

# Information Services - Annual Academic Report, 2013-2014

Information Services provides technical expertise, infrastructure, and tools that help Oregon State University realize its mission and its strategic vision. Our goal is to support the University's top priorities by enhancing learning and engagement, supporting advanced research, streamlining the business activities, and enabling data-driven decision making.

In Academic Year 2014, Information Services's collaborations with stakeholders across campus were broader, deeper, and more impactful than ever, as the following major initiatives demonstrate.

- **Learning Management System (LMS) Assessment:** We partnered with stakeholders across campus on an unprecedentedly broad initiative to evaluate a core teaching and learning technology. All OSU students and instructors were invited to participate in product assessments, and their feedback, along with assessments of how the products fit OSU's goals for successful learning and their marketplace positioning, was crucial in selecting Canvas to replace our current Blackboard environment. This is a crucial step in creating Learn@OSU, an ecosystem of technology to support learning for credit, professional, extension and open education.
- **Cooperative Open Reporting Environment (CORE):** Over new 300 reports and dashboards were developed in collaboration with units across campus and support all aspects of the enterprise: research growth, student success and operational excellence.
- **NSF Grant for a dedicated research network:** Our multiyear collaboration with the Center for Genome Research & Biocomputing (CGRB) and the College of Engineering resulted in a \$500,000 grant from the National Science Foundation to build an advanced, 40 Gbps IT infrastructure exclusively for high-performance scientific applications. Student and faculty researchers will be able to produce, analyze, and disseminate massive amounts of data using this network.

In parallel with these major initiatives, Information Services (IS) achieved significant progress across the enterprise.

- We increased network availability to 99.99% uptime.
- We collaborated with architects, faculty groups, and consultants to finalize the design of the new Classroom Building that transforms learning space at OSU. Classrooms in the new building advance student interaction and engagement through innovative floor plans, multiple displays, lecture capture technology and wireless applications.
- We established an Office of Information Security with a mandate to further secure the processing, transmission, and storage of our data in a rapidly evolving technology environment.
- We developed a data storage strategy that will significantly lower the cost of data storage for campus customers while expanding capacity to 800 terabytes in AY 2015.

Units across IS also made many incremental improvements in our systems, our operational effectiveness, and our customer outreach, including those services that have served our community well for many years. Everyone in IS played a role in our success in AY 2014.

# Student Engagement and Success

## Student Taking Academic Responsibility (STAR)

To address the University's goal for improving student retention, the STAR program is a new intervention model for all first year and conditionally admitted international students who go on academic warning and probation. IS developed tracking and reporting tools that help advisors help struggling first year students, including those who are constantly moving between being in good standing and being on academic warning and/or probation.

## Adoption of Google Apps for OSU

The OSU community adopted Google Apps for OSU in a big way and the service is fulfilling its mission to enable learning and collaboration. As of June 30th, 2014, our community uploaded or created 1.2 million documents, and more than 100,000 of these documents were shared with persons inside and outside OSU. All students were moved from the legacy local email system to Google Mail, and many aspects of the service adopted by faculty and staff as well.

## Office 365 Student Advantage

IS laid the groundwork for the Office 365 Student Advantage program that will be rolled out to all OSU students effective Fall 2014. Students will have access to the latest full version of Office 365 Pro Plus at no cost. This program offers students yet another toolset for improved collaboration and learning while helping to lower the cost of attending OSU.

## First Year Student Experience

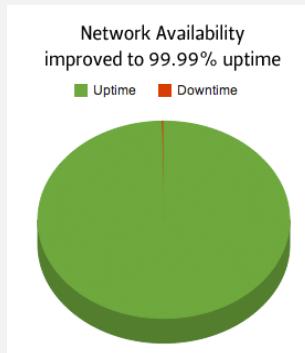
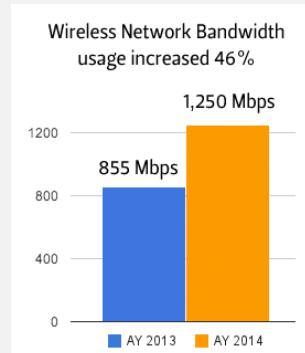
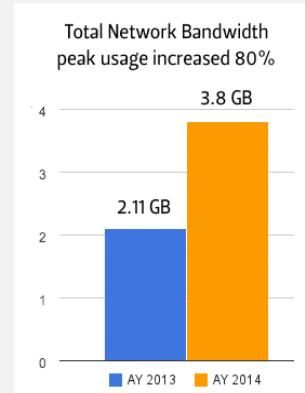
A new First Year Student Experience initiative kicked off in nine START sessions this last summer. This program generates a direct connection with almost all incoming students. Each session included 350 to 450 students using Turning clickers to play the IS-produced "Play It Smart!" interactive game that allows incoming freshmen the opportunity to investigate topics related to health, alcohol and drug issues, technology, and learning.

