



University Information & Technology

ANNUAL REPORT

2017-2018

Dear Colleagues,

This report highlights the accomplishments of University Information & Technology (UI&T) during the 2017-18 academic year. During that time, we improved how we work, learn, operate the university and conduct research, throughout the state and around the globe, all while maturing our processes to better serve OSU. Many of our accomplishments were achieved in partnership with others, and our ability to build strong, sustainable working relationships both internal and external to OSU continues to be an essential element of our success. Technology underlies nearly every aspect of OSU's work and our efforts over the past year demonstrate our commitment to maximizing the value of information technology at OSU.

For our students and faculty, we introduced new tools and services to continuously improve the Learn@OregonState digital learning environment. Wireless coverage was expanded and the reliability of OSU's network improved. The OSU Mobile app saw nearly 20,000 downloads, providing students contemporary access to numerous OSU online resources. We also played a key role in the university-wide conversation to provide the necessary data and analytic insight to measure and advance student success.

For our research community, we continued our work with campus partners to evolve and grow a modern suite of cloud-based computing infrastructure services. Noteworthy in these efforts is our new university wide contract with Amazon Web Services (AWS); this service is already being leveraged in almost all of our academic colleges. OSU's local research network was expanded, providing improved connectivity for cross-campus information sharing; we also made substantial progress in our multi-year plan to build redundancy into our network and improve reliability.

In support of our administrative operations, a new Institutional Analytics & Reporting (IAR) unit was formed to improve OSU's efficiency in delivering authoritative information and improve the effectiveness of our analytics under a single, unified strategy. We improved interoperability services to enhance speed and flexibility and reduce maintenance. We also made significant progress in the multi-year migration to the latest version of OSU's enterprise information system, Banner, ensuring that our primary administrative applications will remain current and supported.

I am especially proud of our efforts to create a welcoming environment for everyone attending or working at OSU. We developed new dashboards to support OSU's diversity mission and co-led trainings on inclusive web design and gender bias in software design. Our commitment to inclusivity is demonstrated in the growing number of trained Search Advocates we have in UI&T, our participation in OSU's Association of Faculty for the Advancement of People of Color (AFAPC), and the multiple languages we speak in our daily interactions with the OSU community at the Service Desk.

I am pleased to present UI&T's annual report for the 2018 academic year. As you browse this document, you will see the variety of ways in which UI&T serves the OSU community to advance the university's mission. I am especially proud of the commitment, care, and dedication of our staff. Their effort is what helps make our success possible. I encourage you to share your questions and comments with me as we continue to serve the OSU community.

Sincerely,

Jon Dolan

Interim Vice Provost, University Information & Technology



SECTION

1.0 PERFORMANCE INDICATORS

The Mission

Build and maintain a technology ecosystem at OSU that enables scholarship, learning and community engagement in an environment where innovation and academic excellence thrive.

ORGANIZATIONAL MANAGEMENT

Maturing IT Practices

It is our primary goal to mature our professional IT practice. One of the ways we measure our progress is through service desk customer satisfaction surveys.

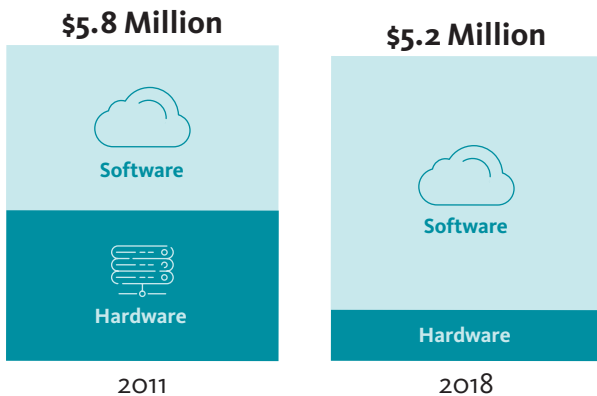
97%

Customer Satisfaction

Budget Stewardship

Another area of focus is to improve processes and be responsible stewards with the budget. In 2011, we spent \$5.8 million on hardware and software to support 29,691 OSU students and employees. In 2018, we spent \$5.2 million (10.3% less than in 2011) to support 37,027 students and employees, an increase of nearly 25% from 2011.

