

ANNUAL REPORT

2018



Information Technology Services

WASHINGTON STATE UNIVERSITY





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Letter from the CIO

Another year has come and gone, and at Information Technology Services (ITS), our employees have made major strides at addressing the mission of WSU. By focusing on the four themes of WSU's strategic plan and the Drive to 25, ITS has made major improvements with respect to improving services, access to services, helping improve student outcomes and their experience in accessing services.

There were several notable accomplishments; however, this report highlights only several. Many of these accomplishments were made possible only because our hard-working staff in ITS collaborated with several organizations across WSU, such as Student Affairs, Provost's Office, Office of Research, Academic Outreach and Innovation, to name a few.

As you can see, we are constantly looking at providing services that are not only cost-effective, easy to use, but also enhance individual and group productivity. We are doing all this while improving IT Security. We are also working on better delivery of services through mobile devices whenever possible. You will see how we are achieving these by looking through this annual report.

Please provide any comments and feedback that you have to Jacqueline Southwick, jsouthwick@wsu.edu, in ITS Communications.

Sasi Kumar Pillay



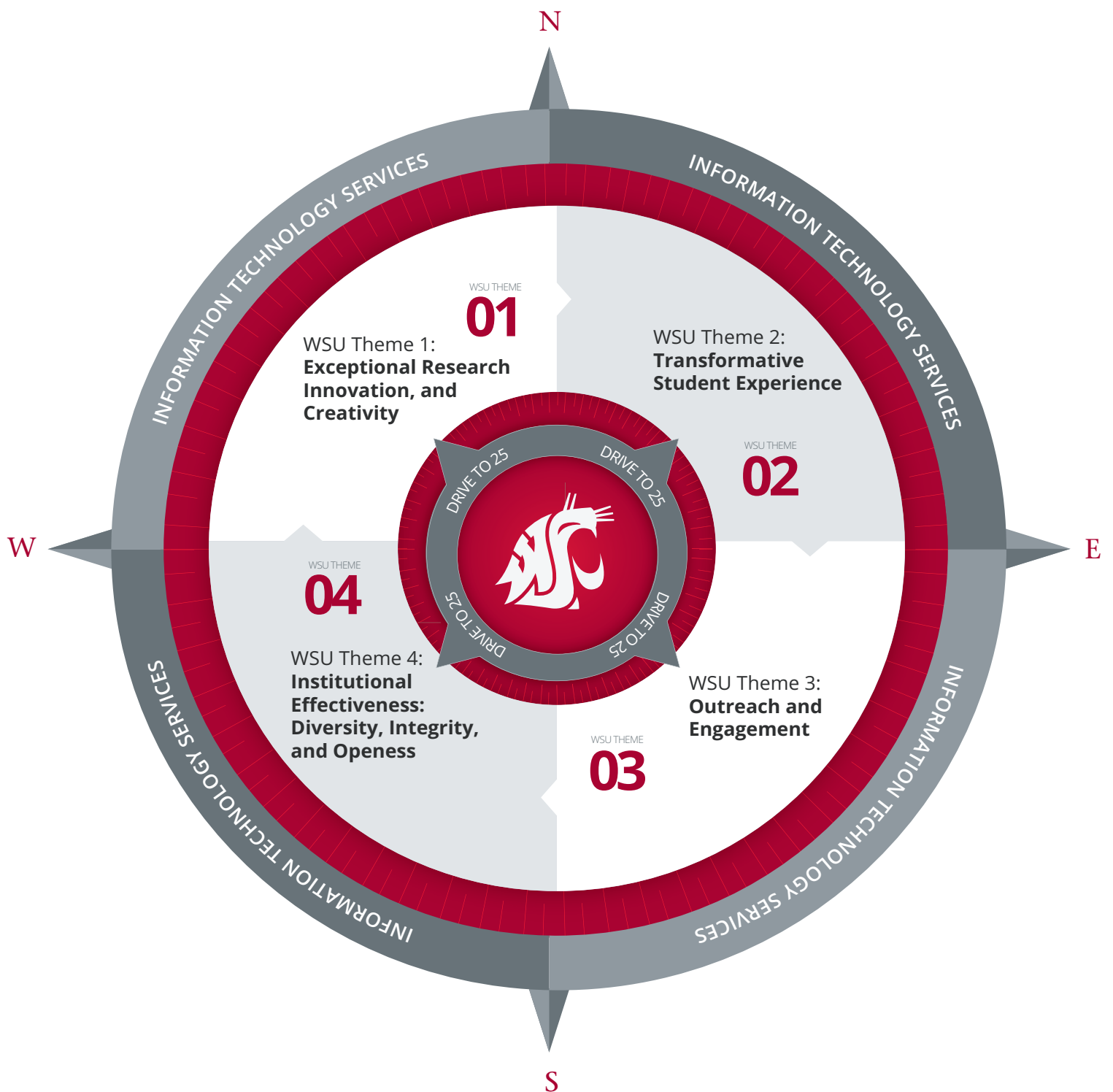
ITS Strategic Plan and Goal Support

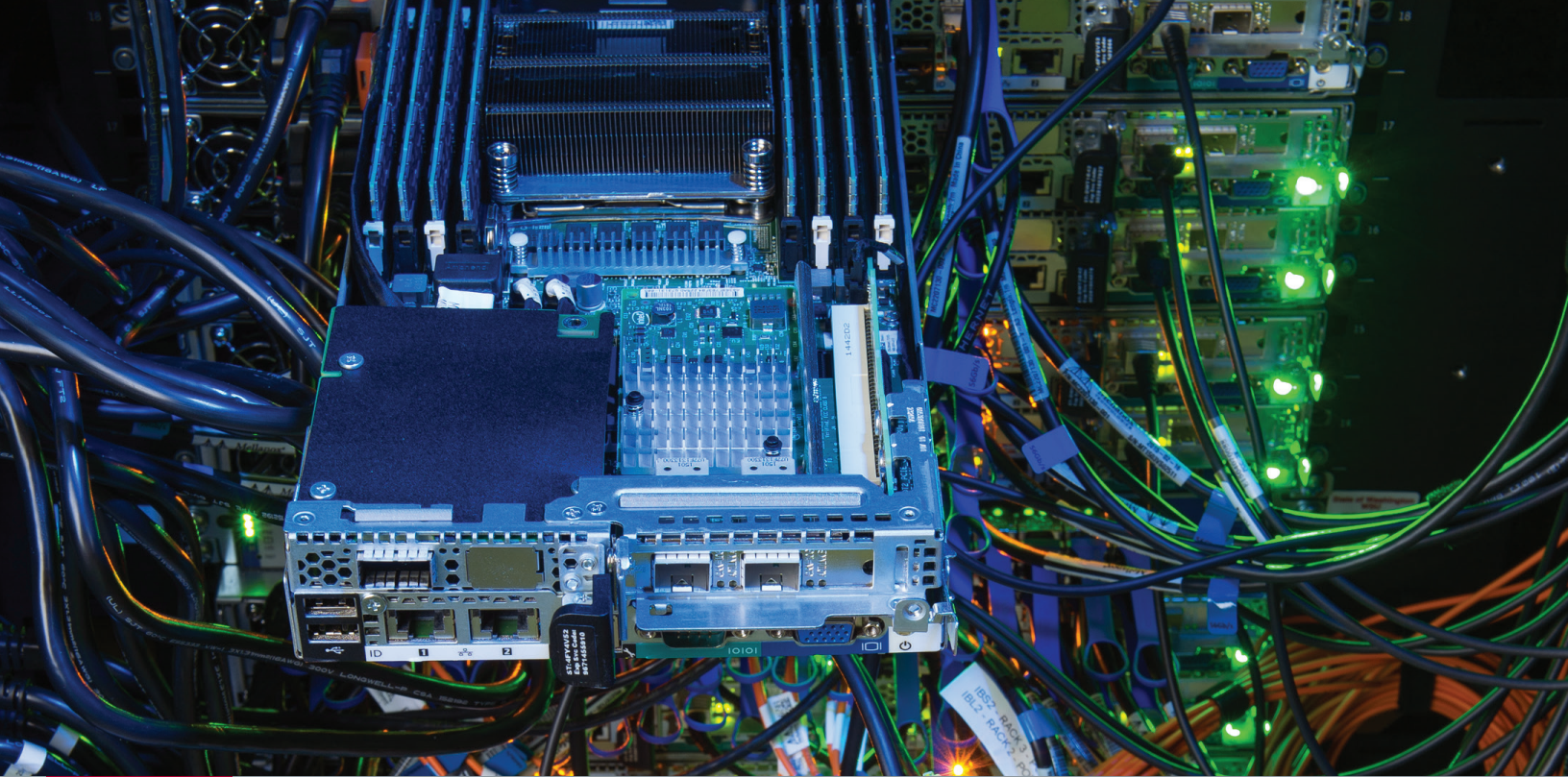


