

# Evolution

Texas Woman's University

The Office of Technology Annual Report 2015-2016



Iris Du, Learning Technologist, assists a student in the Houston computer lab



## Evolution

2 Beyond Improvement  
*A message from the CIO*

4 Education

8 Modification

12 Elevation

20 Maturation

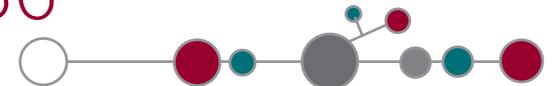
24 Saturation

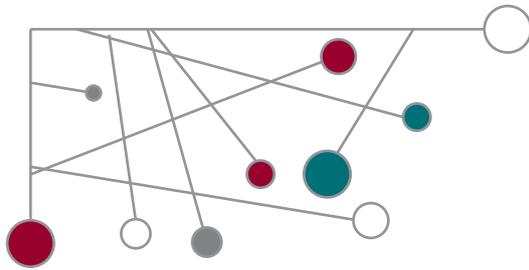
28 Collaboration

32 Innovation

34 Transformation

36 Anticipation





“It is not the most intellectual of the species that survives; it is not the strongest that survives; but the species that survives is the one that is able best to **adapt and adjust** to the **changing environment** in which it finds itself.”

-Charles Darwin

### **Delivering solutions to a few people is a simple task.**

The solutions can vary, have flexible designs, and costs are generally manageable. Delivering solutions to an enterprise is a complex endeavor. Enterprise solutions have to try to meet everyone's need but commonly cannot. Adding people and processes increases risk. Solutions implemented for an enterprise are also extremely expensive. Central standards are employed in order to provide the most features, while reducing risk, and controlling cost. TWU expertly uses **standards to provide great service, reduce risk, and stretch our resources**. The downside of standards is that, by their nature, they prohibit variation, creativity, and innovation. This past year, The Office of Technology strived to reflect on our standards to see if there were ways to improve.

We have hundreds of classrooms at TWU. Imagine the implication of having unique technology (i.e., non-standard) in all of these rooms. Each support person would have to be knowledgeable on all systems. Purchases would not be able to take advantage of volume pricing. Faculty would have to learn to use many versions of teaching technology. Back-end processes would have to be integrated with numerous systems. When trying to manage hundreds or thousands of something, standards make sense for many reasons. However, what is the point of having classroom technology if it does not enhance learning in a particular content domain? We began to challenge this balance between standards and innovation on many fronts. For example, we partnered with the Provost's TARGET grant program looking for opportunities to deviate from our set standards. We awarded grants to three faculty teams to **create innovative classrooms**. These rooms will serve as a test of our ability to vary, adapt, and be flexible.

Putting a theme on our strategy for the year is difficult. We took risks that did not always produce great outcomes. We moved forward and sometimes backward. Certainly we attempted to continuously improve the services we offer. We also spent a good deal of our resources on maintaining solid operations. In the end, I believe the most significant change to last year was **our focus on evolution**. We want to evolve, not just improve.

Robert B. Placido

Associate Provost for Technology & CIO

# Technology Dashboard

## WHO WE ARE

83 Technology professionals

## WHO WE SUPPORT<sup>1</sup>

15,687 Students (fall)

455 Professors

384 Adjunct faculty

288 Graduate assistants

882 Staff

## OUR ENVIRONMENT

3 Campuses

4,186 Desktop computers

1,073 Laptop computers

728 Tablet computers

539 Printers

416 Virtual servers

104 Physical servers

1,790 Single-line phones

968 Multi-line phones

142 VoIP phones

213 Fax lines

1,033 Infrastructure phone lines to support building facilities

↑ 20%

increase in **peak wifi usage** over FY15 from 1GB to 1.2GB

↑ 37%

increase in **wireless access** points

↓ 39%

decrease in **pages sent to printers** from 2012-2016

↑ 283%

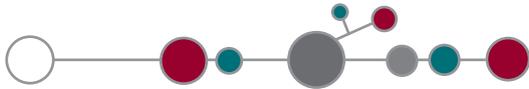
increase in number of **Lynda.com courses** completed compared to prior year

## Notable Changes by Fiscal Year

	2012	2013	2014	2015	2016
Open Lab Hours	n/a	235,181	231,943	321,700	253,968
Pages Sent to Printers	9.5 million	9 million	8.5 million	6.7 million	5.8 million
Classroom Lab Hours	71,580	130,959	200,729	201,844	502,880
Videoconferences	688	560	747	1,270	n/a

Note: Data estimated using best information available at time of publication

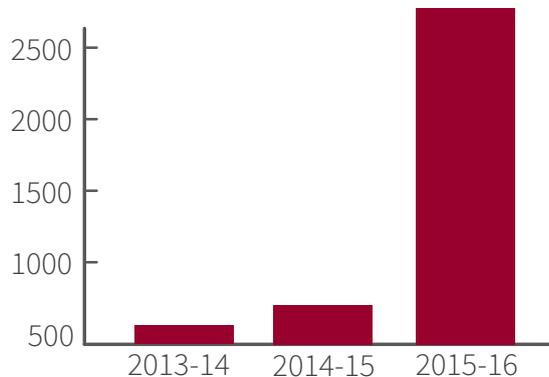
<sup>1</sup>TWU Fact Book (<http://www.twu.edu/institutional-research/fact-book.asp>) and TWU Campus Stats Report (<http://www.twu.edu/compensation-classification/twu-campus-stats-report.asp>)



# Education

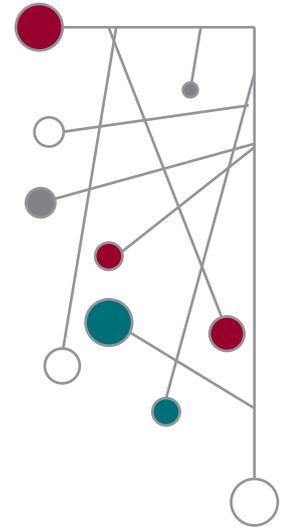
Education is the primary goal that drives everything at Texas Woman's University. In 2015-16 the Office of Technology made improvements in the education of its staff while also providing learning opportunities for the TWU community. The department participated in a pilot for a new LMS and made improvements to classrooms that directly benefit TWU students.

**283%** increase in **Lynda.com** course completion certificates compared to last year



## Increasing Learning with Lynda.com

TWU Technology released single-sign-on for Lynda.com in February 2016. Lynda.com provides **24/7 on-demand, mobile-friendly training** on everything from software to communication skills to leadership training. Lynda.com has been available to the TWU community (faculty, staff, and students) for a couple of years, but prior to this year, users had to create additional accounts. Single-sign-on allows users to access Lynda.com with their Portal credentials. Beta-testing by the department ensured that existing accounts' certificates, etc., transferred to the Pioneer accounts so that no one lost their Lynda.com history.



Teaching and Learning (TLT) with Technology collaborated with the Technology student team, the Technology infrastructure team, and the learning technologists in Denton, Dallas, and Houston to prepare for a pilot implementation of the **Canvas learning management system** (LMS). The Technology student team worked with the Canvas system administrator to integrate Colleague information with Canvas. Staff in Technology infrastructure also worked with the Canvas system administrator to guarantee that Canvas would be supported with server space. The learning technologists developed a webinar to introduce students enrolled in the pilot sections of the Canvas LMS. They hosted a total of nine webinars the week before classes started, the first week of classes, and the second week of classes. Mindful of student schedules, the webinars included two 6:00 pm sessions.

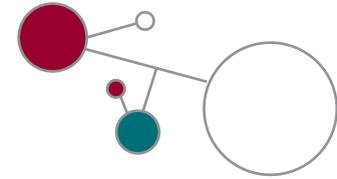
Additionally, the **learning technologists** provided the faculty teaching a Canvas section with useful links and other getting started information. TLT and the Office of Technology further worked together to develop a Canvas LMS entry in the Technology Service Catalog and to include helpful articles in the Technology Knowledge Base. As it does for the Blackboard LMS, the Technology Service Desk provides tier-one support for Canvas LMS questions, and Heidi Collins, Associate Director of Learning Systems, was great at providing that team the information they needed to be successful.



**4,675** Blackboard tickets processed in FY16. The Technology Service Desk provides tier-one support for Blackboard service requests.

## Learning Technologists

Technology's Learning Technologists collaborated on two projects to improve the user experience of TWU faculty, staff, and students. In November, they streamlined **instructions** for the videoconference LifeSize units across all three campuses. Look for new, easy-to-follow directions in LifeSize rooms. This team also worked to test the December **Blackboard Upgrade** and to develop student support documentation for its new features.



## Professional Development for Administrative Support Staff

Since 2014, the Office of Technology's administrative support staff have organized professional development opportunities for administrative support staff throughout the University. What started with a small group from Academic Affairs has since **expanded to include all administrative support staff** in Denton, Dallas, and Houston from all of the divisions in the institution. Dr. Robert Placido, Associate Provost for Technology and CIO, has provided support for these efforts through funding.

This spring, over 100 administrative support staff were invited to attend a full-day workshop on professional development. The event was organized by the Office of Technology who also funded the event and provided technology support staff. Dozens of staff took advantage of the training opportunity. The event was held off-campus at Ashton Gardens which **allowed participants to focus their attention** on the speaker and activities of the day without the distractions of work email and other interruptions. Following the event, a listserv was created for administrative support staff so that they can continue to communicate and collaborate.

Administrative support staff, Lisa Valle, Laura Beck, Adelina Spaulding, Judy Pentecost, Melanie Baker, and Lori Kennedy enjoying lunch and getting to know one another at the professional development day



## Sharpening the Saw: Professional Development of Technology Staff

TWU Technology staff benefit from a department culture that emphasizes continuous improvement. **Professional development opportunities** include technical training to enhance expertise, and the department also offers annual training tracks. In addition, the department purchased licenses for staff to use Pluralsight, which offers unlimited online developer training, creative, and IT courses authored by industry experts.

## 2016 Certificates in Communication

### EMOTIONAL INTELLIGENCE TRACK

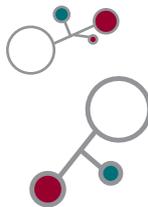
Self-Assessment: How Emotionally Intelligent are You?  
Coursera: Inspiring Leadership through Emotional Intelligence

### PROJECT MANAGEMENT TRACK

Coursera: Initiating and Planning Projects  
Live: Project Management in TeamDynamix

### ITIL IN ANY ROLE TRACK

Lynda.com: ITIL Foundations  
Live: ITIL in Any Role  
Self-Assessment: Applying ITIL Quiz



## Lynda.com Courses Completed

**221** courses watched and completed by Office of Technology staff in 2015-16

## Plural Sight Courses

**56** users      **150** courses viewed  
**72** courses completed      **344** hours viewed

## Emotional Intelligence in IT<sup>1</sup>

Studies demonstrate that IT professionals are “one of the least engaged populations within organizations.”<sup>2</sup> Research suggests that improving emotional intelligence among staff can lead to greater employee engagement, which, in turn, results in **higher productivity and lower turnover**. By encouraging its staff to develop emotional intelligence and improve interpersonal skills, the Office of Technology contributes to the greater success of Texas Woman’s University.