Budget Spent on **Hardware** and **Software**



HOW WE LEARN

We provide and maintain anytime, anywhere, innovative spaces and effective & insightful tools.

96%

of students use Canvas with an average of 3,200 published courses each term (AY18).

39%

of students utilize campus computer labs with 462 workstations across 11 labs (AY18).

79%

increase in number of videos used for instruction with nearly 1.36 million video plays total (AY18).



On-the-go Access with OSU Mobile

Last year, 13,635 people opened the new OSU Mobile app 503,281 times to access their grades and assignments, the campus map, events and more.



HOW WE WORK

We maintain a stable environment and enable innovation through modern tools that are accessible and easy to use.

Stability

Our core services provide the foundation for much of the educational, scholarship and business applications that power OSU. One of the most important functions that we perform is to ensure that these systems remain highly available and easy to use.

99.8%

Campus-wide network uptime. Over the course of the year, there were only two campus-wide network outages totaling 65 minutes (AY18).

4000

New wireless access points added across Corvallis, Bend and Newport - adding to the 4000 that are currently maintained.

Modern Tools

We enable collaboration and innovation by providing modern tools like Box and WebEx that are intuitive and accessible.



Box

167%

increase in Box logins (AY18).



WebEx

33%

increase in online meetings hosted with WebEx (AY18).

HOW WE FACILITATE RESEARCH

We provide tools and services to the research community at OSU that enable scholarship and creativity without barriers.

Collaboration

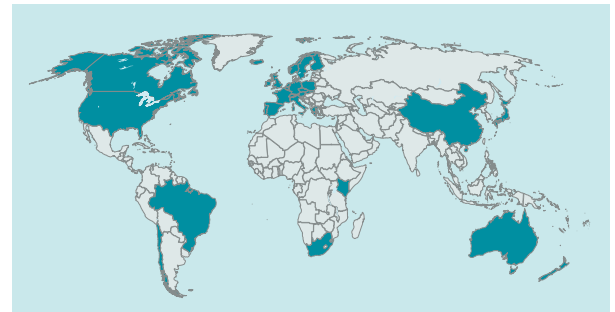
By leveraging platforms like Box and Eduroam, we bring OSU to the world and the world to OSU.

Box

Last year, we collaborated with 2413 external Box users from 315 US institutions and 33 government agencies.

Eduroam

OSU's Eduroam partnership makes it easier and faster for our faculty to wirelessly connect to the internet when they travel to partner institutions. 3232 people from 34 countries used Eduroam while at OSU.



55000

OSU users utilized Eduroam around the world (AY18).

Network Capacity

We upgraded the network connection to 6 buildings to enable researchers to collaborate and share data in realtime without worrying about connection speed.

75%

more campus buildings with high speed internet upgrade (AY18).

4x

faster internet speed for those buildings that have been upgraded (AY18).



HOW WE OPERATE THE UNIVERSITY

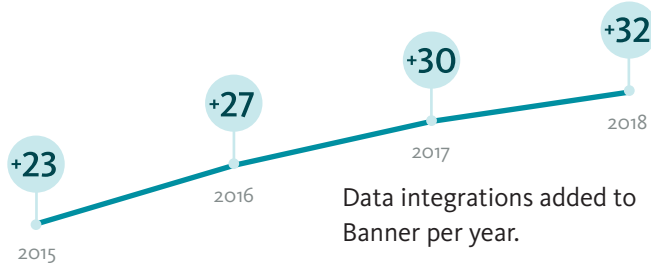
We integrate business systems, enable paperless processes and manage risks to data and infrastructure.

Integrating Business Systems and Reducing Overhead

One of the key services that we provide to our customers is the integration and maintenance of new software applications that interoperate with other systems on campus. These integrations maximize the utility of our purchases and make sure that they deliver information that is consistent with other university systems.

