



# ANNUAL REPORT '17



**WEBER STATE UNIVERSITY**  
Information Technology

*"We make it possible for people to do the right thing"*

# *Letter from the Vice President*

We are pleased to present the annual report for the Information Technology (IT) Division for the 2016-2017 academic year. This year the focus has been on "student success" for the IT Division and the University.

This report highlights a number of the important, high-impact projects completed this year. Projects included: "student success", training and support, information security, risk, and career ladders/job families. Over fifty (50) of the initiatives and projects were met or significantly moved forward.

The objectives around the IT infrastructure improvements were set back due to a lack of financial resources, typically provided by the University. The same lack of resources will continue to be a challenge for this upcoming year and the IT Division will need to seek support from the University along with outside resources in order to move critical projects forward.

Our Division employees continue to be our greatest asset and their commitment to innovation and computing resource availability is valued. We will continue our efforts to provide employees with the necessary tools to allow them to be successful in providing University support.



Dr. Bret Ellis  
Vice President of  
Information Technology



# IT Infrastructure Services

*Implementing and supporting IT solutions to empower faculty, staff, and students.*



**Mark Green**  
Associate Director  
Infrastructure Services



**Allison Knowlton**  
Manager  
IT Support Services



**Jonathan Karras**  
Manager  
Network & Comm Services



**Mark Buxton**  
Manager  
System Services



**David Fernelius**  
Manager  
Database Services

The main focus for the Infrastructure Services department is to implement and support IT solutions the University has selected. The four teams provide reliable computer systems to run the University's administrative applications to support faculty, staff, and students.

The Network & Communication Services team provides reliable and stable networks and telephone systems so that customers can connect to their needed applications and the Internet.

The Database Services team provides secure, dependable databases to house the University's mission critical data.

The Support Services team is the front line contact for customers. The team helps resolve application problems and any technical issues with the technology being used.

These four teams work very closely together to provide a stable and secure computer infrastructure so that customers are able to be more successful and productive at their jobs and to make sure that



# Infrastructure Accomplishments

Project Title	What and Why	Customers	Impact
<b>Weber State Enterprise Data Warehouse</b>	New dimensions and fact tables were created in the Enterprise Data Warehouse.	WSU Community	Allow for new analytics in the advancement and financial aid areas. The University is now able to analyze FAFSA applications. Involvement in the project: IT, IR, IE, Financial Aid, and Advancement.
<b>Banner 9 Admin Pages</b>	Install all of the modules for the transformed banner 9 admin pages (replacement for banner 8 INB). Modules: Admin Common, Accounts Receivable, Advancement, Finance, Financial Aid, General, Human Resource, Position Control, and Student.	WSU Community	Moving the University off of aging and limited technology. The Banner 9 Admin pages provides a new look and feel with some new functionality. Multiple browsers can now be used and it is mobile friendly.
<b>DR Site (Richfield) Network upgrade</b>	Switches, routers, and firewalls were all upgraded to modern supported hardware. The out dated equipment was EOL from the manufacture and slow.	IT along with the admin side of campus who use the site for DR capabilities	Backup speeds from Ogden have improved drastically. The new equipment supports 10GigE speeds which improves operations and allows for new types of uses of the site.
<b>Davis 10GigE Upgrade</b>	Increased speeds between Davis and Ogden Campuses from 2 Gig to 11Gig. The circuits were due for contract renewal and price points for increased speed. Alignment with our needs for more speed between campuses to be able to allow support for growth over the next 5 years.	Davis Campus	No slowdowns for access to Ogden campus services or the wireless network.
<b>West Center 1GigE Upgrade</b>	Contract up for renewal. Original 80 Mbps speeds to West Center had been overdue with technology changes.	CE/West Center	Internet no longer slow during the busy times of the day.
<b>Outdoor Wireless</b>	Increased outdoor wireless coverage from 8 to 26 access points.	Students	The block party and any other outdoor activity now have improved wireless coverage.
<b>Wattis Building Rewire</b>	Copper cabling in building needed to be renewed to support newer technologies. Old wiring had outgrown its existing closet.	Wattis Building occupants	Future growth and remodels can be supported with modern technology and wiring methods.
<b>IPTV Refresh</b>	Contract for old IPTV system was due. Newer systems were better adapted to today's viewing habits.	Mainly Housing and Various Common TV's on Campus	The new system allows for streaming to personal devices and DVR functionalities. All channels converted to HD.
<b>Service Desk Incidents Handled</b>	The IT Service Desk handled over 14,500 incidents this year.	Faculty, Staff, Students, and WSU Community	The IT Service Desk was the single point of contact to assist the campus community with technical issues, challenges, and questions.



