
<td>$7,624,401.00</td>
<td>-19%</td>
</tr>
<tr>
<td>MU</td>
<td>$49,395,566.00</td>
<td>$49,729,322.00</td>
<td>$50,104,057.00</td>
<td>$40,018,406.00</td>
<td>-19%</td>
</tr>
<tr>
<td>UMSL</td>
<td>$10,303,028.00</td>
<td>$10,052,704.00</td>
<td>$10,467,704.00</td>
<td>$9,237,936.00</td>
<td>-10%</td>
</tr>
<tr>
<td>UMKC</td>
<td>$8,630,961.00</td>
<td>$7,118,372.00</td>
<td>$8,156,421.00</td>
<td>$6,136,000.20</td>
<td>-29%</td>
</tr>
<tr>
<td>UM Shared Svcs</td>
<td>$16,970,933.00</td>
<td>$17,172,683.00</td>
<td>$17,146,769.00</td>
<td>$18,372,482.00</td>
<td>8%</td>
</tr>
</tbody>
</table>

Note: Some portions of the ASB and shared services expenses are included in each University’s IT budget making a portion of each budget duplicative.

### TABLE 2 - IT Staffing FTE trends (excluding student employees)

<table>
<thead>
<tr>
<th></th>
<th>FY17</th>
<th>FY18</th>
<th>FY19</th>
<th>FY20</th>
<th>FY21</th>
<th>% Change since FY17</th>
</tr>
</thead>
<tbody>
<tr>
<td>S&amp;T</td>
<td>95.0</td>
<td>94.0</td>
<td>83.0</td>
<td>107.0</td>
<td>75.0</td>
<td>-21%</td>
</tr>
<tr>
<td>MU</td>
<td>437.6</td>
<td>434.1</td>
<td>414.5</td>
<td>407.5</td>
<td>404.5</td>
<td>-8%</td>
</tr>
<tr>
<td>UMKC</td>
<td>110.4</td>
<td>111.6</td>
<td>95.4</td>
<td>91.2</td>
<td>93.0</td>
<td>-16%</td>
</tr>
<tr>
<td>UMSL</td>
<td>65.0</td>
<td>61.0</td>
<td>60.0</td>
<td>56.0</td>
<td>46.0</td>
<td>-29%</td>
</tr>
</tbody>
</table>

### TABLE 3 - Employee trends

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>% Change since FY17</th>
</tr>
</thead>
<tbody>
<tr>
<td>S&amp;T</td>
<td>3,516</td>
<td>3,496</td>
<td>3,430</td>
<td>2,946</td>
<td>-16.2%</td>
</tr>
<tr>
<td>MU</td>
<td>18,916</td>
<td>18,171</td>
<td>18,215</td>
<td>17,013</td>
<td>-10.1%</td>
</tr>
<tr>
<td>UMKC</td>
<td>5,058</td>
<td>4,741</td>
<td>4,947</td>
<td>4,613</td>
<td>-8.8%</td>
</tr>
<tr>
<td>UMSL</td>
<td>2,996</td>
<td>2,941</td>
<td>3,150</td>
<td>3,000</td>
<td>0.1%</td>
</tr>
</tbody>
</table>

*as of 09/03/20

### TABLE 4 - Student trends

**Student Enrollment (headcount)**

<table>
<thead>
<tr>
<th></th>
<th>Fall 2019</th>
<th>Fall 2020*</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>S&amp;T</td>
<td>7971</td>
<td>7531</td>
<td>-6%</td>
</tr>
<tr>
<td>MU</td>
<td>29,668</td>
<td>30,835</td>
<td>4%</td>
</tr>
<tr>
<td>UMKC</td>
<td>12,546</td>
<td>12,262</td>
<td>-2%</td>
</tr>
<tr>
<td>UMSL</td>
<td>9,794</td>
<td>9,523</td>
<td>-3%</td>
</tr>
</tbody>
</table>

*pre-census
### TABLE 5 - Decentralized IT Staff (Current)

<table>
<thead>
<tr>
<th>Decentralized IT staff</th>
<th>% of decentralized vs. centralized</th>
</tr>
</thead>
<tbody>
<tr>
<td>S&amp;T</td>
<td>8.54%</td>
</tr>
<tr>
<td>MU</td>
<td>15.47%</td>
</tr>
<tr>
<td>UMKC</td>
<td>16.77%</td>
</tr>
<tr>
<td>UMSL</td>
<td>23.33%</td>
</tr>
<tr>
<td>UM</td>
<td>1.88%</td>
</tr>
<tr>
<td>Total</td>
<td>4.84%</td>
</tr>
</tbody>
</table>

