Information Technology SUPPORTS AND ENHANCES the learning, teaching, research and service goals of the University of Louisville through effective, customer-focused TECHNOLOGY RESOURCES.

Information Technology is comprised of 136 employees working in five teams: Research Computing and Communications, Digital Media Production, IT Infrastructure, Technology Support Services and VPIT Support.
I am pleased to share some of the exciting accomplishments of Information Technology at the University of Louisville and how our high-performance teams have met IT objectives in 2013 and 2014 with extremely successful results. Throughout these two years, we have worked to expand the variety and effectiveness of technology services and support for the UofL community. In addition to our usual array of complex upgrades and implementations, IT completed several large projects as part of our commitment to improve the performance, functionality and security of UofL’s databases, systems, tools and applications.

In both years, IT rose to the challenges of the university’s technology needs by improving productivity while maintaining very high customer satisfaction ratings in all areas. I’m proud of how our service support areas interface directly with students, faculty and staff; our HelpDesk, Desktop Support, iTech Connect and Print/Media Services were recognized as providing quality-driven solutions. Our IT Infrastructure team received significant praise for the improvements to email spam filtering and Cardmail capabilities. Additionally, Communication’s expansion of our WiFi offerings to be campus-wide for all including guests has garnered numerous accolades. Overall, the depth of talent and knowledge in all of our employees shows across every aspect of this report – in IT, our people enable the connections and technology that make UofL succeed.

This report actively demonstrates how IT will continue to streamline service management structures and maximize the use of existing resources to ensure the future of technology at UofL. The safeguarding and sustaining of the university’s data, networks and information systems present some of the biggest changes and challenges we face. As I look forward, the importance of how IT can contribute to the facilitation of learning, scholarship, outreach and the core operations of UofL is foundational to our strategic focus.
Our goal of providing technical and operational excellence generates solutions that are innovative, reliable and secure as we keep pace with the university’s need for advancing technology. The responsibility of enterprise-wide, flexible and adaptive information technology services and support is met with a commitment to professionalism and continuous improvement. We strive to deliver efficient, strategic technology results for UofL and its extended community by integrating ITIL, a set of best practices for IT Service Management, with services of demonstrated value.

**FY 2013 – 2014**

IT achieved 100% of our measurable goals.

**April 2014** – 100% of IT staff that undertook the initial ITIL Foundations training passed their certification. Select team members and leaders went on to pursue additional training in ITIL Service Strategy and ITIL Capabilities.
From July 2013 to December 2014, iTech Connect has supplied free one-on-one technology assistance and solutions on both Belknap and HSC campuses, to 7,612 individuals (6,821 students, 296 faculty, 495 staff).

**Success Rates**

**In 2013** – Resolution of Issue in First Contact was at an 84% average.

**In 2014** – Resolution of Issue in First Contact was at an 87% average.

**In 2013** – HEAT (HelpDesk Expert Automation Tool) Tickets totaled 69,593 with a 97% closure rate.

**In 2014** – HEAT Tickets totaled 56,617 with a 99% closure rate.

**IT HelpDesk**

**With LiveChat interactive help**

**In 2013** – HelpDesk had a total of 1,278 online sessions.

**In 2014** – HelpDesk had a total of 1,628 online sessions.

**With Bomgar secure remote access control**

**In 2013** – IT staff were given remote access to customer’s computer to resolve issue 713 times.

**In 2014** – IT staff were given remote access to customer’s computer to resolve issue 1,345 times.

Sande Johnson-Byers, Assistant Vice President for Information Technology. Provides leadership for Support Services including consulting, training, HelpDesk, student services and classroom support.
MAKING TECHNOLOGY ACCESSIBLE

GOALS THAT ENSURE STUDENT SUCCESS / PRODUCTIVITY
Sept 2013 – Completed upgrade of student email system, CardMail, to Microsoft’s cloud-based Office 365. This change takes advantage of new online capabilities such as SharePoint, Lync instant messaging and Office 2013 Web Applications.

2014 – Completed implementation of Student Advantage providing full Microsoft Office 365 to students for free (on up to 5 devices) with current enrollment.

ECAR Survey
(from 2014 EDUCAUSE survey of undergraduate students)

73% of UofL students believe Technology helps them achieve their academic outcomes

75% of UofL students think Technology helps them prepare for their future academic plans

64% of UofL students own 3 or more internet-capable devices

DEVICE OWNERSHIP AT UofL

Laptop 94%
Smartphone 84%
Desktop Computer 39%
Tablet 34%

June 2014 – Enhanced Blackboard student reporting capabilities with Analytics Module. This module offers charting and dashboards for enrollment comparisons, retention and graduation rates, student risk assessment and targeted reporting.
Dec 2014 – Completed first phase of migration of UofL’s Voice over IP (VoIP) telephone lines to use the SIP protocol, allowing voice calls to be carried over Internet circuits. The transition of approximately 10,000 lines has shown greater flexibility, cost savings and improved performance.