# Academic Technology

*Providing flexible technology services to enhance academic learning.*



**Shelly Belflower**

Director

Academic Technology Services



**Alan Ferrin**

Manager

Creative Academic  
Technology Solutions



**Matt Cain**

Manager

Classroom Technology  
Services



**Jeremy Harvey**

Manager

Academic Web  
Services

The IT Academic Technology Services (ATS) focuses on providing effective technology services to enhance and support academic learning.

Each ATS team focuses on the area of their expertise. The Classroom Technology Services team provides reliable technology and classroom support. The Creative Academic Technology Solutions team provides media to enhance classroom instruction as well as broader media coverage. The Academic Web Services team designs and provides frameworks for academic content in support of academic departments, programs, and events.

The ATS team looks for opportunities to design, promote, and support the University in academic technology endeavors with software and solutions to match needs with successful outcomes.



**WEBER STATE UNIVERSITY**  
Information Technology

# Academic Technology Accomplishments

Project Title	What and Why	Customers	Impact
<b>IT Division Website</b>	The IT Division website needed to be updated with a complete redesign. A committee was formed from various members of the IT Division.	Faculty, Staff, and Students	All content was reorganized and rewritten. A new framework was designed and implemented to allow the user to effectively navigate to find what they are looking for. All IT Departments currently have a webpage. The site is consistent and fully responsive to mobile devices. <a href="http://www.weber.edu/itdivision">www.weber.edu/itdivision</a>
<b>Stromberg Complex Website</b>	The Stromberg Complex website needed to be updated. The content, images, design, and navigation were all outdated.	Faculty, Staff, and Students	All of the content was reorganized and rewritten with a focus on current and prospective students. <a href="http://www.weber.edu/strombergcomplex">www.weber.edu/strombergcomplex</a>
<b>Child &amp; Family Department Website</b>	The Child & Family Department website needed to be updated. The content, images, design, and navigation were all outdated.	Faculty, Staff, and Students	All of the content was reorganized and rewritten with a focus on current and prospective students. <a href="http://www.weber.edu/chfam">www.weber.edu/chfam</a>
<b>Geography Department Website</b>	The Geography Department website needed to be updated. The content, images, design, and navigation were all outdated.	Faculty, Staff, and Students	All of the content was reorganized and rewritten with a focus on current and prospective students. <a href="http://www.weber.edu/geography">www.weber.edu/geography</a>
<b>Health Promotion &amp; Human Performance Department Website</b>	The Health Promotion & Human Performance Department website needed to be updated. The content, images, design, and navigation were all outdated.	Faculty, Staff, and Students	All of the content was reorganized and rewritten with a focus on current and prospective students. <a href="http://www.weber.edu/hphp">www.weber.edu/hphp</a>
<b>College of Science Website</b>	The College of Science website needed to be updated. The current website had not been updated in several years.	Faculty, Staff, and Students	We helped Alicia Miller, from the College of Science, to redesign their website. We also optimized the site to be more responsive to mobile devices. <a href="http://www.weber.edu/cos">www.weber.edu/cos</a>
<b>Radiologic Sciences Department Website</b>	The Radiologic Sciences website needed to be updated. The content, images, design, and navigation were all outdated.	Faculty, Staff, and Students	Reconstructed the website with new images, a modern design, and made it fully responsive to mobile devices. Teamed up with Marketing & Communications to completely re-write all content for the website. <a href="http://www.weber.edu/radsci">www.weber.edu/radsci</a>
<b>Athletic Training &amp; Nutrition Department Website</b>	The Athletic Training & Nutrition Department website needed to be updated. The content, images, design, and navigation were all outdated.	Faculty, Staff, and Students	All of the content was reorganized and rewritten with a focus on current and prospective students. <a href="http://www.weber.edu/atn">www.weber.edu/atn</a>
<b>Virtual Labs</b>	This year many upgrades have been implemented into Virtual Labs, including newer and faster physical servers. The upgrade has increased the throughput and capacity of Virtual Labs.	Faculty, Staff, and Students	Virtual Labs allow us to host the latest versions of software to train and prepare students in their chosen careers. <a href="http://weber.edu/virtuallab">http://weber.edu/virtuallab</a>