### TABLE 6 - EDUCAUSE CDS IT Spend

<table>
<thead>
<tr>
<th>OPERATIONAL PEERS – IT Spend Comparators - Educause 2019 Core Data Services</th>
<th>IT spending per employee FTE</th>
<th>IT spending per student FTE</th>
<th>IT spending as a % of institutional expenses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Missouri University of Science and Technology</td>
<td>6,521.01</td>
<td>1,175.79</td>
<td>0.04</td>
</tr>
<tr>
<td>Michigan Technological University</td>
<td>9,137.93</td>
<td>2,070.15</td>
<td>0.05</td>
</tr>
<tr>
<td>Rochester Institute of Technology</td>
<td>9,355.15</td>
<td>2,305.22</td>
<td>0.06</td>
</tr>
<tr>
<td>Stevens Institute of Technology</td>
<td>9,558.50</td>
<td>1,640.18</td>
<td>0.04</td>
</tr>
<tr>
<td>Colorado School of Mines</td>
<td>10,209.86</td>
<td>1,997.21</td>
<td>0.03</td>
</tr>
<tr>
<td>New Jersey Institute of Technology</td>
<td>11,863.63</td>
<td>2,029.60</td>
<td>0.04</td>
</tr>
<tr>
<td>University of Kansas</td>
<td>3,797.25</td>
<td>1,298.47</td>
<td>0.02</td>
</tr>
<tr>
<td><strong>University of Missouri - Columbia</strong></td>
<td><strong>4,105.29</strong></td>
<td><strong>1,441.70</strong></td>
<td><strong>0.02</strong></td>
</tr>
<tr>
<td>University of Oregon</td>
<td>5,185.92</td>
<td>1,181.95</td>
<td>0.03</td>
</tr>
<tr>
<td>The University of Iowa</td>
<td>5,223.17</td>
<td>1,896.14</td>
<td>0.02</td>
</tr>
<tr>
<td>University of Colorado Boulder</td>
<td>7,149.39</td>
<td>1,856.84</td>
<td>0.04</td>
</tr>
<tr>
<td>University of Virginia</td>
<td>5,992.09</td>
<td>2,499.26</td>
<td>0.02</td>
</tr>
<tr>
<td>Indiana University Bloomington</td>
<td>10,139.06</td>
<td>2,311.69</td>
<td>0.06</td>
</tr>
<tr>
<td>University of Louisville</td>
<td>2,792.84</td>
<td>1,023.48</td>
<td>0.02</td>
</tr>
<tr>
<td><strong>University of Missouri-Kansas City</strong></td>
<td><strong>3,446.10</strong></td>
<td><strong>808.92</strong></td>
<td><strong>0.02</strong></td>
</tr>
<tr>
<td>Wayne State University</td>
<td>4,227.90</td>
<td>1,136.79</td>
<td>0.03</td>
</tr>
<tr>
<td>University of Alabama, Birmingham</td>
<td>4,947.84</td>
<td>2,749.49</td>
<td>0.02</td>
</tr>
<tr>
<td>University of Akron</td>
<td>740.75</td>
<td>852.87</td>
<td>0.04</td>
</tr>
<tr>
<td><strong>University of Missouri-St. Louis</strong></td>
<td><strong>883.09</strong></td>
<td><strong>1,010.79</strong></td>
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## Appendix C - Accomplishments

### IT Transformation – Applications Development Team

- Civics Exam data management tool
- Grade Pass Back tool
- Phase 1 of 4-campus software app inventory tracker
- Satisfactory/Unsatisfactory grade management application in response to COVID-19
- COVID test score management
- Moved all central IT developers to a standard source control application
- Defined standards for common software development languages and databases
- Initiated training plans to assure all developers have knowledge for standard development languages

### IT Transformation – Infrastructure

- Saved ~$22,4k through coordination and consolidating of infrastructure purchases
- Avoided $1.9 million in capital purchases, reduced annual operating costs by $1,043,904 by consolidating the UM inter-campus network
  This consolidation will also increase inter-campus network bandwidth by 900%, Internet bandwidth by 50% and Internet2 bandwidth by 400%.
- Implemented services offerings for Microsoft 365 and Google Suite for all users at all Universities

### Research Computing

- Expanded HTC storage
- Established connectivity to DREN
- Formed new workgroup (Linux and Specialized Systems Support (LASSS)) to provide advanced support for specialized systems in research and instruction (MU)

### MOREnet

- Welcomed 25 new members
- Improved member satisfaction ratings from 92% to 94%
- With DESE, provided computer science training to nearly 900 school district staff
- Saw bandwidth increases of 62.93 Gbps (39% increase)
- Reengineered southeast fiber network for failover protection
- Collaborated with DESE to launch the new MOSIS ID Automatic Student Lookup service

### MOREnet 2019-2020 impact report

### Project Unify

- Mapped functional processes for Registrars, Admissions, Financial Aid & Cashiers
- Updated and Aligned Student SSN Collection
- Digitized Transcripts –90% complete
- Finalized agreement on summer enrollment start date
- Updated and aligned reassessment policies
- Updated and aligned residency policies
- Established standardized processes within Canvas for “last day of attendance” tracking

### Cherwell Ticketing

- Developed telework arrangement and payroll reduction request processes for COVID
- Digitized the HR PCQ process
- Digitized the Tuition Assistance request process
- Broadened the use of Cherwell to 15 groups including units such as CVM facilities, Mizzou Academy, UMKC Student Affairs, and UM Finance