Banner

Since 2015, we've added a total of 112 data integrations to Banner, allowing critical university data to flow between various systems. Additionally, we reduced the number of Banner modifications by 47% since last year, decreasing maintenance costs and improving speed and flexibility.

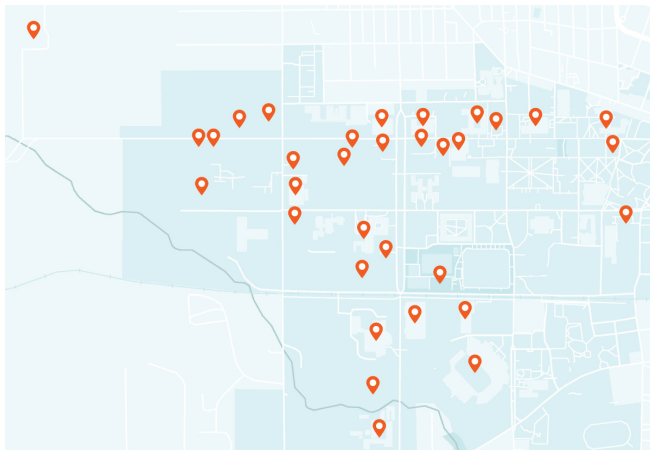


Risk Mitigation

As providers of core infrastructure, it is not enough to plan only for normal, day-to-day operations. With risk mitigation UI&T plans for atypical and unplanned threats to business continuity, taking steps to anticipate and gracefully address these types of incidents.

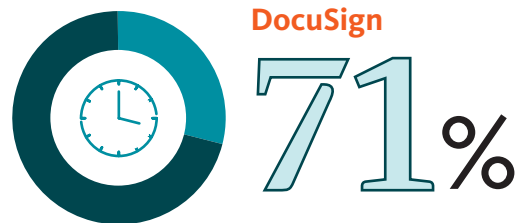
Fiber Redundancy

33 buildings on the OSU campus are now connected to a redundant system to ensure consistent network operation.

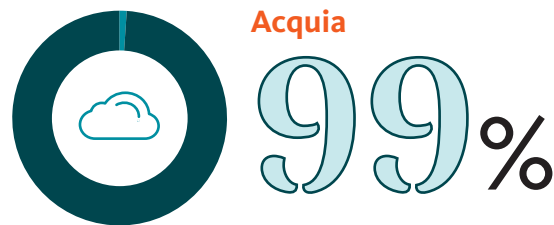


Secure and Modern Environments

Cloud-hosted applications and platforms play a critical role in our mission to provide secure, flexible, best-of-breed tools and services to our users. By leveraging vendor specialization and economies of scale, we can more efficiently deliver the suite of services that OSU needs.



of DocuSign documents are signed and completed within 24 hours - shifting the timescale of many business processes from days or weeks to hours.



of OSU websites hosted by UI&T have been transitioned to a more secure and efficient cloud-hosted solution provided by Acquia. This enables superior disaster recovery, easier security updates and streamlined feature development.

Two-step Login to Protect Our Data

Since taking steps to protect the data of employees, students and the institution with two-step login, there have been **zero** cases of direct deposit theft of paychecks.



SECTION

2.0

EDUCATION & LEARNING

“I appreciate the cooperation developed between UI&T and OSU-Cascades. The strong partnership we’ve established helps us advance our mission to provide globally relevant education, research, and outreach in central Oregon.”

--Becky Johnson, Vice President, OSU-Cascades

EVOLVING THE LEARNING ECOSYSTEM

Learn@OregonState is an integrated ecosystem of tools and processes enabling next-generation learning modalities to power student success. Made possible by OSU’s partnership in Unizin, our portfolio continues to evolve in order to support an ever-growing range of learning styles, leveraging technology to power a transformative learning experience. One recent example of this evolution is Top Hat. UI&T worked with OSU faculty on plans to introduce a mobile app that will replace hardware-based classroom-response devices, improving interactions between students and instructors. Top Hat will allow students to utilize their personal mobile devices instead of purchasing clickers, lowering cost while also providing additional innovative engagement options for classroom interaction. UI&T examined current use of student response systems, conducted analysis, and consulted with campus committees before making a recommendation. Top Hat will be officially launched in AY19.

