WELCOME FROM LEADERSHIP

Thank you for taking a few minutes to read the NU ITS 2018-19 Annual Report. Here, we highlight our service to the students, faculty, and staff at our Kearney, Lincoln, and Omaha campuses, as well as the NU system and the state of Nebraska. We also recognize the deeper collaboration and efficiency we’ve gained in our second year since the OneIT initiative. In Spring 2017, the OneIT initiative brought together what once were four distinct IT organizations into a single division that honors the uniqueness of each campus, maximizes the impact to faculty, staff, and students, and leverages the ability for IT to scale in behind-the-scenes areas like IT security and network infrastructure.

Technology drives change and empowers the most strategic goals of our campuses and system-wide partners. As I reflect back on 2018-19, I think of the transformational value created by ITS projects including Canvas, VidGrid, Zoom, and Eduroam. In hearing from our communities in the first unified ITS user survey in Spring 2019, we learned that these core systems are truly game-changing in their impact to teaching, learning, working, and connecting at Nebraska. We also celebrate our first unified strategic plan published in Fall 2018, which signaled the overall organizational trajectory, values, goals, and key projects that will innovate and lead progress for the success of our broader campus communities.

I want to give a special thanks to Mark Askren, who retired from his role as Vice President for IT and CIO in July 2019 after 10 years at Nebraska and 30 years of service in higher education IT. Mark’s leadership was instrumental in shaping the organization we have today, and I am grateful for many of the key initiatives Mark put into motion during his time here.

We recognize that NU ITS is at an exciting point of our journey together. As we conclude 2018-19, we will drive further optimization and reinvestment within our organization in order to resource the most strategic priorities in IT security and academic technologies. We will deepen our dedication to gaining valuable stakeholder feedback by conducting a series of focus groups across the communities we serve, in addition to continuing to work closely with the ten primary faculty advisory committees with whom we have an ongoing dialogue.

As we look to the future, we have innovative, strategic projects in the pipeline that will have a lasting impact for NU students, faculty, and staff. These key efforts will further our commitment to helping Nebraska thrive.
In this report...

This annual report is organized by the communities of users we are committed to serving each day through the University of Nebraska (NU) Information Technology Services (ITS) organization. Our partnership, collaboration, and commitment to students, faculty, staff, the University of Nebraska system, and the State of Nebraska are illustrated throughout this report, and we hope that you enjoy learning more about how we serve each of these critical groups.

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“Faculty, staff, and students rely upon ITS in executing on our University missions of teaching, research, and outreach. From the services behind these missions to their delivery, ITS brings the best practices, latest solutions, and efficient strategies that position NU for success.”

Susan Fritz, PhD
Interim President
University of Nebraska

INFORMATION TECHNOLOGY SERVICES

STRATEGIC GOALS & VALUES

The mission of the University of Nebraska (NU) states that, where appropriate, the resources of the campuses should be linked in cooperative efforts. To maximize the benefits of resources available to the institution, the University system should realize economies that may accrue from a scale of operations whenever possible. In 2017-18, the OneIT initiative was launched in support of this mission.

Teams from the University of Nebraska at Kearney (UNK), University of Nebraska-Lincoln (UNL), University of Nebraska at Omaha (UNO) and the NU Information Technology Services (ITS) Enterprise Systems team formed into a unified ITS division aligning to the strategic needs of NU and each campus. This structure includes a unified budget and five scaled service areas — Security, Infrastructure, Client Services, Enterprise Services, and IT Strategy — as well as two Communities of Practice in Application Development and Academic Technologies with campus-specific teams to respond to individual campus support and training needs. The unified division also works closely with Nebraska Medicine and the University of Nebraska Medical Center (UNMC) to partner on procurement, security, and standardized technologies.

OUR VALUES

In collaboration with our academic communities, we will:

• Be excellent by exceeding expectations.
• Be champions for our people and our partners.
• Be great listeners who empower stakeholder needs.
• Be forward-thinking through innovation to create solutions.
• Be trustworthy through integrity, transparency, and communication.

OUR STRATEGIC GOALS

Services
Provide an exceptional customer experience and outstanding, responsive IT services that are consistent and reliable across all locations, well understood, and valued by the faculty, staff and students we serve.