# Academic Technology Accomplishments

Project Title	What and Why	Customers	Impact
<b>MBA Classroom Capture</b>	In collaboration with the Davis campus and the MBA program; the CTS department assisted with the equipment upgrade in D2 112 & 113 to include Lecture Capture hardware. This included upgrading to new Touch Panels, Recording and Streaming devices, and Audio equipment. This new equipment would allow for the recording of lectures and also live streaming for different classes which is critical for MBA students.	Davis Campus and the MBA Program	Allows for easy review of materials for students and getting lectures to distant students with minimal effort of the professor. Also, to set a standard for recording equipment across the Davis campus.
<b>Public Facing Classrooms</b>	In an effort to overcome the struggles of technology in public accessible rooms; CTS met with different departments across campus to begin discussions of what it would take to upgrade the equipment to a digital standard.	Student Affairs, Continuing Education, Athletics, Administrative Services, College of Arts and Humanities	Discussions continued with collaboration with the Shepherd Union building to upgrade the equipment in the ballrooms. The upgrade will allow versatility of the ballrooms for expandability, up to 4k. This will make it possible for users to take inputs from any ballroom and display across any of the 4 displays in the ballroom. Phase 2: Will include streaming capabilities.
<b>Completion of Tracy Hall Classroom Installation</b>	In 2016, designs were set-up for the forty-three (43) classroom labs in the Tracy Hall Science Center. During the first quarter of 2017, CTS made sure the equipment was properly installed and programmed to allow faculty to easily use the different equipment. Also, the systems were networked and tied to the Global Viewer Enterprise (GVE). The GVE allowed CTS to monitor the usage of the different projectors and systems. CTE can rotate projectors to extend the lifespan of the projectors.	College of Science	Tracy Hall Science Center has become the standard for classrooms across campus. The installation of programmable and interactive panels, and advanced AV switches, have provided faculty with the necessary tools for instruction.
<b>Jamf Roll Out</b>	JAMF Pro is a Mac Management Solution allowing for greater access to manage Mac systems. JAMF Pro was implemented after a failed implementation of the Parallels Mac Management solution that worked with SCCM. The Parallels Mac Management Client didn't really provide the necessary information and reliability needed to properly manage Mac systems across campus.	All of Campus	JAMF has provided a much higher level of functionality and support for Mac systems across campus. It has saved hundreds of hours for CTC's across campus, easily paying for its cost. Also, JAMF has made it possible for CTC's to manage iOS devices allowing for tracking and control.



# Project Highlight:

## HR VIRTUAL CAMPUS TOUR

A committee of WSU employees was asked to improve the New Employee Orientation program. Although the walking tour of the campus had been a highlight of the old program, it became apparent that technology could reduce the length of the walking tour. Enter the CATS team.

### TARGETED CUSTOMER/GROUP: NEW WSU EMPLOYEES



*"The CATS team was great to work with throughout the project. They were accommodating of last minute changes and put together a high-quality product that we look forward to making available to new employees soon."*

**Vince Crane, HR  
Employment Consultant**



### Background

New Employee Orientation happens every month, facilitated by Vince Crane in Human Resources, and has traditionally included a physical walking tour around campus. This is time consuming and difficult or impossible during poor weather. The CATS team was asked to create a video tour to supplement or replace the physical tour, allowing better accessibility, time and cost savings, and to allow new employees to revisit the tour on their own schedules.