IMPROVING OUR TRAINING PLATFORM

In partnership with Human Resources, UI&T played a key role in the plan to introduce and deploy the Bridge professional development and learning management system at OSU. Initially expected to cost more than \$1M, UI&T was able to leverage our Unizin membership to significantly reduce the expected licensing investment for OSU. Currently, the system is being used to deliver critical required employee trainings; looking forward to AY19, UI&T will expand the use of Bridge with an eye toward consolidation of redundant and outdated tools that are currently being used for similar purposes.

HELPING STUDENTS NAVIGATE OSU

OSU Mobile’s first full year serving students was worthy of note. The app was been downloaded over 20,000 times and averaged 5,000 active weekly users throughout the year. Students can access personalized course information, receive push notifications about assignments and grades, view their bill and holds, as well as having dining, transit, location, news and event information at their fingertips.

LEARNING INNOVATION GRANTS

In AY18, UI&T awarded over \$230,000 in Learning Innovation Grants to support 18 awards for faculty to enhance pedagogy and the student experience. This past year, our largest grant was awarded to the College of Engineering to support instructional delivery for orientation courses. The project aims to integrate technology, creativity, and experiential learning with a shared curriculum for first term students in four majors. The orientation courses will involve approximately 800 students starting in fall 2018, using two robotics platforms to engage teams of students and develop their analytical, teamwork and communication skills. Other awardees included the Colleges of Liberal Arts, Science, Public Health and Human Sciences and Forestry, supporting a wide range of pedagogical pursuits with innovative learning strategies.

HELPING OSU GROW

This past year, UI&T continued its role as a key partner in technology planning and implementation for our branch campuses and other statewide locations. As an example, we reorganized our dedicated, on-site IT team at OSU-Cascades to better support the teaching mission and deepen our focus on academic success. In Newport, UI&T remains engaged with our partners at the Hatfield Marine Science Center (HMSC), working collaboratively to plan the upgrade of the existing network infrastructure, preparing for the expansion of the HMSC with the Marine Studies Initiative. For the new OSU Portland center, we are actively engaged with university colleagues to plan and install the network infrastructure and audiovisual technology in preparation for the center’s opening in fall 2018.



SECTION

3.0

RESEARCH & CREATIVE WORK

"The AWS contract has enabled OSU Libraries and Press to successfully transition our backups of digital and digitized content, such as theses, dissertations, and historic photographs, as well as online collections related to OSU150. We are thrilled to have AWS in place for long-term backups and digital preservation of our irreplaceable and unique online collections."

- Margaret Mellinger, Director, Emerging Technologies & Services, OSU Libraries and Press

HACKATHON 3.0

In May, UI&T staged its third annual Hackathon, a daylong event designed to promote a culture of innovation, creativity, collaboration, and relationship-building. This year's event featured 11 teams with members from across the Corvallis campus; many of the projects focused on enhancing student experience and student success. The winning team this year leveraged the recently-released campus map (an outcome of a previous Hackathon) to personalize the map for students, presenting a custom view of class locations, available parking according to their permit, and more. It is our hope to build these types of contextualized features into future services to students.

SIMPLIFYING CONNECTIVITY

OSU's Eduroam partnership makes it easier and faster for our faculty to wirelessly connect to the internet when they travel to partner institutions. When an Eduroam user visits another Eduroam site, their device automatically connects, providing a seamless transition between OSU and other institutions. Traveling OSU faculty use this capability over 500 times each month on average, and our partner institutions make even better use, authenticating more than 800 devices each month while visiting OSU.

MODERN TOOLS FOR RESEARCH

In our continuing effort to offer contemporary, flexible tools to our researchers and others engaging in innovative digital work, UI&T partnered with the College of Engineering to offer Amazon Web Services (AWS) to all members of the OSU community. AWS offers high-performance, scalable infrastructure as a service; with this industry-leading solution, we are able to quickly and easily instantiate the high-availability tools needed to solve complex computational research and related problems.