ITS dedicated FY 2018 to ensuring WSU goals such as exceptional research and transformative student experience move forward by introducing innovative new technology resources, strengthening WSU's information security position, and working with university partners in countless areas of research and academic support.

Thanks to these continuing efforts, WSU is on course for great things ahead.







Theme
01

Exceptional Research Innovation, and Creativity



ITS PROJECTS

Kamiak: The Sum is Greater Than Its Parts

Head out on the Highway: Network enhancements

WSU Connections: K20 and Internet Exchange

First Consolidated Email Exchange In WSU History

SharePoint Online: A Collaboration Win for WSU

Office 365 Groups: Come Together



Kamiak: Sum is Greater than its Parts

A significant, ongoing benefit of WSU's two year old high-performance computing cluster, Kamiak, is its affordable expansion capability. Users working with the Center for Institutional Research Computing (CIRC) can invest in additional computing nodes - essentially adding more speed and memory into the cluster. Unused capacity is available to the general WSU research community of Kamiak users, benefiting all.

In FY 2018, ITS system engineers, working with researchers in CIRC, implemented the addition of 40 new servers (known as nodes) for CIRC. How much total computing power does that mean for WSU's researchers? Currently at 119 nodes, Kamiak offers what equates to approximately 2,600 processing cores with 25,800 gigabytes of memory. A typical personal computer would house two to six processing cores and up to 16 gigabytes of memory.

Kamiak's current memory configuration equates to approximately 1,500 desktop computers working 24/7 on

the research of people such as Dr. Bert Tanner, Assistant Professor, Integrative Physiology and Neurosciences, whose studies focus on coordinated motor protein activity and the role of muscle in locomotion and heart disease. Or the research of Dr. Assefaw Gebremedhin, as shared in the CIRC February 2018 newsletter. Assistant EECS Professor, Assefaw Gebremedhin, found that to effectively process and analyze high-volume streaming data, powerful algorithms were needed. Using Kamiak's resources to implement the needed deep learning algorithms, Dr. Gebremedhin demonstrated the merit of his approach on real-world human activity datasets for healthcare research.

ITS supports Kamiak's operations, constantly striving to ensure continuity of service, reliability through monitoring and applying needed technical updates, and listening to the expansion needs of research leaders at WSU; a partnership that, like Kamiak, creates a whole that is truly more than the sum of its parts.



Head out on the Highway

In a project developed throughout FY 2018, Information Technology Services is transferring all Pullman data and voice network services from the current decade-old, 10-gigabit-per-second equipment to new 100-gigabit-per-second campus infrastructure equipment.

...a 10-fold increase in capacity, which compares to going from driving on a single-lane road, to a 10-lane highway.