### Solution

CATS expanded on this idea and proposed a virtual tour experience that goes beyond just watching videos. They filmed and edited eight videos highlighting services and locations important to new employees, and then incorporated those within a spherical panorama environment. A new employee is able to virtually travel to different locations on campus, navigate and look around a 360° view, see building names and informational panels, and click and watch the tour videos. The tour can be accessed from a computer, tablet, phone or VR headset.



### Results

The New Employee Tour will be implemented this Fall. It will benefit both new employees, potential employees and the HR department. Benefits of this change include:

- Reduction in the overall length of time of the orientation
- Elimination of lengthy tours on bad-weather days
- Empowering employees to "take" the tour at their convenience
- Enabling employees to get more details on their own from those areas of greatest interest





# IT Business Services

Communicating IT planning and strategic vision through policy, projects, training, events and financial planning



**Shelly Belflower**  
(Interim) Director  
IT Business Services



**Heidi Munk**  
Directed Projects



**Ty Naylor**  
IT Marketing and  
Training Manager



**Jared Van Orden**  
IT Finance and  
Office Manager



**Nancy Jarvis**  
Policy and Planning  
Administrator



**Vacant**  
Project and Portfolio  
Administrator

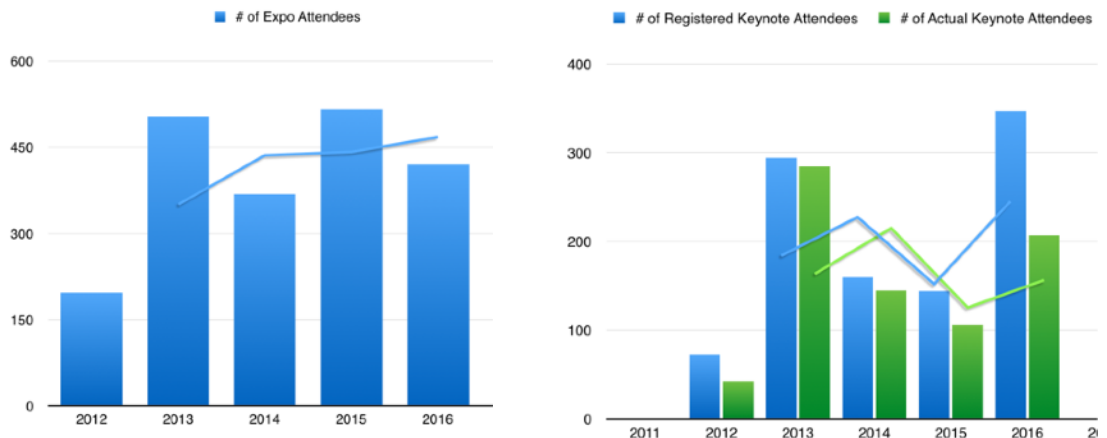
The IT Business Services (ITBS) department focuses on communicating strategic information and planning through products, policy, training, and events to our Weber State University community and constituents. Our vision includes 1) ensuring customers are aware of how to request IT services; 2) providing the conduit for customer feedback to help enact improvement on products and services; 3) ensuring every employee receives the training they need or access to training; and 4) ensuring employees know and understand the policies and procedures for using technology. We provide financial overview and solutions for IT projects.