ANYTIME, ANYWHERE ACCESS

We continue to invest in the network infrastructure that enables the work we do. Last year, we added over 400 wireless access points across the state, including 300 in Corvallis. These upgrades improve our wireless coverage footprint as well as increase the overall capacity of our wireless network, enabling anytime, anywhere access to students, faculty, and our statewide constituents.

SECTION

4.0

OUTREACH & ENGAGEMENT

BUILDING A NEW STATE-WIDE NETWORK

UI&T continued our collaborative work with our state-wide partners, including the State of Oregon, University of Oregon, and Oregon Health Sciences University to create a new state-wide network. Led by OSU, a new organization called Oregon Fiber will be dedicated to the ongoing maintenance and management of the network. The aim of the project is to deliver improved coverage, performance, reliability, resiliency, and value to serve Oregon institutions. The rearchitected network will improve connections between OSU's campuses, while adding extension sites and 500+ other government offices to the list of those served by it. The plan also bolsters OSU's disaster recovery capability, all at an overall lower cost to OSU.



MODERNIZING TOOLS TO SUPERCHARGE ENGAGEMENT

In the past 12 months, UI&T introduced two new tools to improve engagement with both our campus community members as well as those we serve via our land grant mission. The new campus map is modern, mobile friendly for visitors and includes new features such as dining information, public safety details and information about gender-inclusive restrooms. In May, we launched our new campus event calendar. The new calendar offers features such as user profiles, RSVPs, searchable locations and organizations, and filters and tags to find events by type and topic. The new calendar is already in use by dozens of units in Corvallis as well as our partners in Bend, Newport and the Extension offices.

PARTNERING, SHARING, LEADING AND LEARNING

UI&T invests in relationships both on- and off-campus as a way to exchange ideas, inform decision-making, and participate in the national conversation that surrounds our work.

Internal to OSU

- Instructional IT Governance Council
- Learn@OregonState Advisory Committee
- Data Governance Council
- Information Security Governance Council
- Information Technology Coordination Committee
- Web Customer Advisory Committee
- Web Student Advisory Committee
- Digital Experience/Mobile Customer Advisory Committee

Edu partnerships

- Northwest Academic Computing Consortium (NWACC)
- EDUCAUSE
- Internetz
- Unizin
- Canvas R1 Peers
- Help Desk Institute (HDI)
- Pacific Northwest Gigapop
- Northwest Managers of Educational Technology (NWMET)
- IMS Global Higher Education Institutional Leadership Board
- Research & Education Networking Information Sharing & Analysis Center

Advisory & Governance

- Instructure/Canvas
- Ellucian
- Salesforce
- Acquia
- TeamDynamix
- IMS Global Learning Consortium
- Kaltura
- FBI InfraGard

SECTION

5.0 DIVERSITY & INCLUSION

UI&T is proud of our track record in demonstrating our commitment to diversity and inclusion. Over the past year, we have evidenced our values in this area in the following ways:

EXAMINING DIVERSITY AT OSU

UI&T partnered with the Office of Institutional Diversity (OID) to develop a suite of diversity dashboards for student and faculty recruitment and retention. These dashboards allow OID to better visualize and interpret data around our existing and incoming populations, lending insight into how we can recruit and support underrepresented groups.

COMMITMENT TO ACCESSIBILITY

Last August, we partnered with Equal Opportunity and Access (EOA) to coordinate a free daylong training on accessibility and inclusive design on the web. OSU representatives from many colleges and units attended, as well as colleagues from 10 other Oregon higher education institutions. In addition to advancing inclusivity and accessibility, the event highlighted OSU's leadership in this area and educated attendees on the ethical, legal, and risk issues associated with noncompliance.

ELIMINATING GENDER BIAS IN SOFTWARE

This spring, UI&T worked with the Computer Science department to evaluate the use of GenderMag, a research-based tool developed by Dr. Margaret Burnett to identify gender-inclusiveness issues in software. UI&T organized a meeting with twenty web and software developers from around campus to learn about this toolkit. UI&T will employ the GenderMag approach to evaluate our designs for current and upcoming projects with two goals: one, to improve our deliverables and implement them in a way that is inclusive and universally accessible; and second, to provide feedback and data to our researchers to advance their scholarship and extend the impact of their work.