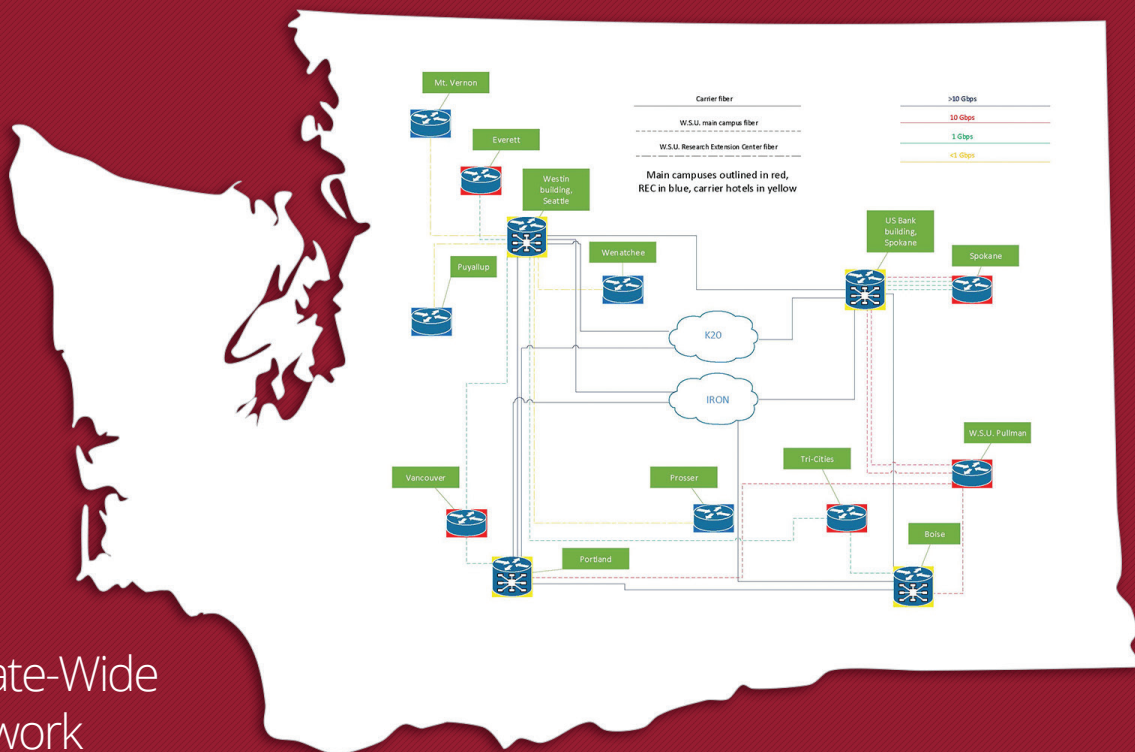
WSU Pullman's network cabling equipment provides data transportation every day across campus for emails, voice network services, and more. Yet with aging cable "lanes",

data traffic faces eventual slowdowns and potential service-impacting issues. This million-dollar equipment update gives Pullman campus a 10-fold increase in network capacity to support the next decade of network applications and data growth.

Tony Opheim, Associate Vice President of ITS, commented, "WSU Pullman's data traffic needs are well met for years to come with this invaluable infrastructure investment."



WSU's State-Wide Area Network



WSU Connections: K-20 and Internet Exchange

This year's collaborative redesign of WSU's Internet connectivity architecture from 20 to 40 gigabits per second coming into Pullman doubles WSU's bandwidth capacity and stems from WSU's new relationship with K-20, a high-speed, high-capacity network that connects education organizations across the state of Washington. K-12 schools and educational organizations rely on the K-20 network to run hundreds of applications that support school administration, video conferencing, distance learning and operations and the resource has tremendous capabilities for the higher education community. By having the POP in Seattle, any geographic limitation is eliminated, and

WSU is provided competitive pricing and great selection of services and providers. Communications architecture planning extended in Seattle, where WSU's first Point of Presence (POP) internet exchange (IX) router is going into the Westin Building, a major server hub for internet traffic. Through collaboration with the Pacific Northwest GIGAPOP and WSU, this is the first presence in the planned internal WSU network (an intranet) that will eventually consist of multiple router locations providing fully dedicated support for WSU teleconferencing, business, and research communications around the state. Eliminating third party data management, the new router network offers maximum speed and low

latency by allowing WSU sole access to its own network. Whether you are working with colleagues in Pullman, Tri-Cities, Everett, or at one of WSU's more remote extension offices, you will have the same access as if all parties were on the same campus. Video conferencing across the various regional locations will particularly benefit from the fully dedicated internal data highway, eliminating delays and service disruptions for high quality team collaboration conversations. Faster internet, greater bandwidth, and resilient communication networks for research projects, business services, and student entertainment are a major wins for WSU both today and as it grows into a top 25 university, offering essential speed and efficiency delivery of data traffic.