## WILDCAT TECHEXPO



### Wildcat Tech Expo by the Numbers.



# IT Business Services Accomplishments

Project Title	What and Why	Customers	Impact
<b>Wildcat Tech Expo</b>	The IT Division, in partnership with the Wildcat Store, hosts the annual Wildcat Tech Expo. World renown companies attend to market their products and services.	Faculty, Staff, and Students	Thousands of students, faculty, and staff participate in the annual Expo. Classes are taught by vendor experts to develop skills on popular market software from Microsoft, Adobe, and Apple.
<b>IT Leadership Retreats</b>	Leadership opportunities and training are provided for talent development in the IT Division. In order for the Division to meet the future demand of the University, it is critical to develop future leaders from our existing pool of employees.	IT Division Members	The Bi-annual meeting were attended by 20+ current employees and possible future leaders of the IT Division.
<b>Career Ladders</b>	Weighted Activity Matrix for assigning compensation values in the IT Division. Soft Skills Matrix for assigning compensation values in the IT Division for skills being learned as part of individual development for PREPs.	IT Division Members	Anticipation of increased morale and staff retention to occur with the implementation of the ITD Employee Compensation application. The IT Divisions goal is that every employee will know not only current expectations but future expectations for job advancement.
<b>IT Trainings</b>	Provided campus employees and staff over 30 facilitated IT classes in a variety of productivity and creative software packages.	Faculty, Staff, and Students	Increased visibility of IT training and to market the Division's desire to help with university software training needs.
<b>JIT Training</b>	To provide a brief overview of software features and functionalities.	Faculty, Staff, and Students	Allows immediate and 24/7 access and exposure to various software catalog functions. Coming Soon!
<b>Adobe Connect</b>	Adobe Connect provides a close mimic of a facilitated classroom experience easily provided online.	Faculty, Staff, and Students	Allows instructors to provide non-local students with an online experience very similar to a traditional facilitated classroom.
<b>IT Surveys</b>	Participated in local, national, industry, and across industry surveys. The data analysis contributes to the industry, various disciplines, and influences IT Division decisions for future planning.	HR, IT Governance Council (ITGC), Data Executive Governance Council (DEGC), IT Division, and President's Council	These surveys help to calibrate IT services, establish comparable salaries, and provides new ideas for improving the IT Division.



# Application Development Services

*Developing and managing critical applications that support student success, teaching, and learning and promote institutional effectiveness.*



**Peter Waite**

Associate Director  
Application Dev Services



**Roy Bradburn**

Manager  
Student Application Dev  
Services



**Ron Jensen**

Manager  
Admin Application Dev  
Services



**Ben Barraza**

Manager  
Web Application Dev  
Services



**Kevin Goodrich**

Manager  
CE Dev  
Services

The primary focus of the Application Development Services department is to provide the best possible digital experience and application access for students, faculty, staff, and the community.

Application Development Services is comprised of three teams: Student Application Development, Administrative Application Development, and Web Application Development. The Student Application Development supports many student systems, including Banner, and develops applications for partners in Admissions, Registration, Advising and Continuing Education. The Administrative Application Development provides support for Banner's administrative applications and develops custom applications for partners in Human Resources, Payroll, Facilities Management, Finance, Accounts Receivable and others. The Web Application Development provides support to the university eWeber portal, management of the Weber.edu web site, such as Site Manager, and campus support for mobile apps. The Continuing Education Application develops, implements, and manages applications for Continuing Education, including marketing, course registration, and other support related activities.

Each of these teams work together on projects to rapidly meet the needs of campus partners, while maintaining functional expertise on systems and applications in their respective areas.

```
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  <meta name="robots" content="noarchive" />
  <meta name="robots" content="nocache" />
  <meta name="robots" content="noimageindex,nomediaindex" />
  <meta name="robots" content="noimageindex" />
  <meta property="og:title" content="web" />
  <meta property="og:type" content="website" />
```