Scale
Work together to achieve economies of scale so that we optimize resources, deliver on our financial commitments, and reallocate resources for emerging needs and innovation.

Secure
Create a safe and secure environment that minimizes risk, protects privacy and data, and empowers the university community to do its work through transformative technology.

People
Commit to investing in people so that we build an exceptional work environment with avenues for advancement and growth, and maintain a culture that embraces diversity in all forms. Empower our staff to facilitate broad collaboration and be outstanding partners to the students, faculty, and staff across the campuses we serve.
Nearly 52,000 students enroll in undergraduate and graduate programs at the University of Nebraska. ITS is committed to serving NU students by empowering a robust teaching and learning environment, and providing critical support for the key systems that allow students to browse the web, connect to WiFi, register for classes, and engage with course materials. ITS staff regularly interact with students in a variety of capacities, from planning and feedback sessions with Student Government groups to technical troubleshooting for the students who stop by or call into one of our Help Desks.

2018-19 was the first year that all NU campuses fully adopted the Canvas learning management system. Usage of Canvas has steadily increased since piloting began in 2016, and now students are utilizing Canvas to read course content, interact with their instructor and classmates, engage in discussions, complete assessments, watch lectures, or even create web-based portfolios in three out of every four NU courses. When we asked students about their experiences with Canvas in a Spring 2019 ITS user survey, we learned that they considered the transition from Blackboard to Canvas to be an extremely positive decision for the university.

We worked closely with a variety of student groups at Kearney, Lincoln, and Omaha to expand access to Wepa printing stations, which are now available at 69 locations across the three campuses we serve. These printing stations provide students a quick and inexpensive option to print their assignments or papers using funds on their student ID card. ITS staff in Academic Technologies regularly work with faculty to design, upgrade and support 633 general-purpose classrooms. These learning spaces have a significant impact on student learning, and ITS is committed to creating and maintaining physical learning spaces that are a catalyst for new ways of teaching, learning, and engagement. We regularly build classrooms that enable video conferencing and collaboration, leveraging the interoperability of our core learning technology systems. The student transformation that occurs every day in these classrooms is paramount to the University of Nebraska carrying out its mission, and we continually innovate in these spaces in order to leverage technology to its fullest in service to our students.

STUDENTS
Reliable. Connected. Accessible.

Empowering student success is the core of the NU ITS commitment to serving our campus communities.

“Having fast, stable internet access helps me and the other students on my floor do homework, stream movies, and use all of our digital campus resources.”

Kyra
Student/Resident Assistant
University of Nebraska at Kearney

“Canvas...”

46,151 students using Canvas
633 total classrooms supported
2.4M WEPa pages printed

SPOTLIGHT: UNO

digital campus resources.

“University at Kearney

Public Speaking Classroom Conversion

UNO Communication Studies faculty approached the ITS Academic Technology team in 2018-19 with what they described as a “task of immeasurable importance” for the CMST 1110 Public Speaking Fundamentals course, which enrolls more than 2,500 students each year. A large portion of the course requires students to give four speeches in which they receive instructor feedback in addition to watching a recording of the speech and conducting a self-assessment in UNO’s Speech Center. For years, the department had relied upon upwards of 1,000 DVD’s each year and physical DVD recorders in the classrooms.

The Academic Technology team developed an action plan for digital transformation of the spaces, simplifying the workflow and updating the technology to seamlessly support the recording of more than 10,000 speeches presented to over 20 faculty each year. This project significantly updated the teaching and learning environment for one of the most common courses at UNO, utilizing the NU-wide accessible video content management tool VidGrid. The 11 classrooms that were updated for this project have also inspired other faculty outside of Communication Studies to consider digital additions and modifications for their courses, and additional classrooms are currently being updated for other departments using this same design and workflow.