First Consolidated Email Service in History of WSU

Completed in June, a multi-phase Office 365 email migration project replaced seven different departmental WSU email services, rolling them all into one centralized service, Office 365 Exchange Online.

Prior to this change, many WSU units utilized unique email tools that often resulted in service limitations when communicating with other areas of WSU. Tony Opheim's project team, led by Bill Rivers, brought the entire university together under the cloud-based service, unit by unit over the course of the year, coordinating the transfer of millions of active and archived email records for each group individually, to ensure continuity of information access during the transition.

Dan Hamilton, project team member, stated, "This change removes the need for on-premises infrastructure, allowing consolidation into the cloud and reduces risk, cost, and future overhead."

The new Office 365 email service provides opportunity for increased employee productivity supporting future university growth and stronger communications through online features not available before, such as enhanced calendaring features and more.

Thanks to the project team's efforts, some employees across the state have WSU mailboxes for the first time, and all WSU employees are now able to communicate more effectively as a community.





SharePoint Online: A Collaboration Win for WSU

SharePoint Online (SPO), a cloud application offering such functions as document repositories, websites, custom forms, and more, is coming to the WSU business community. This centralized service eliminates the need for many currently used services that create workflow limitations between departments due to limited compatibility-resources that cannot talk to each other well, if at all, and brings existing SharePoint users into the Office 365 environment for even greater integration and collaboration opportunities.

Following project planning during FY18, SharePoint presentations are now being offered to departments already using on-premises SharePoint services, and ITS is beginning to schedule those groups into development sites for testing the new cloud version.

“This free service replaces the on-premises SharePoint application that requires expense and staff to maintain,” said Tony Opheim. “Cost-savings and strengthened collaboration resources are the goal for ITS, and a win for WSU’s Drive to 25 initiative.”

Office 365 Groups: Come Together

Office 365 Groups is a free, cross-application group collaboration service ITS now offers in response to customer requests. At the basic level, an Office 365 Group is a list of members and a loose coupling to related assets including a shared calendar, group mailing list, document repository, SharePoint Team Site, OneNote Notebook, and more.

The group can be public or private; the administrator can add or remove people to the Group as needed, and-like Office 365 Exchange Online and SharePoint Online-Office 365 Groups offer stronger collaborative resources and the opportunity to replace existing on premises solutions that cost WSU to maintain.

With over 200 active Office 365 Groups now at WSU, users are enjoying new channels for communicating, sharing, and coordinating effort. While this service is not directly available for request by student groups, WSU staff and faculty can request a new group by emailing [CougTech at cougtech@wsu.edu](mailto:CougTech@wsu.edu) for themselves or on behalf of students.

More information and training resources are scheduled for the coming year. Stay tuned!



Theme 02

Provide Students With a Transformational Educational Experience



ITS PROJECTS

Welcome Home

A New myWSU

Technical Resources Provide Emotional Support and More

Hacktober: It's not All Fun and Games



Welcome Home

In response to the record numbers of incoming freshman students expected for fall term, ITS is teaming up with Housing and Dining Services on a number of residential connectivity enhancement projects this summer.

ITS crews are aiding in recommissioning Waller Hall—a men's residence hall retired in 2015, introducing three WSU apartments to WSU's ResNet infrastructure (with approximately 350 newly installed wireless access points throughout the apartments), and strengthening wireless connectivity for personal devices such as Roku's, tablets, and wireless televisions in the WSU residence halls.

As Dave Peckham, an ITS network engineer supporting these projects pointed out,

"Our job is to provide a student's home away from home, allowing them to enjoy the same level of connectivity and service whether in the campus residence halls or the WSU apartments—just as they would in their own homes."

The ITS team is diligently working on installing new equipment and access points for wired and wireless communications in Waller Hall by the first day of fall move in, August 11. Craig Howard, Director of Admin SVS Information Systems for WSU's Housing and Dining group, stated, "Waller Hall will offer an exceptional value to students."