<sup>1</sup>Pittenger, Linda M. (2015). Emotional and social competencies and perceptions of the interpersonal environment of an organization as related to the engagement of IT professionals. *Frontiers in Psychology*, 6, 623. 10.3389/fpsyg.2015.00623

<sup>2</sup>Treadwell, D., and Alexander, P. (2011). *Money isn't all that matters: Strategies for attracting and retaining technical professionals*. Skillman, NJ: Blessing White.



# Modification

The nature of technology is change. Rapid and exciting change. An IT department that resists change fails the community it serves. Every day, staff in the Office of Technology work to modify its services in line with ITIL's cycle of continuous improvement. The projects on these projects illustrate a few of these changes.

## Reading Recovery Room Upgrades

The classroom and labs team worked with the Reading Recovery program to **redesign a room to meet pedagogical needs** with technology solutions. TWU Technology had worked with the Reading department a few years ago, but that technology was cumbersome to use and didn't function in accordance with faculty use. Changes were made: equipment that had been removed was moved back in. Screens were moved to increase functionality. Students are now able to observe interactions through video stream in a classroom. Faculty needs and TWU Technology expertise in collaboration resulted in the best use of classroom space.

## Online Workflow for Degree Plan Changes    Improved Network in Houston

Prior to this year, the degree plan form was on paper. If changes were needed, it was an inconvenient process. Dr. Michelle Buggs, Associate Provost for Undergraduate Studies and Academic Partnerships, requested that the **process be moved online**. The business and web apps team worked with Dr. Buggs to create the online workflow. Through the new process, Buggs's staff can see comments and where the form is in the process. Dr. Buggs notes that this is a faster process that is easier to use because everything is online.

Significant changes were made in Houston to the **wireless and wired networks**. The number of wireless access points at the Houston Center increased by 84%, from 31 to 57. This improves the signal quality and increases wireless availability. The uninterruptible power sources were replaced on each floor, as were the server cabinets. Further, network switches were distributed on each floor. An advanced network hub, a network switch forwards data only to one or multiple devices that need to receive it, rather than broadcasting the same data out of each of its ports. The Houston network is now faster and more reliable.

## Audio Upgrades

Pioneer Hall 328 received an audio makeover this year. It might be called the installation of a fierce, **bumping sound system**. Two 12-inch speakers were mounted on the wall and a subwoofer was installed. A sweat-proof fitness headset was procured for the instructor. Such upgrades allow for these students to have some seriously fun fitness in the classroom.



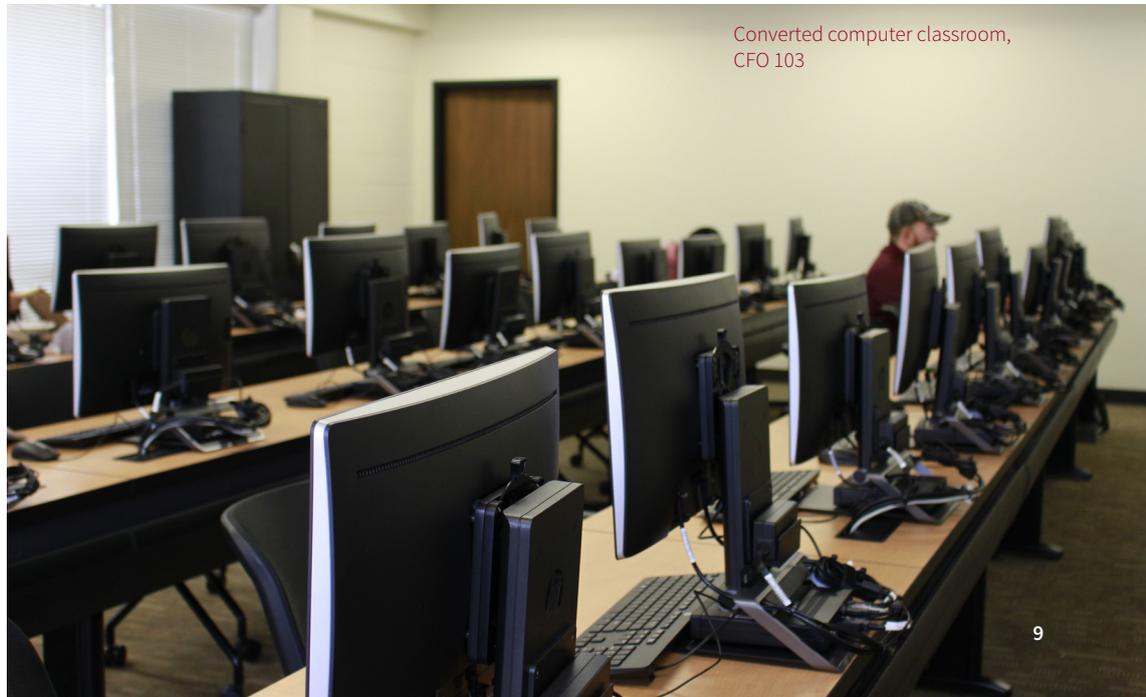
Students prepare for a dance class in a space with premium audio technology



## Pivoting to Meet Student Need

As reported by University Scheduling, TWU's classroom facilities are surpassing ninety-percent use—a situation that makes scheduling classes an interesting challenge.

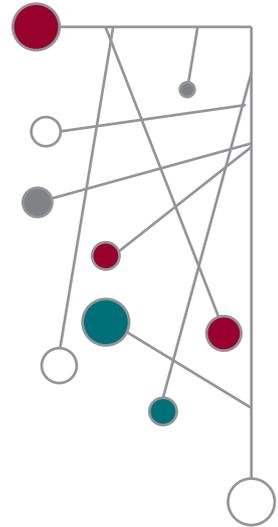
In response to **instructional needs and requirements**, the Office of Technology renovated CFO 103 in summer 2016 to be available as a computer classroom.



Converted computer classroom, CFO 103

# Classroom and Conference Room Upgrades and Improvements

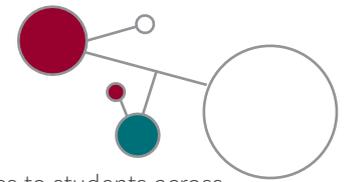
<b>ACT</b>	<b>ASB</b>		<b>HDB</b>	<b>MUS</b>	<b>HOUSTON</b>	<b>DALLAS</b>
218	101	301	101	314	1120	1010
301	103	302	200		3115	2102
706	104	303	300	<b>SH</b>	3310	3514
1012	105	304	309	105	3314	4102
11th	201	305		202	3318	4104
	202	<b>BA</b>	<b>MCL</b>	412	5117	4302
	203	231	101	419	5215	
<b>ART</b>	204		405		5410	
110	205	<b>CFO</b>	915		6314	
	207		916			
	209					
	211					



An upgraded Houston classroom



HDB 101, a specialty classroom



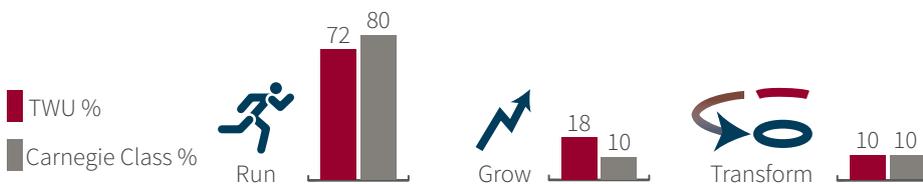
## Making Space for Students

TWU Technology is committed to providing equitable services to students across TWU's three locations. As described in last year's report, Dallas' computer lab features two collaboration stations which allow students to work together on group projects. Houston's technology team faced a dilemma. They didn't have a way to create a collaboration station in their computer lab without sacrificing much needed stand-alone PCs. Using a **student-centered approach to service**, Carlos DaSilva, Campus Manager in Houston, moved his staff into new spaces and converted their former offices into collaboration rooms for students.

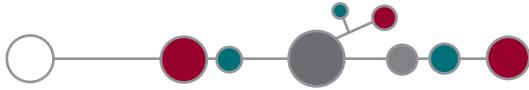
## Student Teaching and Internship Forms 3.0

Three years ago, the College of Professional Education made a move toward paperless workflow with forms required of supervisors of student teachers and interns. TWU Technology originally collaborated by providing iPad training for the participating instructors. Last year, Adobe FormsCentral closed, and a new solution was needed. Facing a short deadline, TWU Technology helped to create Google Forms with a script to deliver form data to the program administrator for distribution via email. This year, TWU Technology built **custom web forms and SQL reports** to deliver the form data for distribution and reporting.

## Demonstrating Growth



Compared with peers in its Carnegie Class, TWU Technology spends less on running operations and **more on growth**, according to *Educause* data. Like its peers, TWU Technology dedicates 10% of its spend on transformative solutions and services.



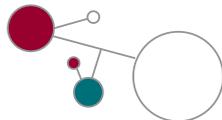
# Elevation

While technology necessitates change, moving to the next level is optional, sometimes a luxury. Through strategic efforts, the Office of Technology made strides this past year to improve its services beyond maintenance and upgrade operations. These efforts required collaboration and innovative thinking. Examples of these projects, featured on these pages, include paperless workflow, software upgrades, classroom renovations, and new software offerings.

## Making Offsite Connections Easier

Anywhere confidential information is transported across a computer network it needs to be protected from public access. Institutions, such as Texas Woman's University, use several methods to secure confidential information, including firewalls, authentication, data encryption, etc. Unfortunately, some of these security technologies prevent authorized computer users from accessing the data they needed if they were outside of the TWU network. A virtual private network (VPN) helps solve remote access issues while keeping **confidential data secure** as it is transferred across a public network. Furthermore, a computer running TWU's VPN client appears to be connected locally to the TWU network.

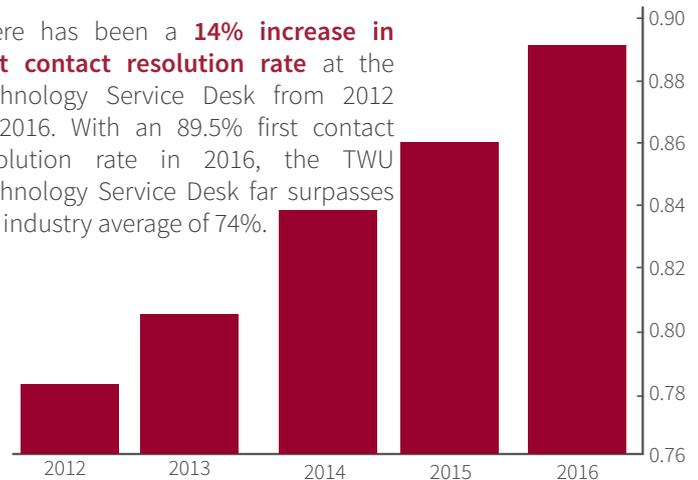
This year, the Office of Technology moved from a paper form to an online workflow for VPN access requests. The VPN solution was also updated to the Cisco Anyconnect Security Mobility client. Both changes allow for easier access to the VPN service that enables TWU employees to be more productive and secure.