SPOTLIGHT: UNL

Digital Learning Center

Academic Technology teams in ITS support an innovative Digital Learning Center, now in its second year of operation. Located on the first floor of Love Library North on the Lincoln campus, the center is a one-stop shop for web-based assessment and Scanntron testing services. In 2018-19, the center managed nearly 70,000 check-ins, doubling usage from the previous year. Students on the Lincoln campus enjoy a streamlined, secure test-taking experience that features online reservations and locker check-out upon arrival for personal item storage. Due to its convenient location in Love Library, students can easily access the center while doing work in the adjacent library spaces, and it is available during hours that align to student demand – staying open until 10pm Sunday through Thursday.

The center is largely staffed by trained students, who focus on outstanding customer service and providing an exceptional test-taking experience. Additional ITS staff on Application Development teams work behind the-scenes to design the center’s registration system, keep the platform stable, and categorize the data so that analytics and usage data are readily available for Lincoln-based students, faculty, and staff. Expansion of the Exam Commons is planned for 2019-20, with an additional satellite center being built on Lincoln’s East Campus.
Dedicated faculty and staff work year-round teaching, supporting, and engaging students as they pursue courses and degrees across the campuses of the University of Nebraska. As a service organization, N l ITS works to support these talented faculty and staff by listening to their goals and needs, partnering to determine options and solutions, and delivering the right technology and support. Our work with faculty takes many shapes, from the ten primary faculty advisory committees we regularly work with to shape our overall service approach and project implementation timelines to the ongoing boots-on-the-ground support and troublesome teams in Client Services and Academic Technologies do every day to keep classrooms and systems up and running. Our ITS staff describe their work with faculty as a driving force in their job satisfaction, frequently mentioning how fulfilling it is to help a professor find a solution that not only meets their needs, but exceeds their expectations and transforms their work with students.

When we surveyed faculty at Kearney, Lincoln and Omaha in Spring 2019, we learned that faculty are overall very pleased with the key services we offer, including Canvas, Zoom, VidGrid, email, and network/wireless access. In survey comments, we learned that faculty feel we are working hard to meet their needs, and that individual IT staff member’s efforts make all the difference to our faculty feeling supported.

2018-19 was the first year our faculty used Canvas as their core learning management system. With each semester, adoption of these systems increased and additional features within these systems were realized. At the hub of the digital teaching and learning environment, Canvas empowers faculty to engage with students, post course materials, embed content from affiliate systems, and even track key student indicators and analytics in real time in order to make ongoing course modifications or implement intervention strategies.

A point of pride for ITS is the commitment we’ve made to faculty student engagement and digital accessibility, as evidenced by our video tools, Zoom and VidGrid. ITS regularly receives feedback from faculty that these video tools have not only simplified their current teaching practices, but also allowed faculty to dream bigger about new options for connecting with students and teaching their courses in new ways to meet students’ increasing needs for flexibility in course curriculum.

“ITS is working well because there are ITS staff intentionally dedicated to each campus; these staff are readily available to serve the needs of faculty, staff, and students.”

Sacha Kopp, PhD
Senior Vice Chancellor of Academic Affairs
University of Nebraska at Omaha

“The faculty appreciate the ITS commitment to making the user experience as positive as possible so that we can focus on building enriching learning and working relationships with colleagues, students, and staff.”

Nicole Baun, PhD
Associate Professor
Faculty Senate President-elect
University of Nebraska at Lincoln

Spotlight: UNK
EvaluationKit
After a successful faculty pilot, ITS staff at UNK led the campus in adopting EvaluationKit, its first digital course evaluation tool, in Fall 2018. This brought a departure from typical end-of-semester paper evaluations. The Kearney campus realized many benefits as a result of adopting this digital tool for course evaluations, the most significant of which include enhanced convenience, shorter turnaround time, and increased student participation. Faculty report feeling more ownership of the process, and students feel more empowered to give feedback, since it is anonymous. UNK faculty member Phu Vu noted, “Students have repeatedly stated that with online evaluations, they feel that they can more accurately depict their views on the course because they are not influenced by the presence of the professor.”

Spotlight: UNO
Digital Learning Showcase
On May 9, 2019, ITS staff at the Omaha campus hosted the second annual Digital Learning Showcase. Designed to connect faculty with one another in a setting to show innovative uses of technology for teaching and learning, this year’s Showcase featured 17 faculty workshop sessions. Faculty demonstrated for one another the strategies they are using to increase course sizes without decreasing participation and engagement, approaches to managing large and small group virtual course meetings, and design principles they adopted in working with our instructional design technologists in redesigning an online course from scratch. At the Showcase, College of Education faculty member Erica Rose was presented with the first ITS Outstanding Innovation in Teaching with Technology award.