# Application Services Accomplishments

Project Title	What and Why	Customers	Impact
<b>Graduation MAPs</b>	GradMAPs is an online tool for students, faculty, and advisors to provide students a semester-by-semester "path" to graduation. Before the implementation of GradMAPs in the summer of 2015, students who wanted a "path" to graduation had to contact the academic department or visit with an advisor to know what courses to take and in which semesters.	WSU Students	"The online tool, with its easy user interface, is a huge benefit to students! This is a major step forward in helping students plan for graduation." <b>Bruce Bowen</b> Associate Provost for Enrollment Services
<b>ALEKS</b>	ALEKS is a web-based, artificially intelligent math assessment and learning system, which uses adaptive questioning to quickly and accurately determine exactly what a student knows and doesn't know to place them in the correct math course. ALEKS then instructs the student on the topics he or she is most ready to learn, allowing the student to place in higher classes, saving money and time for graduation.	Provost Office	"To date, over 650 students have used ALEKS and its use is expanding and will be used by Concurrent Enrollment students this fall." <b>Eric Amsel</b> Associate Provost for Academic Programs and Assessment
<b>KEAS - Keys and Electronic Access System</b>	Allows faculty and staff to request access to a building or room. The Keys and Electronic Access System (KEAS) sends the request through approval queues and then to the key maker or area access coordinator.	WSU Faculty and Staff	Allows the employee to pay for the key deposit through credit card, payroll deduction or inner department billing. The KEAS system allows the employee to see what keys are assigned to them.
<b>Major Pages</b>	The Major Pages project specifically encourages students to explore all the major offerings at WSU through interests, career prospects, and ultimately to discover the perfect major for them. This will serve as a hub between disparate systems from the web, recruitment, application, and major declaration in assisting students to make the right decision at the right time.	WSU Students	"The Major Pages project is critical to WSU's recruiting efforts. These pages provide a window into the academic offerings of the university and are at the forefront of our academic information/marketing efforts to prospective students." <b>Bruce Bowen</b> Associate Provost for Enrollment Services
<b>DUO Mobile Application</b>	WSU rolled out the DUO Mobile Application to all faculty and staff. DUO protects sensitive data and systems by adding an additional layer of security on every login attempt made on campus. This two-factor system notifies the user whenever a login is made using their Wildcat Username and password. The user is then notified and asks them to verify the login using their cell phone or a key fob.	WSU Staff and Faculty	The Duo Mobile application made it easier for faculty and staff to enroll in our Two-Factor authentication system. Reducing the need to work with staff on a one to one basis.
<b>Transfer Articulation</b>	Currently it takes on average from eight to thirty-five business days and sometimes longer, to complete the transfer articulation process. This delay limits student's ability to make critical decisions regarding admissions, registration, financial aid/scholarships, advising and overall transferability to Weber State University. The overall solution is saving the Registration on average about 3 hours per day.	Registration	The transfer articulation project IT has completed for the Office of the Registrar has significantly increased the efficiency of the articulation process. The students benefit the most from the system because they are able to receive timely advising based on their fully articulated transfer work.
<b>Prior Prior Year</b>	This was a one year issue to provide Financial Aid eligibility using tax records from 2 years ago as opposed to last year. The solution was to use 2015 tax records for 2016/17 and 2017/18 Financial Aid eligibility. The Department of Education would send a C-Flag with a value of 399 which identified people using the wrong tax year.	Admissions	Enables students the ability to receive federal funding in a timely manner.



# Project Highlight:

## TRANSFER ARTICULATION

Transfer Articulation was a manual process that took on average from eight to thirty-five business days and sometimes longer, to complete. Frequent delays and errors occurred hindering student progress.

### TARGETED CUSTOMER/GROUP: REGISTRATION



#### Background

The delays would limit the student's ability to make critical decisions regarding admissions, registration, financial aid/scholarships, advising and the overall transferability to Weber State University.

*"Thank you so much for following through and getting this application. It is still amazing to me what you guys were able to accomplish."*

**Ruth Little**, Enrollment Specialist III



#### Solution

The project team worked to understand the ServiceNow application that was currently near completion. The team took the knowledge learned from the ServiceNow application and with the help of the customer expanded on its functionality and provided a solution that met all the requirements of the existing request plus as much additional functionality that could be added and still stay within project scope.



#### Results

From November 23, 2016, to August 22, 2017:  
13,815 articulations have been sent to departments for evaluation. Within less than a day, 10,310 (74.68%) of those articulations were completed. By the third day, 13,191 (95.5%) of the articulations were completed.



# Project Highlight:

## ALEKS INTEGRATION

ALEKS is a web-based, artificially intelligent math assessment and learning system, which uses adaptive questioning to quickly and accurately determine exactly what a student knows and doesn't know to place them in the correct math course

### TARGETED CUSTOMER/GROUP: WSU STUDENTS



*“To date over 650 students have used ALEKS and its use is expanding and will be used by Concurrent Enrollment students this fall.”*

**Eric Amsel,**  
Associate Provost for  
Academic Programs and  
Assessment



### Background

ALEKS instructs the student on the topics he or she is most ready to learn, allowing the student to place in higher classes, saving money and time to graduation. For example, students have jumped from Math 950 to 1010 in a semester saving them two classes (Math 950 and 990) and two semesters of class work.