## Write365

IS collaborated with The School of Writing and Literature and The Center for Writing and Learning to produce Write365, an online utility designed to incentivize WR121 students to practice writing every day. WR121 is a very large required class that's populated with first year students in particular.

## Improving student access to computing and support

Even as demand for network availability increased exponentially – using an average of 2.7 devices per student – support and computing resources were more available to students than ever before, including 99.99% network uptime.



## **Merged Service Desk in the Valley Library**

IS merged the OSU Computer Help Desk Walk-up and Student Multimedia Services's equipment checkout on the Valley Library's main floor. The expanded space offers a single, unified experience to support student use of technology.

## **Faculty Support Services**

In AY 2014, we reached over 600 faculty in face-to-face workshops or webinars and recorded over 3,500 consultation sessions with faculty. Staff offered a range of media fluency workshops and webinars ranging from poster design and visualization, use of media in instruction, creating digital books (integrated media + interactivity), and collaborating on instructional applications of 3D anatomical models.

## **BeaverPrints**

To make it easier for students to work anywhere and print from their own devices, the BeaverPrints service will launch in Fall 2014. This will allow students to pick up printing at a number of conveniently located printers across campus. Software selection and creation of the service was done as a shared project amongst IS, the Library and colleges.

## **Wireless Experience Enhancements**

Several significant expansions in students' wireless experience enhanced the learning experience in and out of the classroom. In the classroom, over 19,000 students now use Turning Technology clickers and faculty are frequently able to manage their presentations and lecture capture while moving around the classroom. Outside the classroom, upgrades to wireless in the Memorial Union and the Valley Library helped students have more options for collaborative work.

## **Meeting the Need for On-Campus Proctoring**

IS helps Ecampus accommodate a growing need for on-campus proctoring. Ecampus used IS facilities such as the Milne computing lab during a year when proctoring grew roughly 10%.

# **Research and Its Impact**

## **NSF Grant for a Dedicated Research Network**

As noted in the introduction, OSU was awarded a \$500,000 grant from the National Science Foundation to build an advanced, 40 Gbps IT infrastructure exclusively for high-performance scientific applications. This infrastructure, commonly known as a Science DMZ, focuses on connecting OSU researchers to each other and their data, but it will also create a platform capable of integrating with Internet2's Advanced Layer 2 Services for the dynamic establishment of dedicated research resources that span the nation. Development of the dedicated research network is being done in collaboration with the Center for Genome Research (Brett Tyler, PI) and the College of Engineering.

## **Updated Standards for the Protection of Human Subject Research Data**

IS partnered with the Research Office to achieve a common set of standards for the protection of human subject research data. As part of this project, the team consulted with researchers to assist in the adoption of those standards and provided awareness training to research teams, including teams of undergraduate and graduate students.

## **Data Center Storage for Research**

Partners such as the Center for Genome Research and Biocomputing are now able to use the IS data storage facility to store vast quantities of data and to better connect to their peers. Storage capacity will expand to 800 terabytes in AY 2015.

## **Outreach and Engagement**

Many of the initiatives described throughout this report are designed to allow people to work productively from any location on any device. While all benefit, those who are not located on the Corvallis campus are particularly well served. For example:

### **Connecting the campus with the state, region and the world**

In AY 2014 staff supported 1,200 to 1,300 web-based video events every term – an average of 17 different events per day. Interactive courses delivered to Cascades Campus, OHSU, and Extension sites connect OSU faculty with students across the state. Administrative meetings, job interviews, and training sessions are streamed to audiences around the world.