The event featured a presentation and demonstration by Dr. Ben Smith of UNO’s College of Business, whose research analyzes the impact of “nudging” students with grade reminders via a learning management system throughout the semester. Dr. Smith partnered with ITS staff to deploy his research as a retention strategy in UNO’s College of Business, and he is finding a 4% overall positive grade impact as a result of deploying nudge strategies.
As a result of the OneIT initiative, our biggest initial opportunities to work together behind-the-scenes and better serve the entire University of Nebraska system came in the Infrastructure, Security, Client Services, IT Strategy, and Enterprise Services divisions. These aspects of IT scale incredibly well, and allow the University of Nebraska system to achieve maximum value through rolling into single contracts or creating unified support teams rather than duplicating fiscal and personnel effort at each individual campus. This alignment allowed for the launch of new projects to create our first shared wireless network — Eduroam — and roll out our top security platforms — Splunk, Palo Alto, and Proofpoint — to all sites as we did in 2018-19.

To directly support our top priority — IT security — NU ITS has increased our overall investment in security tools and support efforts by $3.6M over the past two years. This degree of investment allowed us to standardize the levels of protection and functionality we were able to offer at each campus. By aligning security tool sets, we reduced our overall IT security risk while increasing our ability to monitor and quickly respond to threats. Additionally, creating a single security footprint empowered our ability to collaborate with peers in the Big Ten on our most critical dashboards within a 24x7 security monitoring platform — OmniSOC — a national leader in this space.

In Client Services, staff prepared for the launch of a single, shared instance of the Footprints ticketing system. Designed to maximize our support staff resources, this common ticketing system provides avenues for campus-specific support when needed, but also shared support system-wide to respond to routine requests such as password resets.

Finally, significant progress was made in 2018-19 to build a holistic, single comprehensive budget that allows ITS to support and resource critical needs, projects, and priority initiatives of our organization in support of the University of Nebraska and the campuses we serve. This year, we drove out the final $1.5M in permanent savings and delivered the totality of the $6M budget reduction we were asked to take toward university budget response goals. Reducing our overall budget by $6M — the equivalent of 25% of our state funding total — required us to launch new efficiency projects, decommission legacy systems, and think differently about how we do our work in order to optimize our ITS personnel and budget resources.

SUCCESS STORIES

Push to Gradebook

With the Push to Gradebook project in 2018-19, ITS staff worked behind-the-scenes to create seamless processes that allow faculty to easily pull grades into Peoplesoft — MyRed, MyBlue, and MavLink — from their Canvas courses. This means that faculty are not only cutting down on errors by eliminating the need to enter grades into two systems, but they are also saving time, sometimes up to several hours. As one of our pilot faculty told us, “This is awesome! It just worked.” This integration was made possible through collaboration between NU ITS NetSSS and Academic Technology divisions and the Registrar’s Offices on all four University of Nebraska campuses.

Two-Factor Authentication

Rapid changes to technology require ITS to be agile and prepared to implement security processes that protect the data of our NU students, faculty, and staff. An industry best-practice — two-factor authentication — was introduced at the Lincoln campus in 2011, and was expanded substantially across Kearney, Lincoln, Omaha, and the University of Nebraska system in 2018-19. Two-factor authentication, commonly used to login to systems from online banking to personal email, is proven to significantly reduce the risk of credentials being stolen and accounts being hacked. NU ITS rolled out this service to specific groups of faculty and staff who use core student service systems, and ITS leadership is currently working with faculty advisory committees on timelines for making the service available to even more users across our campuses. When we asked our communities about two-factor authentication in the Spring 2019 user survey, we learned that many are already using this service and are adapting well to the subtle login changes the system requires. ITS staff in our Security and Client Services divisions regularly support individuals across all of our campus sites with questions and setup processes to adopt two-factor authentication for their credentials.