## Improving Service

**90%** of TWU employees surveyed reported satisfaction with the Service Desk's ability to support their issues & problems. The same employees ranked the Service Desk as the **most important service** offered by TWU Technology.

There has been a **14% increase in first contact resolution rate** at the Technology Service Desk from 2012 to 2016. With an 89.5% first contact resolution rate in 2016, the TWU Technology Service Desk far surpasses the industry average of 74%.

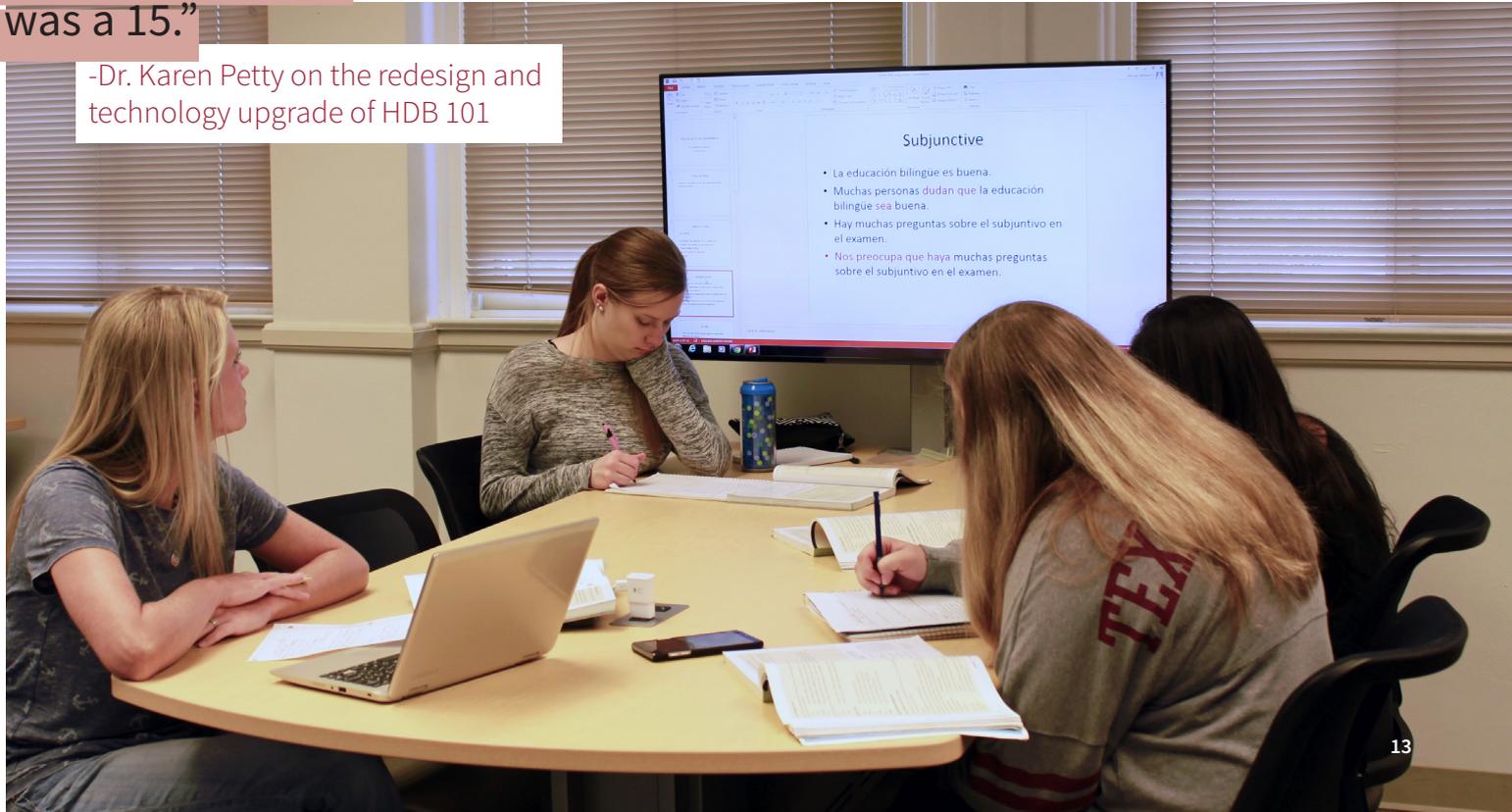


## A Teaching Lab Powered by Technology

It is critical that faculty have the opportunity to investigate the breadth of technology solutions to meet their teaching needs before equipment is purchased and installed. When Dr. Karen Petty, Professor and Chair of Family Sciences, realized that an iPad project wouldn't meet her pedagogical needs, she turned to TWU Technology for support. Dr. Petty and colleagues had attended a conference to visit with vendors and learn about technology. Leadership in the Office of Technology invited additional vendors to campus so that the **faculty were able to explore all of their technology options**. In addition to technology support, TWU Technology also helped the faculty source funding for the project and provided training for faculty and students.

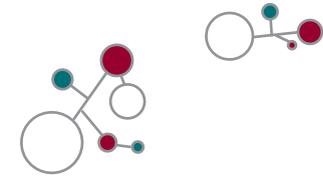
“On a scale of 1 to 10,  
this was a 15.”

-Dr. Karen Petty on the redesign and technology upgrade of HDB 101





Sarah Kate Henderson, Associate Registrar, Bobby Lothringer, Registrar, and Patrice Armor, Senior Manager Applications Development, work together to improve business processes for TWU students and employees



## Colleague Degree Audit & Student Planning

Technology's Enterprise Applications teams have worked closely with the Registrar's office to make two Colleague applications available to the University. Degree Audit will replace DARS, the current degree audit software. It is critical to TWU students that they **enroll in the appropriate courses** to complete their degrees on time. In a true collaboration, the Registrar's staff coded the degree requirements and the Technology student team managed the technical implementation.

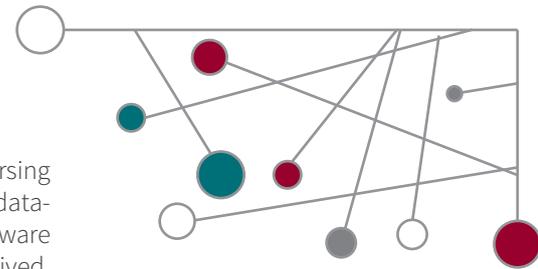
The second application, Student Planning, provides **tremendous opportunity for the University**. The application gives students an easier way to plan their paths to graduation. While also providing a communication tool between students and academic advisers. Further, academic leaders will be able to better plan section offerings to align with student needs. The application has prerequisite and corequisite courses built-in, along with course rotations, so that TWU's students can successfully plan out their coursework.

When asked what TWU Technology could do to improve its relationship with his office, Bobby Lothringer, Registrar, said that he is highly satisfied with the service he receives from the Office of Technology. He added that the **department needs more resources** to meet the demands placed upon them.

## twu.edu/technology

The Office of Technology reorganized from a division of multiple departments to a department of unified teams in 2012. Since then, TWU Technology has undertaken a number of actions and projects to **consolidate and streamline its services, staff, and information**. In 2016, the department released its new website: [twu.edu/technology](http://twu.edu/technology). The introduction of a service center allowed the department to unify its web presence to a single site using the new TWU template with responsive design.

The new site has no subpages; rather, it **links directly to the service center**, connecting the TWU community to services, knowledge base articles, and FAQ. Featured services are listed, along with Technology Service Desk contact information and information about the Office of Technology, such as its organization chart, mission and values, and the CIO's blog and twitter account. A final project to unify TWU Technology will be to move legacy SharePoint content to new locations that are centralized and easily accessed.



## Nursing Research Computer Lab

TWU's College of Nursing has seen rapid growth in its grant awards the few years. As such, Nursing faculty required **better performing computers to analyze data** and crunch numbers, big data-style. The Office of Technology worked with the Denton Nursing faculty to find the hardware they needed. A test machine was ordered for the faculty, but by the time the machine arrived, there were bigger, better machines available—a phenomena familiar to those who work with technology. In the end, a model was selected, and TWU Technology installed the machines and the software, which included Tableau, a data visualization application.

## Empowering University Advancement

Originally implemented in 2013, Raiser's Edge is an application that supports University Advancement's efforts on behalf of TWU. The newer version is **a cloud-based application**, allowing Advancement officers to access the system on the road and all the data are in real-time. The business applications team worked closely with Advancement staff to implement the upgraded application.

The business and web apps team also worked with Advancement to install Reeher. The Reeher Platform is a shared fundraising management system designed exclusively for higher education, serving institutions of all sizes. It is the only shared management system that provides insight and tools to drive consensus and builds trust to unify strategic direction. The Reeher Platform software solution provides **predictive models, productivity tools, metrics, reports, and peer benchmarking** to help advancement organizations work more efficiently.

Advancement relied upon Technology staff for support with a handful of other projects, including a phone-a-thon and an alumni directory. Through collaboration and support, TWU Technology advances Texas Woman's University.

## Technology Demand Increases

Demands for technology continually increase. When one demand goes down, such as number of kiosk users, another increases, such as peak wifi usage. These two metrics demonstrate the increased demand for technology; similar examples appear in various places throughout this report.

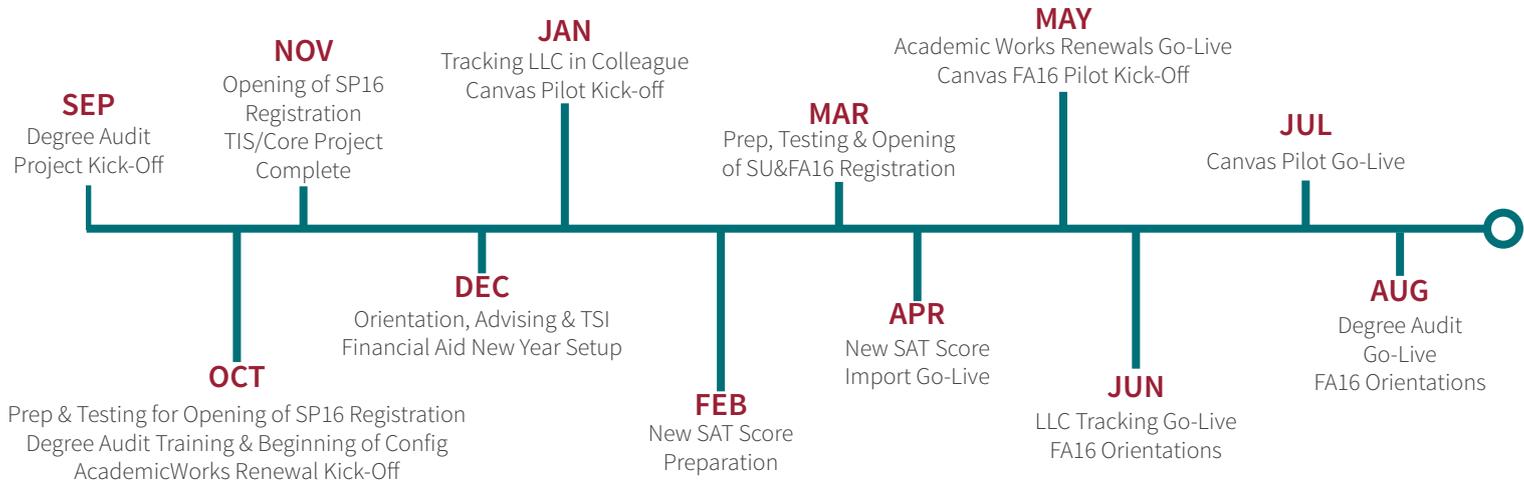
420

**web applications** supported by the business and web team. This number increases each year.

35%

increase in **number of emails processed** by Proofpoint, the University's spam-blocking service from 71.9 million in FY15 to 97.2 million in FY16

# Colleague Student Timeline 2015-2016



## TWU Technology Spending Compared to Carnegie Class

The Office of Technology participates annually in the Educause Core Data Services survey which allows the department to **benchmark its services and metrics** against institutions across the country. For this report, TWU data were compared to medians from its Carnegie Class in the 2014-15 academic year.