We also demonstrate our commitment to inclusivity in our personal and professional development and service activities:

- UI&T is represented in the membership of OSU's Association of Faculty for the Advancement of People of Color (AFAPC). Last year, one of our employees was elected co-chair of the AFAPC steering committee.
- In AY18, eight UI&T employees underwent Search Advocate training, bringing the total number of trained employees in our division to 25, an increase of 47% during the year.
- A number of our employees participated in the Social Justice Education Initiative and the recently-offered Transgender 101 training.
- Institutional Research (IR) implemented the 3rd campus climate survey on behalf of the OID, compiling the results and providing analytic expertise to the survey task force.

SECTION

6.0 EMPLOYEE DEVELOPMENT & SUPPORT

IMPROVING OUR LEADERSHIP & MANAGEMENT

UI&T has been an active member of the Northwest Academic Computing Consortium (NWACC) for many years; one of their programs that we have participated in is their leadership development program. A multi-institution cohort meets over the course of 12-18 months to work on real-world case studies from partner institutions. In recent years, UI&T has sent several of our managers and directors through the program along with several of our college IT partners, demonstrating our commitment to developing IT leadership across OSU. Two more individuals from OSU are planned to participate in AY19.

Recently, UI&T began the visioning work for a dedicated IT leadership and management development program. Designed to serve the entire OSU IT community, an advisory committee has been formed and the work to create this program continues into AY19.

As part of an institution of higher learning, UI&T enthusiastically supports the personal and professional growth of our staff, offering the flexibility and encouragement needed to allow our employees to take academic courses at OSU or elsewhere. Our belief is that these investments are a key benefit of employment in higher education, and that the outcomes are positive for both the individual and to the organization.

PUTTING SERVICE FIRST

UI&T recognizes that we are a service organization. In addition to developing and empowering our own employees, we strive for ever-greater engagement and partnership with our colleagues and customers, evolving our services and interactions to respond to business needs.

EXPANDING DATA LITERACY

UI&T expanded the reach of the Cooperative Open Reporting Environment (CORE) by investing in our user community. We hired an outreach manager to lead the socialization and development of community of practice around our analytics tools; as part of this effort, we have enhanced and expanded our training and support activities, teaching users how to use new tools and techniques to derive greater utility and value from the tools we offer. This past year, UI&T presented to nearly 500 campus community members about the data and analytics services it provides; of those, 27 have been certified as "Citizen Data Scientists" after completing the Tableau data visualization certification program.

EMPOWERING DIGITAL COMMUNICATORS

This past year, UI&T grew and enhanced its Open Lab, a weekly drop-in session hosted by our web team for digital communicators of all types to attend. The Open Lab represents a flipped experience, allowing our customers to bring us their projects and questions while our team works to assist and teach them side-by-side in real time. We hosted close to 1,000 visitors at the open lab in AY18; in addition, we offered formal, classroom-based training multiple times per month and hosted a semimonthly web community meeting to augment our training efforts and increase customer engagement.

TEACHING CYBERSECURITY

The security of our data resources is a shared responsibility of all members of the OSU community. Our Information Security office worked in partnership with HR and Academic Technology to deploy required cybersecurity training for all employees. This is an important topic of employee and consumer education and serves to decrease institutional and personal risk of computer crime.



SECTION

7.0 RESOURCE STEWARDSHIP

MODERNIZING BUSINESS PROCESSES

In our effort to reduce administrative overhead and increase business efficiency, UI&T launched DocuSign in AY17. As an electronic signature and approval tool, DocuSign made a significant impact on our business processes in AY18, eliminating paper forms, ink signatures and physical routing. DocuSign replaces these processes with simple, fillable electronic forms and automated routing, approval and signing tool that can be used anywhere that has internet access. The service was used over 9,000 times in its first full year, and we expect this number to double next year.