Eduroam

In 2018-19, infrastructure teams in ITS implemented a new intercampus wireless network designed to scale to meet the needs of the University. Switching to eduroam, a common platform used throughout higher education institutions across the country, allowed for a significantly improved security posture as well as financial savings through shared infrastructure design and resources. With the switch to eduroam, ITS implemented the first standard wireless network access across all University of Nebraska campuses, making it easier than ever before for students, faculty, and staff to connect to WiFi on each campus and as they move between campuses.

“ITS is a strategic partner in helping ensure that every person and every interaction matters at UNL.”

Ronnie Green, PhD
Chancellor
University of Nebraska – Lincoln
SUPPORTING STATEWIDE PARTNERS

Transformative. Integrated. Accountable.

Providing critical services across the State of Nebraska allows us to empower our communities and connect a variety of educational service entities.

The NU ITS organization plays a vital role in serving the state of Nebraska, beyond our University of Nebraska communities. These lesser-known services and projects are critical to providing expansive access and connecting the technical needs of the state, including K-12 schools, public libraries, State Colleges, and beyond. Three primary functions of the NU ITS organization provide these statewide services: Infrastructure, Enterprise Services, and Identity Management.

Under the executive sponsorship of the NU Provost’s Office, the University of Nebraska supports two primary Enterprise Resource Planning (ERP) systems: the Nebraska Business Information System (NeBIS) and the Nebraska Student Information System (NeSIS). These two systems comprise the core business and student services for the University of Nebraska, in addition to serving students and employees of the Nebraska State College System.

2018-19 initiatives have focused on areas to improve and transform services across the State of Nebraska, including the development of an application to support student retention and success, the adoption of electronic forms to streamline student and business transactions, the deployment of Single-Sign-On, and the addition of two-factor authentication to better secure our services.

PARTNERSHIP SPOTLIGHT

Network Nebraska

Since 2007, ITS has partnered with the State of Nebraska’s Office of the CIO to manage and support Nebraska’s statewide research and education network that serves as the Internet Service Provider for approximately 430,000 K-20 students throughout the state, including educators and learners at public schools, libraries and Educational Service Units. Network Nebraska maintains over 100Gbps of connectivity to local, regional, and national R&E and commodity networks. The organization is 100% member-funded, focused on reducing transport and Internet costs, and improving the reliability and speed of services. Network Nebraska currently offers one of the lowest perunit costs for commodity Internet in the country with a 99.6% reduction in cost since 2007.

WHAT’S NEXT FOR ITS

In 2019-20, we believe a few indicators of success for NU ITS will be:

90% ADOPTION OF TWO-FACTOR AUTHENTICATION

To be achieved through close consultation with faculty and campus leadership

$1M+ IN SAVINGS TO STUDENTS

To be achieved through adoption of digital course content in Canvas courses by 200+ faculty

50+ PARTNERS IN IT ACCESSIBILITY EFFORTS

To be achieved through engaged partners acting as liaisons across the university system

As we enter Academic Year 2019-20, we have many exciting projects in the works to serve our campuses and align to the most strategic priorities of the University of Nebraska.

Security will remain our biggest priority. As threats to the university digital and data environment continue to increase in both quantity and complexity, we must invest and innovate in order to protect our campuses and stay current with industry best-practices.

Optimization will remain a theme, as we continually seek opportunities to become more efficient. These ongoing efforts allow us to reinvest in the most strategic priorities of NU and the campuses, including learning technologies and IT security.

Finally, we are eager to launch the NU ITS Big Ideas process. NU ITS was inspired by a NU system-wide initiative launched by Dr. Susan Fritz in her role as Provost in Fall 2018, where faculty across our campuses were asked to bring forward ideas of transformational opportunities that exist that could solidify NU’s position and take our university impact to the next level. The ITS Big Ideas process asked individuals to submit ideas that are strategic, forward-facing, and game-changing in their ability to make a noticeable impact for the faculty, students, and staff we serve. In the Spring of 2019, we saw over 40 proposals submitted into the inaugural ITS Big Ideas process, which will officially launch next year.
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“I’ve observed a sincere effort on behalf of everyone in NU ITS to solicit feedback, take input seriously, and use suggestions to refine and revise practices.”