This table demonstrates how technology spending at TWU compares with peers. Others spend twice as much on administration and management of IT, where TWU spends 20% more on education technology services and 100% more on information security. Differentiations in spending demonstrate TWU Technology’s commitment to the University’s strategic plans and goals.

Spending by Domain	Carnegie Class	TWU
Administration and management of IT	10%	5%
IT support services	14%	14%
Education technology services	8%	28%
Communications infrastructure	13%	4%
Enterprise infrastructure and services	10%	5%
Information security	2%	4%
Identity management	0%	10%
Information systems and applications	20%	27%



Dallas students use their own devices

## SPSS for Everyone!

Just in time for the 2016-17 academic year, the Office of Technology made an SPSS license available to everyone in the TWU community. This action **resolved a number of issues**. In the past, faculty and students often used different versions of SPSS, and the versions weren't compatible—a tremendous source of frustration for both populations. While some at the institution were apprehensive about adopting a new version of the popular statistical evaluation software, Technology made it easily available and the Center for Research Design and Analysis (CRDA) offered training and support.

## I ♥ TWU Tech

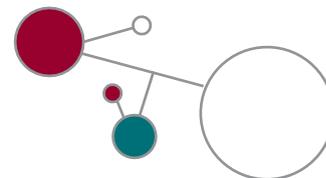
The Student Advisory Committee for Technology's favorite event this past year was the "I ♥ Technology" campaign in February. They ordered buttons with the phrase and set-up tables for giveaways. They used the slogan as a chance to ask students what they love most about technology at TWU. It was fun to hear the students share what services they most appreciate. Over 630 students were reached on the Denton campus.

In March, the committee's outreach campaign focused on **gathering student feedback**. At events, students were asked to complete a survey of their satisfaction with TWU technology services. These events included the Apartment Fair and tables in ASB, CFO, and the Student Union, as well as tables on the Dallas and Houston campuses. Approximately 725 surveys were completed across all three campuses.

## Elevated Service & Support

9.4%

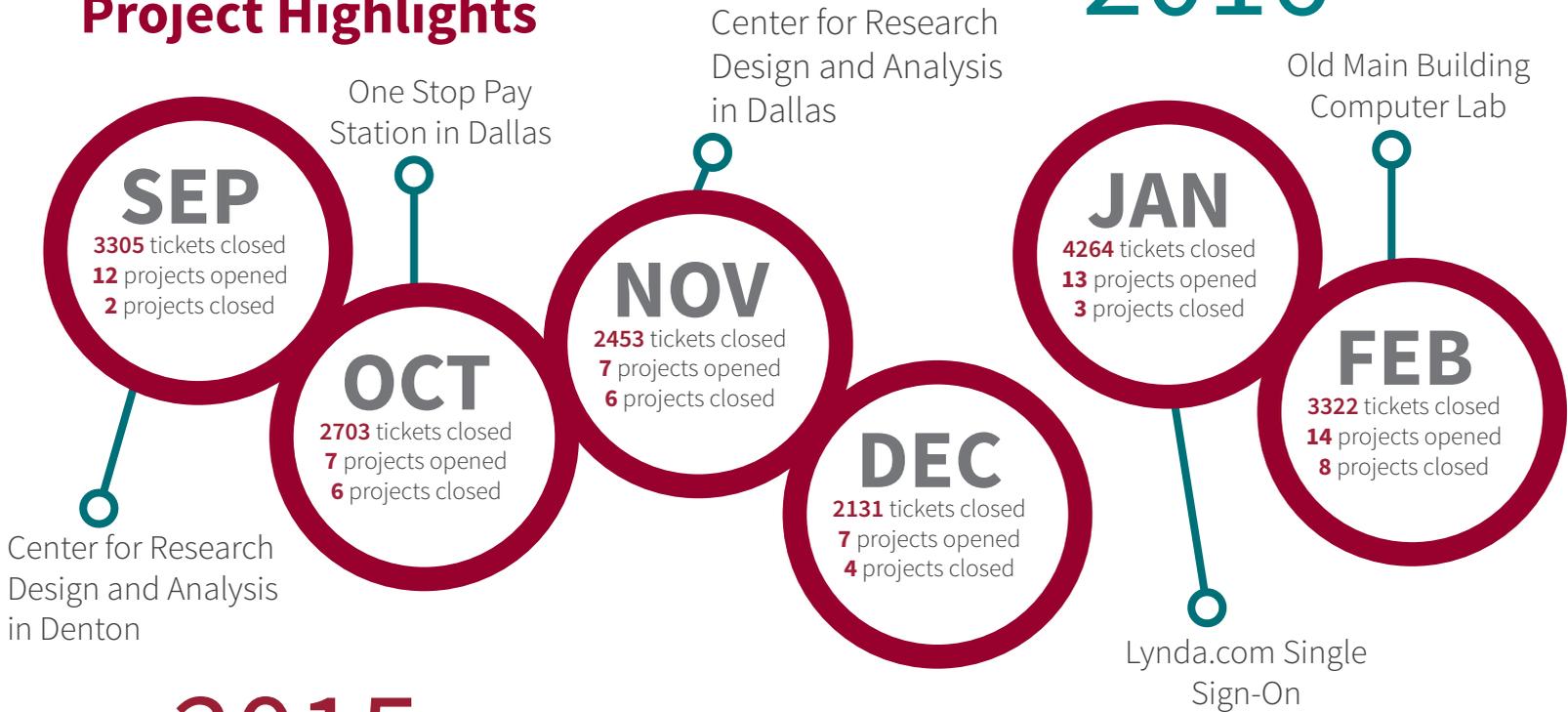
TWU's Technology Service desk received 9.4% **more requests** than the median received by institutions in its Carnegie Class in 2014-15



# Year-in-Review

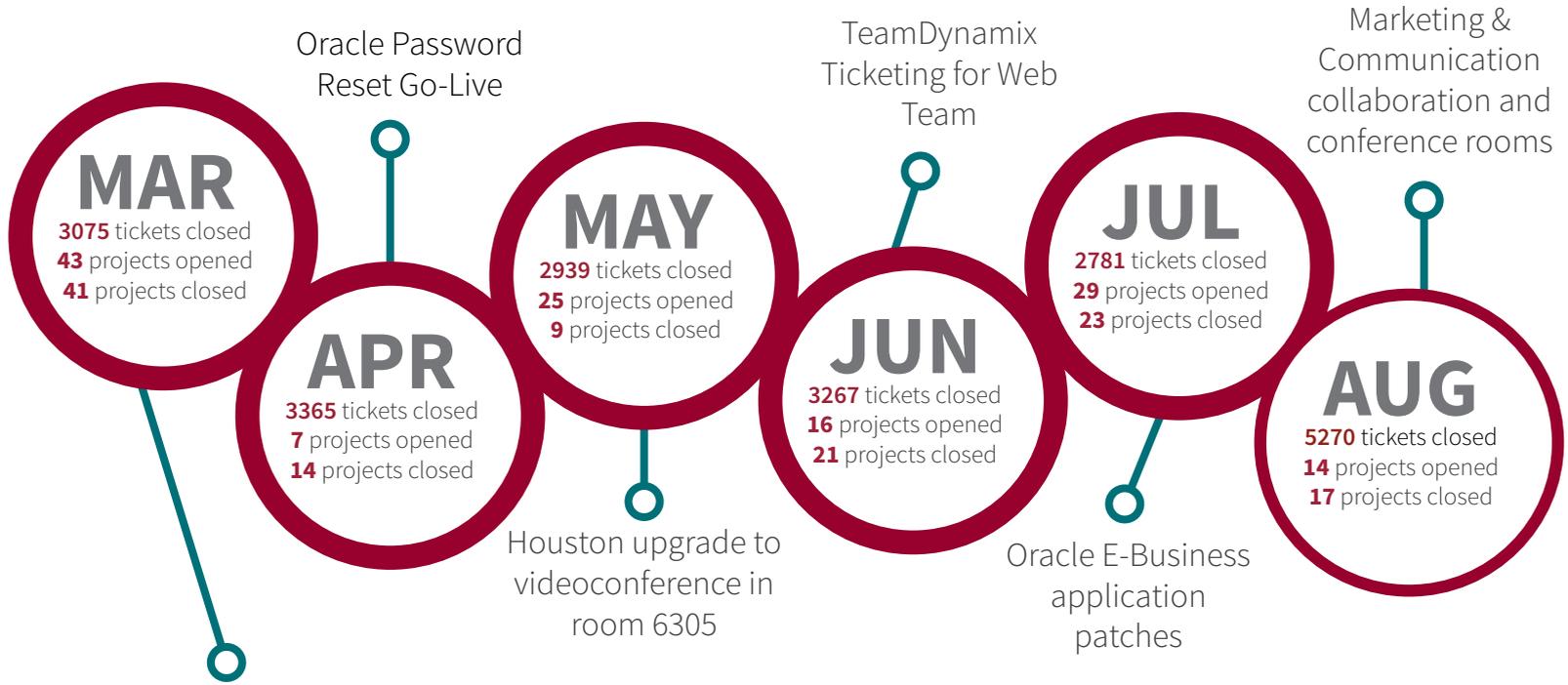
## Project Highlights

# 2016



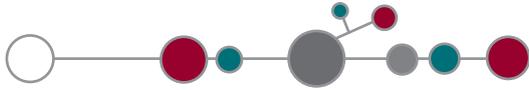
# 2015





TEDxTWU was simulcast in Denton which allowed the TWU community to see the speakers without purchasing a ticket. Here, staff and students watch Dr. Gretchen Busl, Associate Professor of English, present her talk via a live stream operated by TWU Technology staff.





# Maturation

While keeping pace with change, it is incumbent upon IT to mature its services, as well. Numerous factors have served as obstacles in operational maturity in years past, but in 2015-16, the Office of Technology was able to realize ontogeny with key services through creativity, collaboration, and commitment. Examples in this report focus on upgrades to enterprise software, a student-led initiative, and a new services suite.