ENGINEERED FOR STABILITY

UI&T's investments in network architecture, system redundancy, and change management are paying dividends in terms of the continuous uptime of our services. Last year, we had only two network outages that impacted our services; the total duration was fewer than 65 minutes.

BACK TO BASELINE/BANNER 9

Enterprise Computing Services is wrapping up a multi-year initiative to launch the latest version of Banner. This critical upgrade will bring enhanced functionality as well as reduced overhead. We have undertaken a huge effort to analyze, evaluate and remove customizations that we have made to the system over the past 20+ years. Removing these modifications eliminates technical debt and improves our maintenance overhead, freeing our programmers and analysts to do work that provides greater value to customers. The financial aid and payroll packages have been released to production; the student and finance modules are both expected to be released by October.

“Prior to the rollout of DocuSign, the processing of signed documents would be delayed for days or even weeks, until our researchers could come into the office. With DocuSign, we have researchers signing documents in the middle of wheat fields and from around the world. This has vastly improved the process from taking a week or more, to now an hour or less.”

-- Debbie Sutor, Office Manager, Columbia Basin Agricultural Research Center

DIGITAL EXPERIENCE FOR STUDENTS

Last year, UI&T developed a vision and began work on a new Digital Experience (DX) initiative for students. DX is centered around next-generation interactions between students and OSU. At the heart of the initiative is a personalized dashboard designed to replace the MyOSU portal and support our students in their OSU journey. DX will also include enhanced mobile experiences, a chatbot to answer common questions, and proactive, automated "nudges" to assist students in their journey. We will build DX iteratively and expect the first pieces of this new platform to be in the hands of students by fall 2019.

IMPROVING UNIVERSITY ANALYTICS

The UI&T re-organization last September brought our analytics and IT practices together into a single unit. The new, combined organization seeks to define and publish reports and tools that expose a single version of the truth using vetted, authoritative datasets. UI&T seeks to help users understand available tools and approaches so that they can bring meaning to OSU's data and drive institutional effectiveness and efficiency by doing so. Going forward, UI&T is shifting its focus to provide reports geared more toward decision-making rather than raw numbers. In AY18, UI&T published nearly 100 new reports and made approximately 1,300 updates to ensure that existing reports were accurate, useful, and actionable. In this timeframe, nearly 4,000 users made more than 500,000 requests for data.



DUO / TWO-STEP LOGIN

As part of our cybersecurity efforts, UI&T implemented Duo two-step login to protect our systems, our data, and our users. Two-step login addresses the fact that passwords are insufficient to adequately protect institutional and user data. Our first Duo users were those who have significant administrative systems access; after that, we made changes to require Duo for access to certain resources that contain confidential data such as social security numbers. Going forward, we will launch a campus-wide campaign to build awareness and drive adoption via opt-in. It is our goal to require Duo for all members of the campus community by fall 2019.

PRODUCT MANAGEMENT

UI&T worked internally to formalize our product management practice. Product management will bring additional focus to the useful life of the services in our portfolio by engaging with customers and actively managing our investments. Last year, our work began with formal training on product management as a discipline; since then, we have hired and/or identified five positions who will focus on this work going forward.

STRETCHING OUR DOLLARS

One of the ways we demonstrate good stewardship of university resources is by carefully allocating our budget. In recent years, we have spent over \$2M to cover staff and services at our locations outside of Corvallis. This investment was made without increasing our overall budget and demonstrates the ways in which we have captured efficiencies and used the derived savings to prioritize and contribute funding to other strategic initiatives. As another example, the work that UI&T does makes all of OSU work more efficiently: our tools reduce duplication of effort and provide easy, actionable information to the colleges and units to use in their operations.

“Our students and faculty benefit from the excellent relations our college enjoys with UI&T. UI&T's collaborative, communicative, and helpful approach directly contributes to the mission of the college and helps us in our pursuit of organizational excellence. I appreciate and value their leadership, partnership and technical expertise in preparing for the opening of the new OSU Portland center this fall.”

-- Malcolm LeMay, Director of Operations, College of Business