### **Increased time for Visitors wireless on campus to 4 hours**

Over 35,000 devices connect to our visitors wireless network and over 650 collaborators connecting via the Eduroam wireless network. Eduroam users have included collaborators from 250 other institutions as nearby as the University of Oregon and as far away as the University of Primorska in Slovenia.

### **Corporate Engagement**

We began to play a supporting role in the University's corporate outreach and engagement strategy. By consolidating on fewer vendors of key products, and deepening our relationships with those vendors, we have begun to have opportunities for inclusion of the University as a case study in corporate whitepapers, to give presentations at company and industry conferences, and to conduct proof of concept tests of new technologies. We expect continuation and expansion of our efforts to create positive publicity about the University, to offer new opportunities for student internships, and early campus access to new technology.

## **Other Initiatives**

### **Middleware Integration**

Our new Middleware Integration team will build a more robust data integration strategy for moving data between systems. This strategy is intended to allow the University to securely and efficiently share data between various systems so that campus clients can begin to deploy applications both in the cloud or on-premise that best meets the business needs of the institution.

### **Desktop & Tablet Management Strategy**

Student Computing Facilities, Community Network, and equipment checkout merged under the same divisional umbrella in late Fall 2013. This realignment allows us to coordinate desktop and tablet management and ensures that students and faculty experience a consistent, safe, secure, and up-to-date computing environment.

## **Identity & Access Management**

IS is incorporating the existing OSU Network ID (ONID) into a broader Identity and Access Management initiative. As such, this work underpins all our other initiatives. By providing secure, personal, and role-based access to systems and services – and by making it easier for departments and colleges to securely create local system privileges based upon a central identity system – we support student learning, research growth, collaboration, and security. Work continues on the system architecture and proof of concept.

## Brief assessment of the efforts in areas in section (1)

The OSU IT strategic plan describes our ambition to create a virtual ecosystem that enables the unbounded creativity of our faculty, staff, and students to flourish. To do so requires us to both invest in the foundational technologies that enable collaboration and data sharing, as well as change our service culture to unleash the power of technology to transform OSU into a University without boundaries.

Our signature initiatives – Google Docs, CORE, a new learning management system, and the Research Network – are examples of our success delivering on that ambition and creating that virtual ecosystem.

The implementation of Google Docs and Gmail for students has enabled faculty and students to create, share, and collaborate more easily. The CORE initiative will put actionable information at the fingertips of all OSU employees, helping them to better do their jobs and assess outcomes. The Research Network will enable “big data” research, connecting our faculty to their collaborators and to computational resources beyond the borders of OSU. It has the potential to differentiate our faculty and enhance their ability to win grant awards. Learn@OSU, an ecosystem of tools and technology, will allow our instructors to evolve their offerings and experiment with new approaches, and allow OSU to increase its educational reach across the state of Oregon and the globe.

Each of these initiatives are transformative, empowering and future-oriented. Each has been a highly collaborative effort of stakeholders from across the university, and this elevated level of collaboration is contributing to the success of the entire enterprise.

Through the year, IS has focused on meaningful and successful collaborations and on service excellence. This focus has enabled faculty and student success on hundreds of projects, has contributed to significantly improved system and network availability (for the second year in row), and has allowed IS staff to focus more attention on value added services rather than on firefighting problems.

Several organizational adjustments were made to support the projects listed in this report, and a focus on metrics is allowing us to better tune our services to meet faculty and student needs as well as optimize service levels. In the coming year, service improvement will continue by adopting industry standard frameworks for IT business processes, and by continuing to evolve services to remove boundaries and better meet the needs of a diverse and changing university.

## Key initiatives to improve administrative efficiencies

### **Enhanced Network Availability – 99.99% Uptime**

IS continued to improve access to learning resources and research data, and network availability improved to 99.99% uptime. Service was improved even as overall bandwidth utilization grew over 80% compared to AY 2013. Traffic to research partners was a major source of this growth.

Key Performance Indicator	FY13	FY14	% Change
Number of Incidents (Service affecting outages)	32	18	Incidents reduced 44%
Minutes of Unplanned Downtime	12,019	6,091	Downtime reduced 49%