## Oracle iRecruitment

Early this fall, Human Resources released Oracle iRecruitment for use by the TWU community. Oracle iRecruitment is a full-cycle recruiting solution focused on the manager-recruiter-candidate hiring relationship that fully automates the entire recruitment process (meaning no more paper applications). Oracle iRecruitment will enable TWU to manage all recruitment activities using a single self-service interface and to provide an **easy-to-use interface for job seekers**. Oracle iRecruitment provides a personalized experience for each group of iRecruitment users: site visitors, registered users, managers, recruiters, and agency users.

Implementation of this significant technology solution relied upon the work of Technology's Enterprise Apps and database administrators in collaboration with staff in Human Resources. iRecruitment is one of a number of Oracle applications in development.

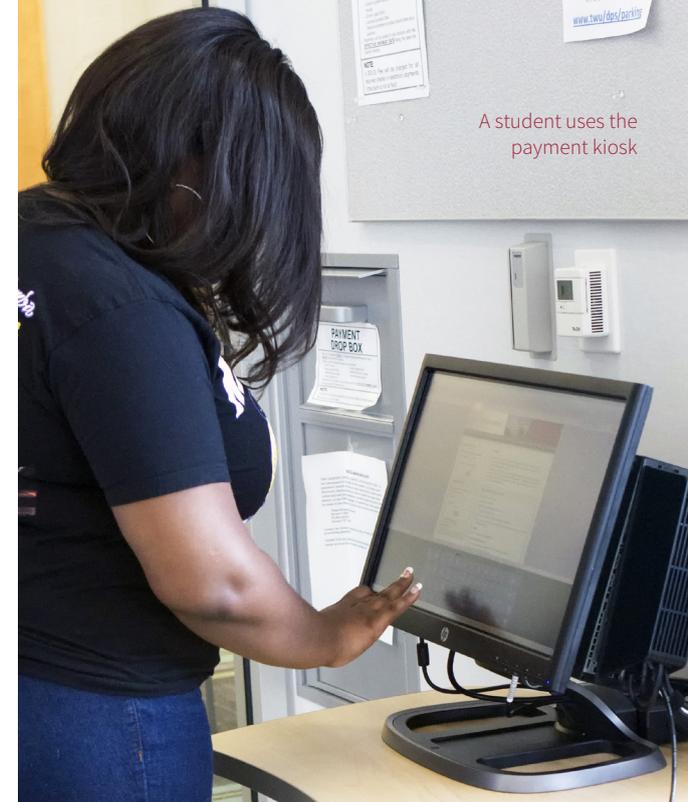


Thuan McCullar, Manager of Applications Development, meets with Rhonda Redfean, Senior HR Generalist, and Amy Hall, Executive Director of Human Resources

## Meeting Student Needs with Technology

Houston students needed more options to pay for their courses. TWU Technology met the demand by installing a PC and touch-screen monitor outside of the One Stop shop at the Houston Center. This kiosk allows **students payment flexibility** and saves the University the cost of additional human resources.

TWU students can now update their personal and emergency contact information through WebAdvisor. These new e-tools for students join the redesigned TWU Pioneer Emergency Notification system as a means of **empowering students** to keep connected to the University. This new feature allows students to update their local, permanent, and mailing addresses, as well as their emergency contact information at the click of a button.



A student uses the payment kiosk

## Tegrity Lecture Recordings

2014

33

2015

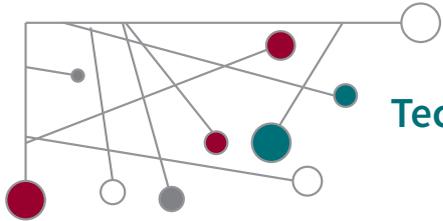
104

2016

1,548

1,388%

increase in the number of **Tegrity lecture recordings** over last year



# Technology Service Catalog

In February 2016, TWU Technology released its self-service catalog that contains information about its services. There are numerous ways to find information in the catalog. Use the **search bar** to access information about services and knowledge base information. Use the **categories** to search. Use the **Services A-Z** to see a full list of Technology services. Use the **tags** to search for services available, determined by one's relationship with the University.

Search the Technology Service Catalog, Knowledge Base and/or FAQ

Sign in with Portal credentials to access more and leave feedback on KB articles

A list of all Technology services

Search services, k

Sign In

Services Knowledge Base Questions

Services A-Z Search

Service Catalog / Technology

## Technology

This is a self-service catalog and contains information about our services. Options to find the service needed:

- Use the search bar to access information about services and knowledge base information.
- Use the categories to search.
- Use the Services A-Z to see a full list of Technology services.
- Use the tags to search for services available based on relationship with the University.

For immediate service, please contact the Technology Service Desk: 940-898-3971 [servicesdesk@twu.edu](mailto:servicesdesk@twu.edu)

### Categories (10)

- Administrative and Business**  
Software and applications that support business offices and centers at TWU.
- Classroom, Learning, and Pedagogy Tools**  
Instructional technology, tools, and resources directly supporting teaching and learning.
- Communication**  
IT services that facilitate institutional communication.

### Popular Services

- Blackboard Learning Management System
- Software Discounts
- Productivity Software
- Offsite Network Connection (VPN)
- Standard Software

View All >

### New Services

- Technology Questions (FAQ)
- Export Controls on Electronic Devices
- Web Forms with Anonymous Payments
- Technology Knowledge Base

### Popular Tags

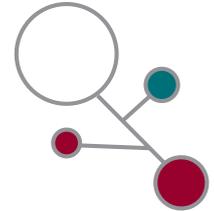
- faculty (61)
- staff (58)
- students (39)

Look for services or articles by category

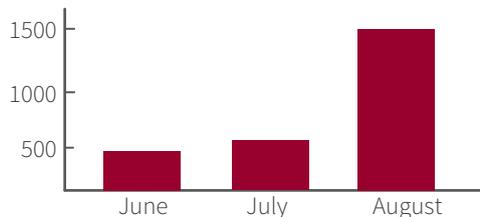
Use tags to search for services or articles

The Technology Service Catalog provides everyone at TWU a list of the available technology services. For immediate service or additional support, the **Technology Service Desk remains the primary point of contact**. There are many benefits to the University of this Catalog, including:

- Jargon-free description of all Technology services
- Technology services categorized logically, rather than organized by Technology organizational chart
- Tags allow individuals to see services aligned with their relationships to the University
- Responsive-design makes the Catalog available on any device
- Powerful search returns results on services and A-Z listing of services available
- Web-based, open to anyone with the URL to make public information freely available
- Catalog is a living document, maintained and updated as services and details change
- Improves communication with the University community about technology services



Searches of the Technology Service Catalog, Knowledge Base, and FAQ **tripled** from July to August 2016



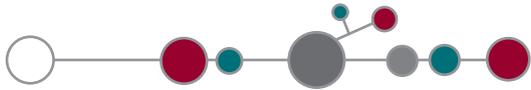
## Technology Knowledge Base and Questions (FAQ)

Knowing all of the available technology services is only so helpful. How do you access them? Why isn't the service working as expected? To answer these questions and more, Technology developed the Technology Knowledge Base, a companion to the Technology Service Catalog.

Like the Catalog, the Technology Knowledge Base is searchable and categorized. It includes tags, as well. **Articles are also attached to services** to make it easy for the TWU community to find the information it needs. A few of the articles are public, but many require a TWU login to be viewed.

The Technology Service Catalog and Knowledge Base are living documents for which there are scheduled reviews, and they undergo ad-hoc adjustments, as needed. Visitors to the Knowledge Base can help by leaving feedback with comments. That allows the Office of Technology to **make adjustments, improving the service** for everyone who accesses the Technology Knowledge Base.

A third piece of the services center is Technology Questions, or FAQ. The services center search draws results from all three areas: Service Catalog, Knowledge Base, and Questions.



1.2 Gb per second of **peak data** received at TWU on a typical weekday.

## Saturation

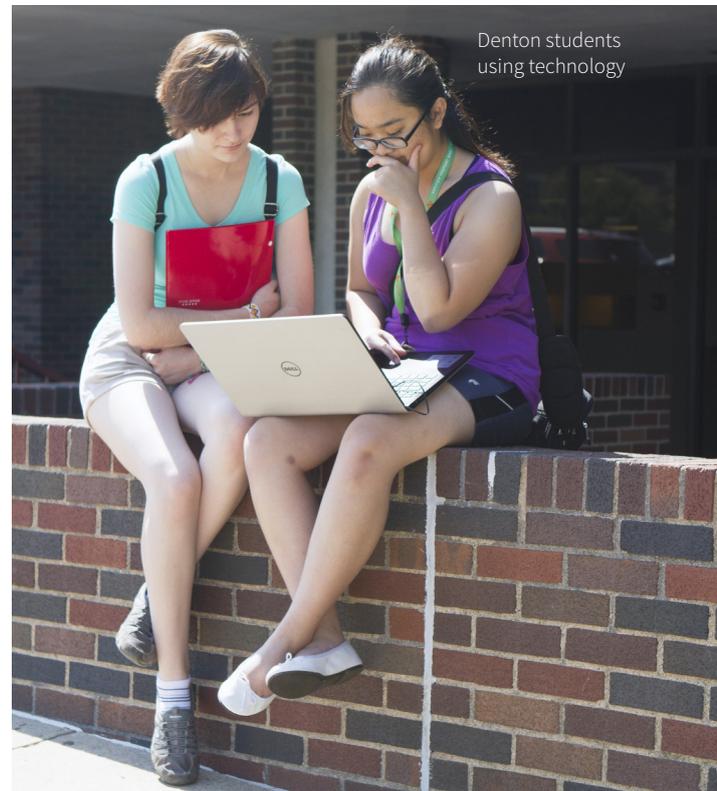
This **20% increase over traffic from the prior year** was made possible by further expansion of TWU's network capability.

TWU Technology strives to be responsive to demand while making the TWU community aware of existing services. The most obvious example of technology saturation in a supply-demand use case is with wifi coverage. Peak use increased 20% last year; the Office of Technology met the demand with a 37% increase in wireless access points (APs). The department also participated more in events and surveyed the TWU community about its awareness of and satisfaction with technology services.

## Keeping Students Connected

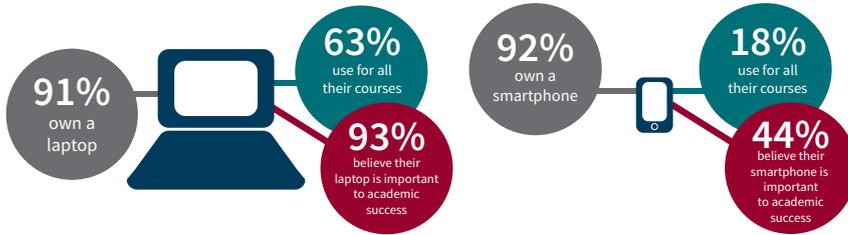
In the 2015 ECAR Study of *Undergraduate Students and Information Technology*<sup>1</sup>, **undergraduate student smartphone ownership hit a milestone of 92%**. This is an almost 40% increase from 2011. The study suggests that “because far more undergraduate students own mobile devices (smartphones, laptops, and tablets) than the general adult population, higher education is in a unique position to leverage these devices as productivity tools, as assets for learning, and as administrative or transactional resources.” This study confirms what is seen on TWU campuses each day. Students are dependent upon their mobile devices, and they use them for study and non-study purposes.