INFORMATION SYSTEMS

OPEN TICKETS
2010
CLOSED TICKETS
213
STAFF – 40

OPEN TICKETS
2014
CLOSED TICKETS
1,594
STAFF – 24.2

Sept 2013 – Completed installation of next generation Firewall system that provides Unified Threat Management (UTM) capabilities on all three campuses, ahead of schedule. This system allows for advanced administrative management, greater monitoring for networking issues and enhanced investigation of security problems.

2014 – Implementation of new in-house email processing program and other advanced security technologies providing increased SPAM filtering, malware detection and penetration testing tools.

Brenda B. Gombosky, CISSP, CISM, CGEIT, CRISC, CHSP, CICISO, Executive Director of IT Infrastructure. Provides leadership for Technical Support, Database Administration, Information Systems, Desktop Support and Enterprise Security.
GOALS THAT ENHANCE SECURITY AND CONNECTIVITY FOR THE UofL COMMUNITY

INCREASING TECHNOLOGY INFRASTRUCTURE

CARDINAL RESEARCH CLUSTER

Mike Dyre, Executive Director of Research Computing and Communications for IT, explains: “We’ve designed, implemented and maintained a versatile HPC system with high utilization and low downtime over its six year existence with a team that’s significantly smaller than typical HPC teams maintaining comparable systems at our benchmark institutions. The system we have created is flexible enough to meet both the biomechanical modeling needs of Dr. Michael Voor in Orthopaedic Surgery and the high-performance demands of computational quantum chemistry applications used by Dr. CS Jayanthi in Physics and Dr. Pawel Kozlowski in Chemistry.”
One of the key individuals Dyre cites in demonstrating research success through this technology at the University of Louisville is John O. Trent, Ph.D., a Professor of Medicine, Chemistry, Biochemistry and Molecular Biology, the Wendell Cherry Endowed Chair in Cancer Translational Research, Director of the Kosair Pediatric Oncology Research Program and Director of the James Brown Cancer Center Molecular Modeling Facility.

Effectively using the Cardinal Research Cluster since 2010, Professor John Trent’s research focuses on “virtual screening in silico” (or simulation) for cancer drug discovery and design. An integral part of the drug discovery process, he employs computational techniques in order to speed the rate and accuracy of discovery while reducing the cost and complicated process. Trent experiments using a 3D structure or molecular model of a cancer target for which he can computationally screen compounds as potential drugs. The evaluation of large libraries of molecular compounds becomes a data-based analysis or time-sensitive math problem. Where he might have 25 million possible compounds to consider against a target, traditional research at 2-4 minutes per compound might take 200 years but the CRC replicates the complex interpretations in 4-6 days. The high-powered computer ranks, in order, the top 50-100 compounds rather than the millions possible with a high rate of success of finding the right compound to be tested in the lab. By filtering and integrating data from diverse sources, Trent optimizes the information in a more efficient manner to reduce the time cancer research takes to get to the clinical trial stage. Twenty different research groups at the University of Louisville work with the findings from Trent’s collaborative team. One specific discovery and initial development has already culminated in reaching Phase I of cancer clinical trials.

“Unfortunately, funding for cancer research has decreased three-fold in the last ten years,” Trent explains. He indicates the cost-effective approach and importance of speed as making the Cardinal Research Cluster such a valuable tool. His collaborative applications for funding these drug discovery efforts have supported $20 million for research, $5 million of which the CRC was directly involved as a resource.

In comparison to his previous use of national computer resources, Dr. Trent sees “more availability and better response” from the Cardinal Research Cluster. He synchs a dynamic combination of both the CRC’s high-performance, high-memory compute nodes and a distributed computing grid (through Dataseam, a local non-profit) of school computers across the Commonwealth running 24/7. “I can pretty much suck-up as much capacity as they’ve got,” he states about his weekly 20,000+ high-throughput bioinformatics workload on the CRC.

But Trent is only one of over 420 users making demands on the Cardinal Research Cluster’s 40+ teraFLOPs of computational power and half petabyte of distributed-parallel storage which allows researchers to explore ideas in greater detail than previously possible. IT gives our researchers a competitive advantage in the research community resulting in new avenues of research funding and increases the university’s profile as a research institution. With over 10 million research computations run to date, the CRC will continue to enable research and collaboration across all disciplines throughout the university as research computing becomes an increasingly important part of the nation’s strategy for technological advancement.
INCREASING EFFICIENCY THROUGH TECHNOLOGY

GOALS THAT ENHANCE CURRENT IT SYSTEMS / EFFECTIVENESS
2013 – 2014 – Engaged Oracle Managed Services (OMS) and successfully incorporated their support for PeopleSoft Financials, Human Capital Management (HCM), Campus Solutions (CS), and Portal. An assessment of the first year of these managed services revealed an overall 15% cost savings with increased productivity.