Jonathan C. Watts
Vice Chancellor for Business and Finance
University of Nebraska at Kearney

### OneIT Initiative

IT teams from UNK, UNL, UNO, and Enterprise Systems came together in 2017 to form a unified IT vision aligned to the strategic needs of the University of Nebraska and each campus. The unified division works closely with UNMC in procurement and standardized technologies. In 2017-18, the new organization was tasked with combining our budgets and contributing a permanent $5M reduction as a part of the university-wide budget response process. We also have invested in our top priority of IT security, increasing our investment by $1.6 million since the OneIT initiative began.

As our teams aligned into shared services divisions and campus-specific communities of practice, ITS became well-positioned to empower the University of Nebraska mission through working together, identifying opportunities to scale, and providing a more consistent user experience regardless of the campus-specific communities of practice. ITS also aligned closely with UNMC on procurement and strategic needs of the University of Nebraska to form a unified ITS division aligning to the Enterprise Systems came together in 2017 to provide streamlined customer support and training needs of the students, faculty and staff at each campus. OneIT also involves the supervision of respective campus CIO’s.

### Leadership Teams

Our organization is led by three teams working together in support of our university community: a Senior Leadership Team focused on strategy and direction; a Senior Management Team focused on resources and organizational health; and a Senior Operations Team focused on solutions and results.

The cross-functional design of these leadership teams decreases divisional silos across our organization and allows for top projects to be moved forward more efficiently through increased visibility and transparency. In addition, internal and external communication channels have been positively impacted as a result of this team design.

Our leadership teams work closely with distributed IT staff in the colleges on each campus. These distributed IT staff have a dual-line reporting relationship into both their college Dean’s Office as well as the NU ITS Client Services division. Distributed IT staff in the colleges play a key role in front-line service support for faculty and meet regularly with a variety of NU ITS teams to identify unique needs of our local campus communities while also engaging in system-wide knowledge sharing and identification of best practices.

### How We Are Organized

Intentionally balancing our responsiveness to campus-specific needs with our opportunities for scale and efficiency.

### Success Stories

#### Cybersecurity Escape Room Challenge

As a way to raise awareness about cybersecurity, NU ITS created a Cybersecurity Escape Room and invited teams throughout the University of Nebraska to participate. The challenge, launched during October 2018’s National Cybersecurity Awareness Month, was fun and informative for ITS to engage with faculty, staff, and students at UNK, UNL, UNO, and NU Central Administration. The Escape Room also provided a platform for ITS staff to communicate valuable information about approaches ITS is taking to increase our overall security posture at NU, as well as practices individuals can take to enhance the security of their data and account credentials. To date, 125 teams have participated in the Escape Room, including the UNK Chancellor’s Cabinet.

For her work on the Escape Room, as well as for her outstanding performance in handling several critical IT security incidents throughout the year, ITS recognized Cindy O’Dell, Incident Response Manager in the NU ITS Security division, with the 2018 Rick Fredericks Award for Outstanding Leadership in a Collaborative Effort.

#### NU-Wide Area Network

During the 2018-19 academic year, the ITS infrastructure team designed and implemented a new intercampus network designed to scale to meet the needs of the University now and into the future. The project also included upgrades to optical networking equipment in Lincoln, Omaha, and Kearney City and the implementation of a new routing platform. The University of Nebraska Wide-Area Network architecture includes 100G connectivity and support for intercampus services, including a ScienceDMZ and private interconnects to major service providers such as Google, Apple, Microsoft, and Amazon. The project also allowed for significant financial savings through shared Internet connectivity for the Kearney, Lincoln, Omaha, and Nebraska College of Technical Agriculture in Curtis campuses.

For their efforts in leading the Wide Area Network Project, ITS recognized Greg Gray, Kalab Kraft, Kent Eitzmann, Matthew Long, James Harr, Walter Aule, Erik Schmersal, Ben Sharp, and Jay Kilborn with the Rick Fredericks Award for Outstanding Collaborative Project.

### About Us

Behind the Scenes of NU ITS

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ONE UNIVERSITY. FOUR CAMPUSES. ONE NEBRASKA.