Student demand for wifi access shows no sign of slowing down. The Office of Technology plans strategically to meet the need by installing access points in Denton, Dallas, and Houston. This year, the department worked with staff in the Fit & Rec Center in Denton to install access points. Students, faculty, and staff now have increased wifi access in this popular hub.



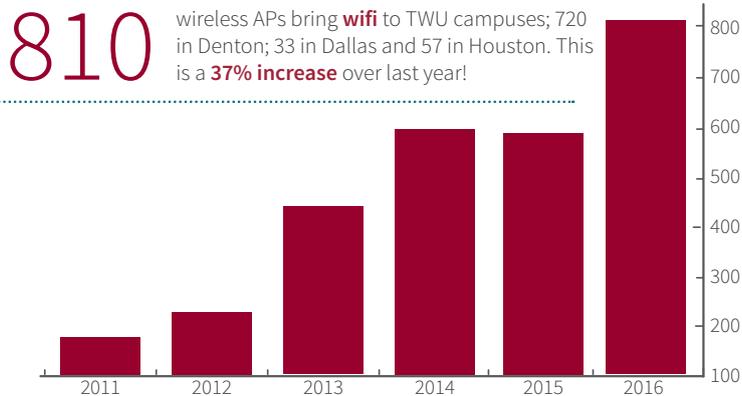
Denton students using technology

Students bring their technology to campus...



...and more undergraduates now own a smartphone than a laptop

The Office of Technology has steadily increased Wi-Fi coverage across TWU campuses to accommodate the BYOD-effect (bring your own device). The Houston Center increased access points by 84%. Also in Houston in 2016, the department piloted an additional service: **charging stations for mobile devices.**



This ECAR infographic demonstrates average device ownership, as well as use of the device for courses and **perception of device significance to student academic success.** According to the ECAR study, first-generation and lower-income students are more likely to rely on a smartphone as an internet-enabled device, so their use of smartphones to complete coursework is likely to be higher than students who also own laptops.

To match BYOD-demand, TWU Technology provided **courtesy charging stations** at the Houston Center in spring 2016. The stations were popular and will be placed across all three TWU campuses in the coming year. Internet technology expands learning beyond the classroom, and TWU Technology is dedicated to providing the tools students need to learn in any environment.



## Increased Use of Google Apps

In its second year, Google Apps is gaining traction at the University. Technology staff met with a number of departments this year to explain the advantages of Google Drive and Apps and how they differ from other storage options, such as the X drive and SharePoint.

Departments and offices are finding the application suite particularly **helpful for collaboration**. A key staff member has cited Google for completely renovating her approach to three significant projects, saving hours of work for her and others involved in the projects.



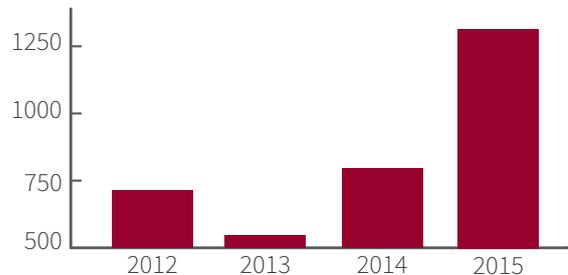
Lilia Bynum, Coordinator of Reading Recovery Grants & Projects, was one of many at TWU who explored Google Apps this year

**1,917,255** files uploaded to **Google Drive** as of August 31, 2016

**4,994** users on **Google Drive**, Monday, May 2, 2016, the peak usage day for the year

## Videoconferences Skyrocket

**280%** increase in **videoconferences** in 2015 over 2014



## TECHNOLOGY SATISFACTION

43% OF FACULTY, STAFF, AND ADMINISTRATORS COMPLETED THE SURVEY



### MOST IMPORTANT SERVICES



SERVICE DESK



CAMPUS INFRASTRUCTURE



WIFI

### OVERALL SATISFACTION & VALUE



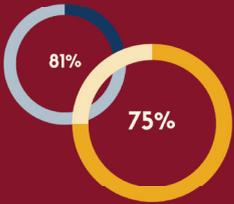
Overall satisfaction and value are key indicators of the University community's overall impression of the Office of Technology.

# STUDENT SATISFACTION

WITH TWU TECHNOLOGY SERVICES

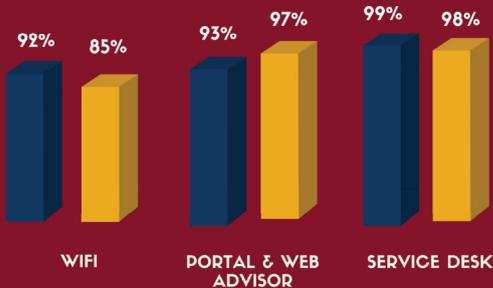
GRADUATE UNDERGRADUATE

ABILITY OF TWU TECH TO SUPPORT YOUR NEEDS

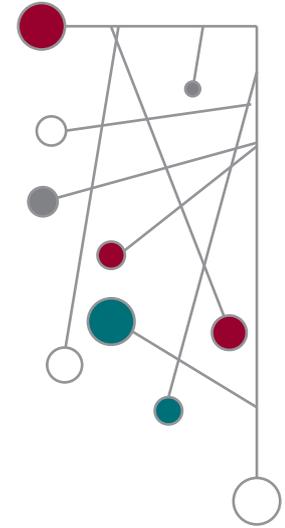
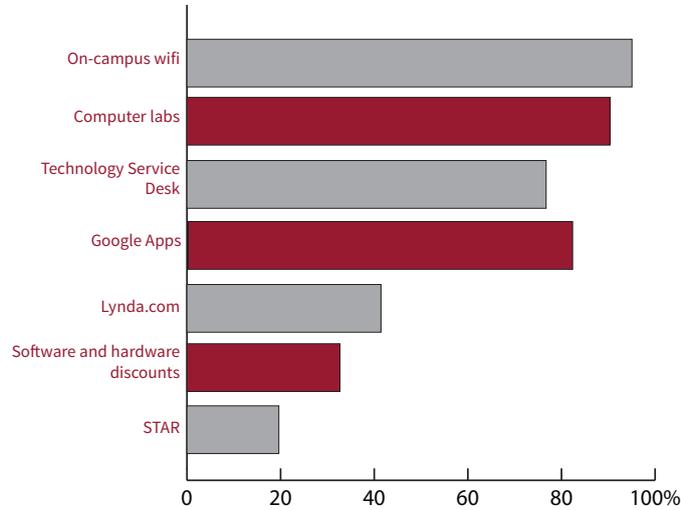


HIGH SATISFACTION WITH TWU TECH'S ABILITY TO UNDERSTAND/MEET NEEDS AND TO COMMUNICATE

POSITIVE SATISFACTION WITH TWU TECHNOLOGY SERVICES



## TWU Student Awareness of Technology Services

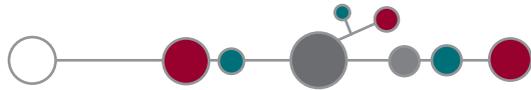


## TWU Technology Staff Increase Presence at Events

In 2016, the Office of Technology was invited by the Office of Admissions and the Center for Student Development to participate in recruiting and orientation events. Staff from numerous teams in the department volunteered at 17 events where they made **contact with over 1,200 future Pioneers**. Beyond SWAG, information, and smiling faces, at some of the events, the department also provided laptops and in-person technical support for students who needed assistance setting up or accessing their Pioneer Portal and TWU Gmail.



First-year students learn about TWU technology at Pioneer Camp



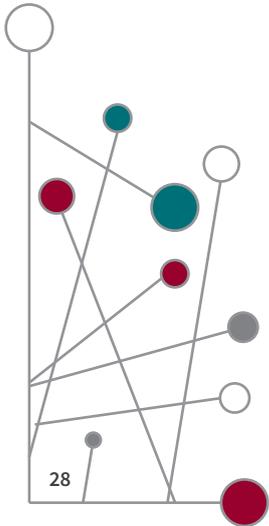
# Collaboration

A common theme from the first Technology annual report to this, its fifth edition, has been collaboration. It is the most essential effort the department makes to provide value to the University. Without collaboration, services and improvements would be made in a vacuum where the decisions could only be guesswork, at best. Included here are some of the more significant collaborations. There isn't space to cover them all.

## CyberCamp: An Educational Collaboration

This summer, TWU Technology supported Dr. Jian Zhang of the Mathematics & Computer Science department with the TWU/AFA CyberCamp for the third year. The **department provided funding** and gave each student a Raspberry Pi, a credit card-sized single-board computer developed to promote the teaching of basic computer science in schools and developing countries.

As in years past, students at the camp toured Office of Technology facilities, such as the Technology Service Desk and the network and server rooms in Bralley Annex. The department is excited to be continue its support of this important educational initiative.





Dr. Dan Krutka, Assistant Professor of Curriculum and Instruction, was one of two faculty to lead Tech Talks in 2016

## Tech Talks Feature Faculty Speakers

The Office of Technology continued its reimagined Tech Talk series that focused less on the how-to of technology and more on broader intersections of technology and society. **Technology staff and faculty outside of the department** led talks on communication, money, social media in schools, Lynda.com, 3D printing, and ways to use Google Forms. The variety of topics and speakers yielded a diverse audience who engaged in the subjects presented.

**6 talks** The Future of Communication • The Future of Money • Why Social Media Must Have a Place in Schools • Be a Power User of Lynda.com • 3D Printing Demonstration • 10 Time-Saving Tips with Google Forms

**101** total attendees across Dallas, Denton, and Houston

**44%** first-time attendees      **78%** wanted to see longer versions of talks



Dr. Chad Smith connecting with a student in the classroom via robot  
Photo by Michael Modecki

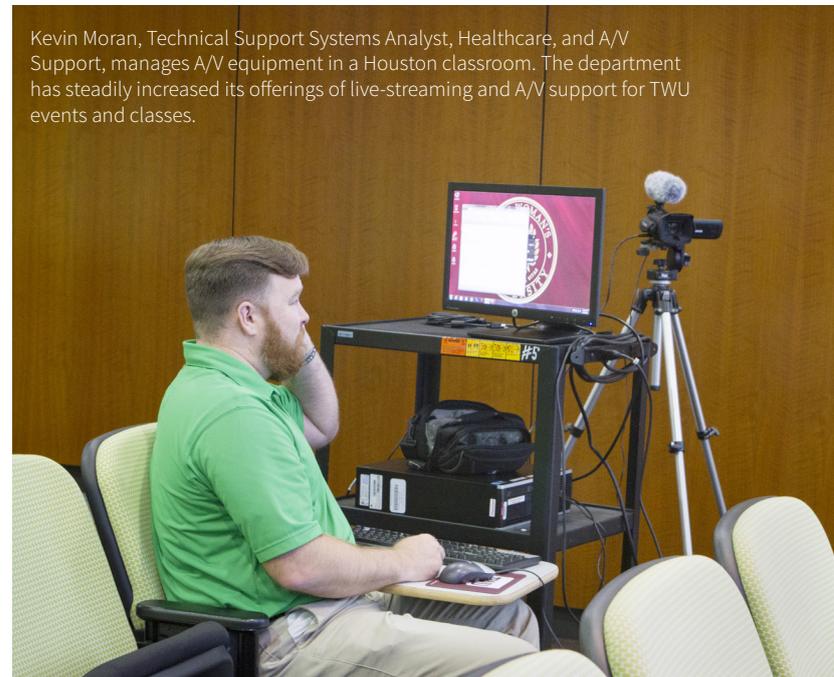
## Teaching and Research Classroom Lab

TWU Technology helped build a futuristic classroom for Dr. Chad Smith, Associate Professor in Communication Sciences & Disorders, and Dr. Ludovic Sourdot, Associate Professor in Teacher Education. The room is **styled after a European model**, organized with six zones. As with the teaching lab project, the Office of Technology provided technical expertise and support to source funding.