### Solution

The IT division created the integration between WSU and ALEKS for students to use a single sign-on protocol and for Banner to retrieve students ALEKS scores from proctored exams. Such information was made available on the Advisors' Dashboard allowing advisors to direct students to the most appropriate next math class.

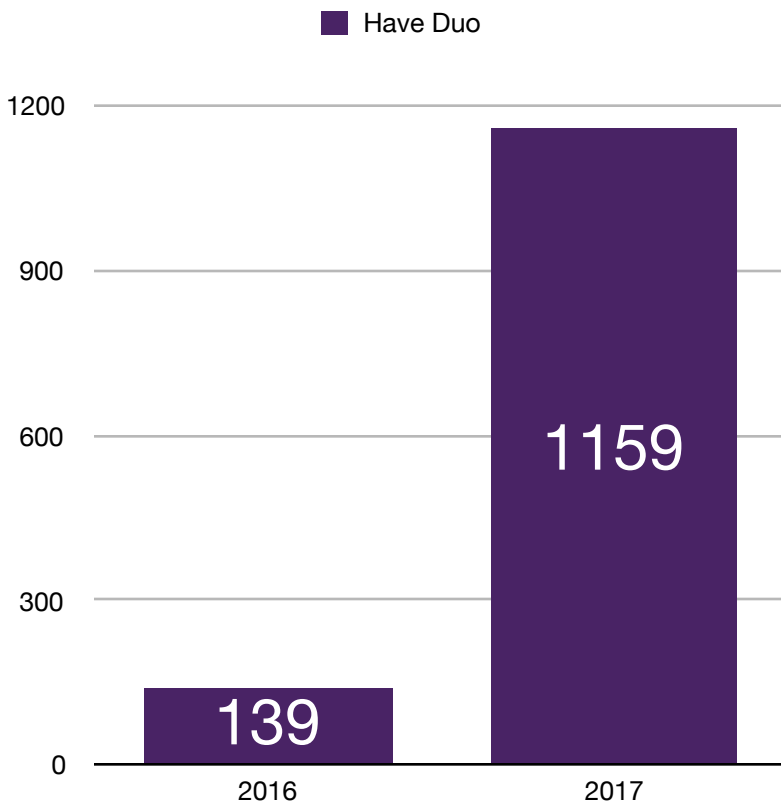


# Information Security Office



**Andrea Grover**  
Manager  
Information Security  
Services

The Information Security Office (ISO) goal is to provide information, resources, and tools to provide confidentiality, availability, and integrity of University data. We accomplish this by developing and modifying policies and procedures, conducting an annual risk assessment, providing training to University employees, and working with multiple groups and individuals across the University and other institutions to obtain and disseminate information and resources. The ISO also works closely with internal groups to resolve identified risks and mitigate potential risks.



# Information Security Accomplishments

Project Title	What and Why	Customers	Impact
<b>Duo</b>	Coordinated with the IT Service Desk and IT Communications groups to implement a process to provide two-factor security for all employees with access to sensitive data or systems.	WSU Community	Improved security by reducing the potential of compromised accounts allowing access to data or systems.
<b>Network Scans</b>	Monthly network security scans are conducted to reduce the number of vulnerabilities present to the internal and external interfaces. The scans provide information to the responsible parties as to what systems need to have system or software patches implemented to remove the chance of the system being compromised through improperly patched systems.	WSU Community	Improved security of University resources by finding present vulnerabilities and, working with the responsible parties, resolving the vulnerabilities.
<b>Training</b>	Continued to provide monthly information security awareness training as part of the New Employee Orientation training program. The ISA training is available to all employees and a special session for all new supervisors. Training topics were also offered on two-factor to interested groups.	WSU Community	Improved security through user awareness.
<b>Risk Assessment</b>	Conducted the annual security risk assessment, incorporating recommendations from the information security task force, data security stewards and CTC members. Risks were also evaluated from internal and external incidents and industry recommendations. The risk assessment provides a ranking system to determine which information security risks are greatest for the University.	WSU Community	A reduction of risks to the University by remediation or resolution of identified risks, in particular the risks evaluated as the top five.







**R**ESPOND  
**I**NNOVATE  
**S**ECURE  
**E**MPOWER