Oct 2013 – Separation of the joint PeopleSoft database into two independent databases for Campus Solutions and Human Capital Management. An additional HCM upgrade allowed for increased functionality of product. The complex dual project was completed quicker than expected with less down time than doing the split and HCM upgrade as separate projects.

Oct 2014 – Upgrades completed on time for PeopleSoft Financial system including Portal tools, Finance tools and the Finance system. The upgrades allowed for increased range of operations and visibility of reports/queries. This resulted in 35% fewer clicks for purchasing requisitions and 72% fewer clicks to manage accounts payable actions.

Completed encryption of our PeopleSoft HCM and CS data.

Oracle provided support and staff augmentation for upgrading both the Financial application to 9.2 and Financial PeopleTools to 8.53. This assistance reduced our dedicated costs by approximately $530,000.

Michael H. Dyre, Executive Director of IT Communications Services and IT Research Computing. Provides leadership for voice and data communications throughout the university, including network infrastructure, telephone services, wireless networking, Internet services and Internet2 networking. Also provides leadership for the Cardinal Research Cluster supporting university researchers through high performance computing, research software and computing support.
2013 – Finished campus-wide wireless access. Additionally implemented wireless NAT solution to conserve IP address spaces.

2014 – Completed implementation of `ulvisitor` for open guest access on campus-wide wireless. This achievement allows the availability of network access to visitors during orientations, conferences and university events.

2014 – Completed implementation of Microsoft Home Use program for employees. This program provides deep discounts on Microsoft products, including Office, for faculty and staff personal use.

2013 – 2014
Continued to provide technology training and support to UofL’s Scholar House. The Office of Information Technology contributed 100 refurbished computers for the Scholar House initiative.

Completed connectivity and services for infrastructure at important UofL new building and renovation projects: GE collaboration at FirstBuild micro-factory, Nucleus Innovation Center, HSC Instructional Building, Student Recreation Center, Softball Stadium and Nucleus Haymarket Building.
2014 Production Printing

4,729
Projects completed by IT’s on-campus print shop in 2014

22%
of the projects were completed in less than one day

71%
of the projects were completed in less than one week

IT’s in-house print shop provides service for all aspects of the University and serves all of UofL’s campuses.

The Campus Copier Management program leased over 537 devices used to produce over 30 million pages. This is a 2¾% reduction from the previous year.

Bob Knaster, Executive Director for IT Design and Print Services. Provides leadership for in-house production Print Shop, outsourced Print Services, Copier Management program, Photography & Video Production and the iTech Xpress technology store.
# CUSTOMER SURVEY

## UofL Faculty/Staff Satisfaction

### Overall

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<thead>
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<th>Year</th>
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<tr>
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### HelpDesk Services

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### UL Mobile

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### ULink Faculty/Staff Services

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### iTech Connect

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### Desktop Security Software

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### Classroom Technology Assistance

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<tr>
<td>2014</td>
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“I’ve been working w/ IT Services for years and have yet to offer a problem that they could not solve.”

“...and an absolute critical part of the University.”
“The people in IT do fast reliable work with most any problem you can have. It’s quite nice.”

“It really enjoy getting Microsoft Office free to all of my devices. That greatly helped with my overall performance in my classes.”
Ann M. Hobdy, Director IT Finance & Administration. Provides leadership for administrative, human resource and financial management and administration for Information Technology.
Information Technology is now aligned with the Office of the Senior Vice President, Chief Financial and Operating Officer. In order to ensure continued success, IT teams are informed by several committees:

> The **Strategic Technology Executive Committee** (STEC) is composed of high-level University administrators who help define and oversee strategic technology priorities for the University, including the campus network, enterprise applications, security, and policies.

> Our **Enterprise Systems Technology Committee** reviews and prioritizes enterprise system requests from units.

> The **Academic Technology Committee** (ATC) is composed of faculty representatives who advise the Vice President for Information Technology on planning and initiatives of interest to the academic community.

> The **Research Computing Governance Council** reviews policies and resource allocations for the Cardinal Research Cluster and other advanced research computing systems.

> A **Tier One Advisory Group** (TAG) consisting of representatives for information technology personnel from each college, school, administrative unit and shared services unit; works to enhance communication and operational efficiencies for IT at all levels, university-wide.

Information Technology stands behind everything we do for the University of Louisville community. All aspects of this 2013/2014 report was created, produced and printed by our IT staff. Let us help you with your technology, design, imaging and digital support needs.

www.louisville.edu/it