Dr. Smith also worked closely with TWU Technology in the testing and **implementation of Double Robotics Telepresence (DRT) Robots** in the classroom. It is easy to think of technology as creating distance and division. The DRT Robots allow a physical presence, making distance students much more involved in the classroom than they would be through the phone or an LMS.

## Web Team Ticketing

Managing requests through email and phone is a notoriously ineffective way to provide quality service. With the **implementation of TeamDynamix software**, TWU's business offices have access to a ticketing application that can significantly improve the quality of their service and customer satisfaction while also providing important metrics. The Web Team took advantage of the system this year, creating a new common email address through which all requests are sent. Each email message creates a service request that the team manages in the TeamDynamix system.



Kevin Moran, Technical Support Systems Analyst, Healthcare, and A/V Support, manages A/V equipment in a Houston classroom. The department has steadily increased its offerings of live-streaming and A/V support for TWU events and classes.

## Student Health Services in Dallas

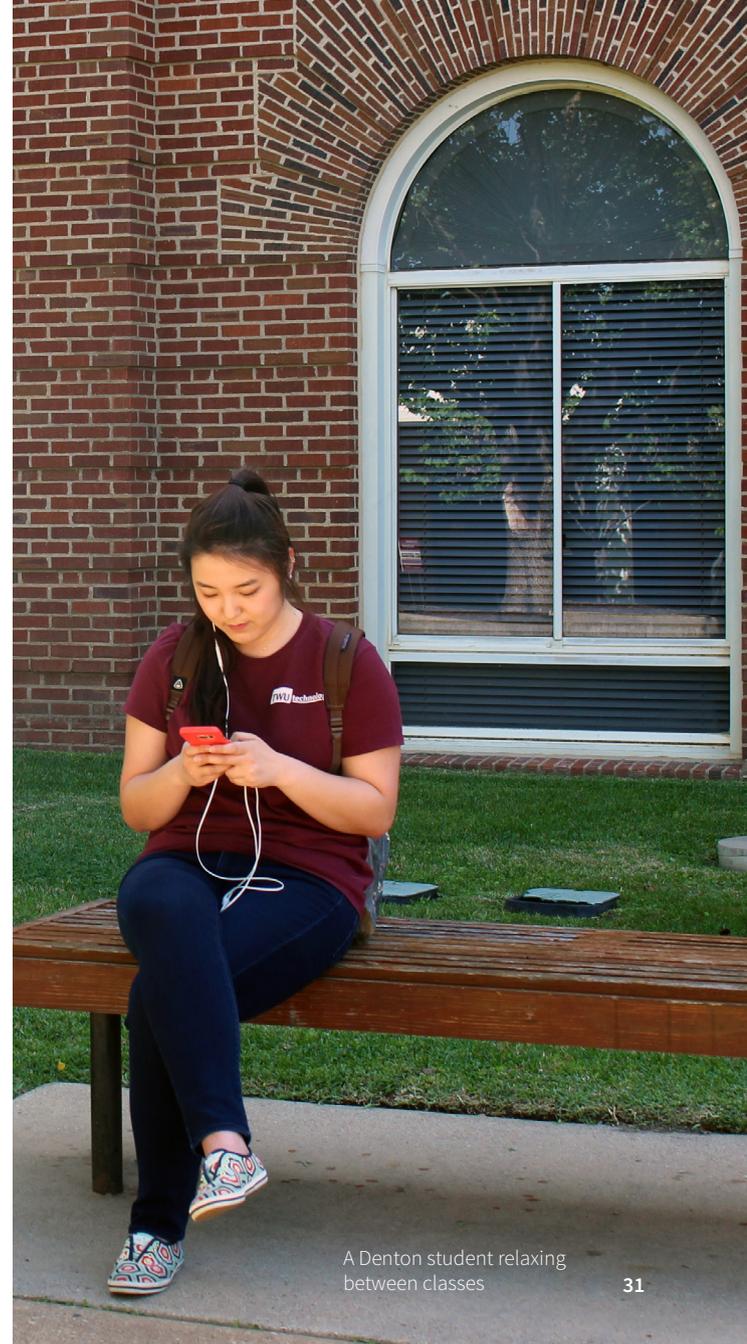
Providing equitable services across the three TWU locations is critical for the success of the University. The Office of Technology has pioneered efforts to standardize services across Denton, Dallas, and Houston. Last year, there was a call from Dallas students for on-campus health services. Expanding health services aligns well with the Chancellor's Wellness initiative while also **answering student need**. A project was quickly implemented, spearheaded by the Dallas team who secured space, wireless, and hardware support for electronic medical record capture and storage. The effort wasn't without obstacles. Some of the special software required wouldn't work on wireless. The Dallas team worked with Student Health Services to quickly resolve these issues and make the service available.

## Centers for Research Design and Analysis

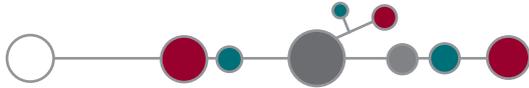
TWU's Center for Research Design and Analysis launched in Fall 2015. The new Center combines areas and services that previously existed to provide comprehensive access to faculty and expands those services to include student researchers. The Office of Technology is always excited to partner on projects that support TWU students and the important research conducted at the University by its faculty.

Dr. René Paulson, Senior Statistical Consulting Director, worked with Technology staff to get the necessary equipment up and running in Stoddard Hall 105 as quickly as possible. Technology staff from the classroom and labs team **worked quickly and efficiently** to set up computers and install statistical software and to install screens and other hardware.

The Dallas team worked to establish the Center for Research Design and Analysis at that center, and they finished ahead of schedule. They installed six new computers, along with a new dual-monitor laptop instructor station that is connected to a large LCD monitor for sharing data and workshops.



A Denton student relaxing between classes



# Innovation

“If you think of in terms of the Gold Rush, then you’d be pretty depressed right now because the last nugget of gold would be gone. But ... with innovation, there isn’t a last nugget. Every new thing creates two new questions and two new opportunities.”<sup>1</sup> TWU Technology regularly partners with innovative individuals across the University — from assessment to classroom design — who create new questions and opportunities.

## Cassie, TWU’s Custom Core Curriculum Assessment Tool

Volunteer raters met each Friday last spring to rate core curriculum student artifacts. They met in a computer classroom. There was very little paper in sight. The assessment software, custom built by TWU Technology, allows instructors to upload the artifacts and select core objectives for assignments.

The application also allows raters to be randomly assigned artifacts for review and rating. Each artifact is reviewed by two raters to establish inter-rater reliability. Every piece of rating process is electronic. Svetlana Galuzinschii, Senior Integration Analyst, worked with Dr. Gray Scott, Assistant Director of Assessment, to deliver a **complete redesign** of the original software.

Beyond building the system, several staff in the Office of Technology served as Core Assessment Academy Raters. The department regularly demonstrates exemplary service and a dedication to the mission of the University and the success of its students.

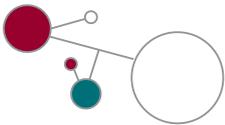


<sup>1</sup> Bezos, Jeff. TED Talk (2007).

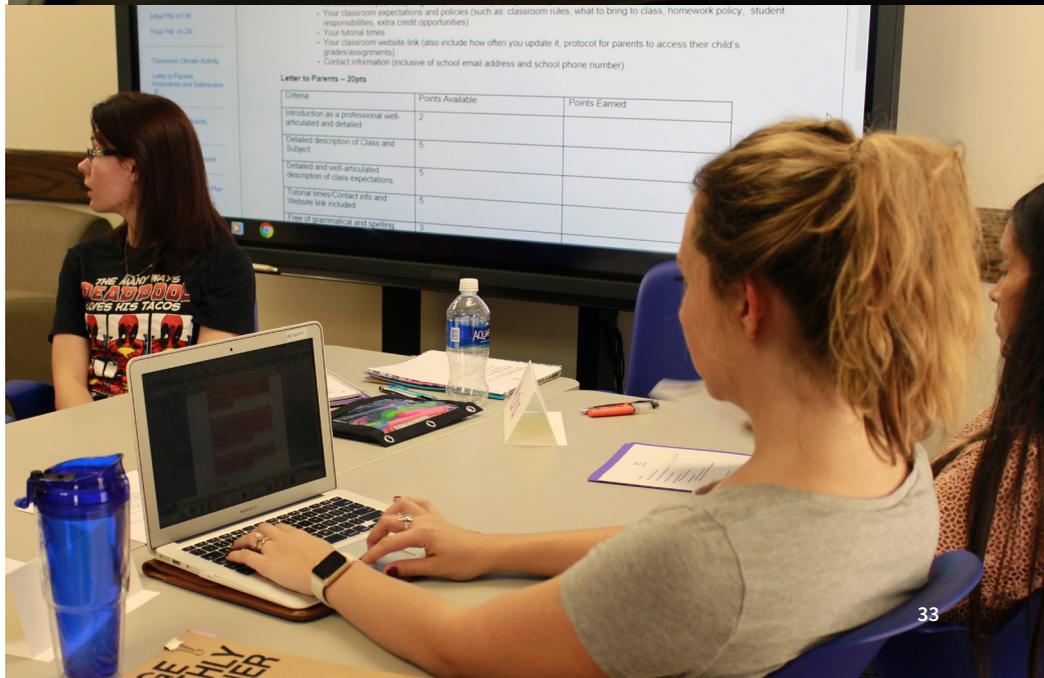
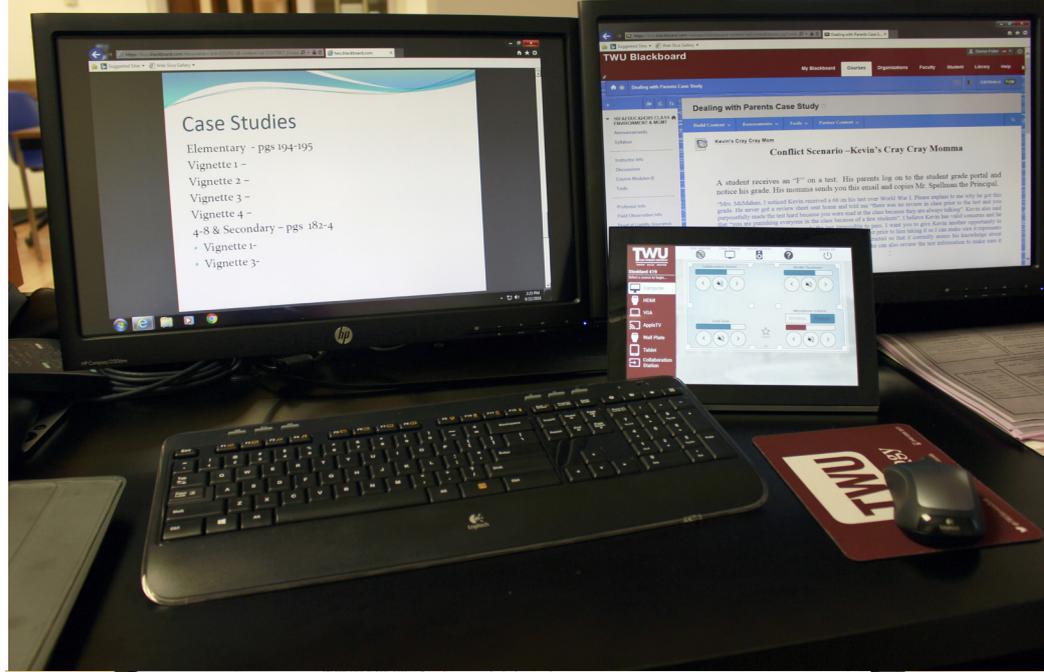
## A Teaching Classroom

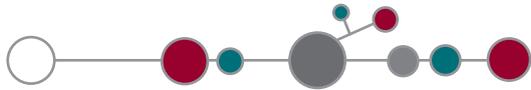
TWU faculty don't just teach: they innovate. Teacher Education faculty, Drs. Peggy Malone, Sarah McMahan, and Laura Trujillo-Jenks, were awarded a grant to create a space for pre-service teachers and administrators to practice and receive feedback. Sound like a familiar concept? This project supports the **TWU QEP: Learn by Doing**. The space allows pre-service teachers to practice teaching, observing, room organization, and using technology.

Observations of these activities meets state requirements: the students studying to be teachers conference with students studying to be administrators, just as they would in a real classroom, and the **sessions can be recorded** to be used for in-class learning. TWU Technology's classroom and labs team worked with these faculty to provide options for technology, furniture, design, and more.



Top-right, the instructor station in SH 419  
Bottom-right, students in the upgraded classroom





# Transformation

The only way to do more with less while continuing to provide an excellent education for TWU students is to develop transformational solutions. Transformation is the evolution or journey from a current level to a different and better state.<sup>1</sup> TWU Technology has engaged in transformations to support academic research, events, and professional development of staff.

## TEDxTWU: Pioneering the Space Between in Denton, Houston, and Dallas

“TEDxTWU is an annual event that showcases Texas Woman's University's unique emphasis on educating the whole student; the broad diversity of our University's ideas, talents, and stories; and our collaboration with the local communities in Dallas, Denton, and Houston. Capitalizing on TED's international reputation, this university-wide event promotes pioneering dialogues across our communities.”<sup>2</sup> TEDxTWU 2016 was **an ambitious project** that required the support and work of dozens of people in the TWU community at all three TWU locations. TWU Technology provided funding and technical support for the events. Additionally, Heather Davis, Manager of IT Training and Development, served on the TEDxTWU 2016 executive committee with bold leadership from the Curator, Christopher Johnson, Chief of Staff.

“The speakers were so very inspiring, and all present were left hanging on every word. There was a quiet energy in the intimacy of the environment, with an invitation to step into another's life, ever so briefly, and open our hearts to change.”

-Deb Unruh, Assistant Director of Student Life, Houston

<sup>1</sup> <https://www.linkedin.com/pulse/innovation-transformation-whats-difference-anyway-deborah-smallwood>

<sup>2</sup> TEDxTWU mission statement from <http://twu.edu/tedxtru/>

Lauren Hoebee, TEDxTWU 2016 speaker





Corin Walker,  
Sr. Learning  
Technologist,  
eager to teach

## Technology Boot Camps Make Learning Fun

In the past, the Office of Technology has approached training offerings with the standard method: put some slides together, advertise, go sit in a room and wait for a handful of people to show up. This is an ineffective use of resources.

There is no buy-in from attendees, so few attend. Those who do participate have different ability levels and familiarity with the subject matter. The curriculum is too easy for some while too fast-paced for others. Technology's learning technologists **decided to try a new approach** in the summer of 2016.

They invited administrative assistants and secretaries—whose job duties overlap significantly—from across all three campuses. They notified the invitees' supervisors, asking for their support. They sent a teaser save the date in intercampus mail. This was followed by an email invitation. The team recognized that email invitations alone were insufficient to raise interest and awareness, so they also used a professional marketing campaign with a theme of teaching others to fish.

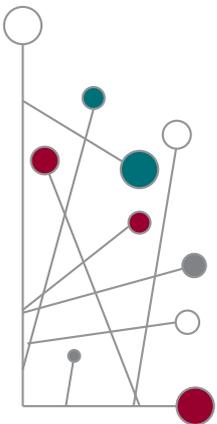
The team developed an **assessment to sort the participants into three training tracks**. The assessment was effective. They found a normal curve distribution among respondents: some at the bottom end, some at the top end, and most in the middle. To address knowledge gaps, they varied the curriculum to offer courses tailored to meet the needs of these groups. Feedback from participants has been tremendously positive.

## Building a Science Research Network

The Office of Technology received a \$500,000 NSF Networking Infrastructure Grant to construct and support a Science Research Network for researchers to effectively use and share large data. Researchers who use this dedicated network will have **up to 10 Gbps of network connectivity on campus**.

The plan includes two phases with concrete objectives: (1) Build an edge network to allow large data sets to be transferred to and from other institutions via the Texas LEARN network, via the Internet, and via Internet2 and (2) Create an internal Science Research Network allowing large data streams to be moved and utilized on campus.

The proposed project will allow TWU faculty to **engage in research using larger data sets** and to access national cyber-infrastructure resources. The current network limitations of 1.2 Gbps bandwidth, shared among University business, academic, and student traffic, have crippled faculty's research when using large data sets. Creating the Science Research Network with access to Internet2 will provide TWU faculty and students greater opportunities to collaborate and contribute to increased knowledge discovery.





# Anticipation

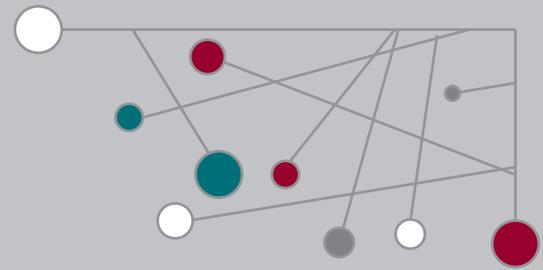
## A Message from Dr. Robert Placido, Associate Provost & CIO, Office of Technology

This year I am excited to begin **incorporating TWU's new strategic plan**. The imperatives (learn, discover, serve, lead, and invest) will provide our whole University with focus, so we can make meaningful forward progress. The Office of Technology will transform our processes and subsequently **realign our resources to our new direction**. Our first step will be to adjust our governance model. I look forward to working with everyone. This is going to be a great year for Texas Woman's University!

## A Message from Dennis Hoebee, Director, Client Services

**Technology Client Services** is a service organization that specializes in technology. We are dedicated to providing a broad range of technology-based planning resources and services to the students, faculty, and staff of Texas Woman's University. Our goal is to provide reliable, effective technology, quality services, and support for the technology that are integrated into the daily activities of the University community, such as advancing teaching and learning, enhancing productivity, and safeguarding information.

**Social collaboration improves an organization's ability to react quickly to new data and information.** The new ways we communicate and collaborate will require redefining how we address connecting participants to meeting rooms, conference rooms, and offices. In 2017, we will embrace this challenge by designing a new team that will focus on efficient and affordable ways to turn any location into a meeting space.



### A Message from Clay Till, Director, Technology Infrastructure

Being connected is vital in today's world. This year we will expand Skype for Business to all of our staff and faculty both on and off campus. This will provide **new and easier ways to communicate**. We will be adding more and faster wireless access points to all campuses both inside and outside of buildings. We will also be making key features of a few systems available through the off-campus network. Another exciting change in communication tools is that our mail servers will be upgraded to the latest version of Microsoft Exchange.

### A Message from Cori Treviño, Director, Enterprise Applications

Technology is always evolving, and it's an exciting time to be an application developer.

As we implement new technologies, newer technologies are being introduced. The need for better, faster, intuitive, and mobile accessible applications is increasing at much faster rates than in the past. Looking ahead, **more "Self-Service" type of applications** will be implemented at TWU. These applications will enable TWU students to access more intuitive, interactive, step-by-step guides to help them apply and accept financial aid, register for classes, monitor academic progress, and elevate their success. Faculty and staff will benefit from applications that will enable advisers and support personnel to see the same information students see, so they can provide relevant, timely support.

Other faculty and staff applications to be implemented will facilitate the updating of University asset assignments and locations, streamlining faculty and staff application processing, and **integration of multiple business systems with our enterprise systems**. We look forward to working with our partners on campus as we continue to adapt to the changing environment.

This striking image from the 2016 Arts Walk illustrates the power of technology in unexpected places. The **invisible equipment** allows the art of the dance to take the audience out of the space, transporting them to a world of emotion and imagination. The image behind the dancer is rear-projected onto the screen. This prevents the dancer from casting a shadow on the screen and from crossing in front of the projection and blocking the image.

The Technology classroom and labs team works with faculty and academic departments to reimagine spaces in which the technology is critical and enhances teaching and learning without getting in the way.

*Photo by Michael Modecki*

This document is for informational purposes only. THIS DOCUMENT IS PROVIDED "AS IS" WITH NO WARRANTIES WHATSOEVER, INCLUDING ANY WARRANTY OF MERCHANTABILITY, NON-INFRINGEMENT OF INTELLECTUAL PROPERTY RIGHTS, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY WARRANTY OTHERWISE ARISING OUT OF ANY PROPOSAL, SPECIFICATION OR SAMPLE. Texas Woman's University assumes no responsibility for any errors contained in this document and has no liabilities or obligations for any damages arising from or in connection with the use of this document. No license, express or implied, by estoppel or otherwise, to any intellectual property rights granted herein.

*Produced by*  
Heather Davis  
Manager of IT Training & Development,  
TWU Office of Technology

*Photography contributions by*  
Katherine Chalon, Heather Davis,  
Vannessa Kantaphone, and Tammi Paul

Copyright © 2016  
Texas Woman's University  
All rights reserved  
Please Recycle. Printed in the USA.





## The Nature of Technology

TWU Denton students engrossed in their personal devices travel between classes as spring is in bloom.

Technology is a lived experience. Each of us interacts with technology for hours every day, whether in class, at work, at the gym, at lunch, at home, or as pictured here, outside. TWU Technology works to keep technology working for the TWU community.