Another Housing and Dining summer project offers improved connectivity access for students' personal devices. WSU's new partner, Aruba, provides an added layer of security utilizing Aruba's Clear Pass, which permits customer access to WSU's ResNet for the Internet of Things (IoT) devices previously unable to get WSU network security approval, making it easier for students to enjoy favorite gaming and Netflix shows when they need a break from studying—just like home.

Once this service is in place, parents visiting the residence halls can also self-register to access WSU guest internet with immediate registration options, no more waiting! The final collaboration project began in

May 2018, with WSU-owned Yakama, Chinook, and Columbia apartment complexes being converted from a cable-modem based network to WSU's GPON (Gigabit Passive Optical Network) infrastructure, providing wired and wireless network services to apartment-living student customers. The updated infrastructure will also deliver cable TV services, essentially eliminating the need for aging coaxial cable while delivering a much greater level of service to student customers.

The transition of the three complexes to GPON and ResNet this fall leads to migration of Kamiak, Steptoe, Terrace, Chief Joseph A building, and Valley Crest complex by fall 2019. Chief Joseph Buildings B through F and Nez Perce complex were previously moved to the GPON network.

With abundant communication and connectivity resources, Howard is excited to meet customer expectations even more. "We would love to see greater customer retention in our various housing options as a result of these network improvements."





A New myWSU

The first major MyWSU enhancement since its introduction in 2012, the Fluid User Interface (FUI) project responded to student feedback for improved functionality and ease of access to essential information resources. The new homepage is a clean, simple presentation of intuitive tiles offering simple navigation within MyWSU that allows more direct information access.

Every student home page offers the following tiles:

- *Academic Advising – Review items such as advisor contact information & notes from advisor, academic progress reports, and application for graduation.*
- *Academic Records – Pages available by clicking on this tile include grade history, GPA, and transcript request forms.*
- *Financial Account – Make a payment, review charges, or set up direct deposit.*
- *Financial Aid – We make it easy for students to review financial aid awards here!*
- *Manage Classes – Search for classes, build schedules, review current class list & weekly schedule.*
- *Profile – Students will still be able to easily review and update all personal & contact information.*
- *Tasks – This tile offers information on any holds or to-do list items.*
- *My Comm Center – Students can review any official WSU emails or letters sent through myWSU.*

Students also now have the ability to customize their own user experience even further by turning favorite myWSU locations into tiles, removing outdated, unnecessary tiles, and more. Each student can have a unique homepage, providing the best user experience for each.

Another big win for WSU's students on the go, the new design is now device-aware. Users can log in on any device (laptop, tablet, or phone) and myWSU will resize and optimize the user view based on that device. Now, no matter where you are or what device you use, students have the ability to see all of their homepage options and get to self-service information such as financial aid tasks, advising appointments, class schedules, and more.

Thanks to design team working directly from student focus group feedback, students are quickly acclimating to these changes while ITS prepares for the next project phase coming this fall, providing similar home page functionality for WSU applicants. Soon students applying to WSU can expect to see a unique home page based on their application status, reducing worry or confusion as they navigate joining WSU's academic life.

The logo for my.wsu, featuring the word "my" in a lowercase, cursive-style font, followed by ".wsu" in a bold, uppercase, sans-serif font.

Technical Resources Provide Emotional Support and More

Students often need to withdraw from college courses, and myWSU's self-service functions make it easy for a student to opt out of a course mid-term. Withdrawal reasons can range from something as simple as a change of major, to critical health difficulties, and while myWSU makes it easy to accommodate a needed course change, it is important to be certain students are thriving and receiving needed support resources.

In order to be more responsive to immediate student needs, educate students about options for assistance and increase course retention through better data, ITS partnered this year with the provost's office to implement a selection of withdrawal reason codes.

Now when a student selects a code such as 1001 Failing Course or Assignments, they will see a pop up message related to that code. In this instance, the students sees the following:

Many students encounter a rough patch, but they often do better after talking with their instructor, from tutoring, and from academic coaching or wellness workshops (drop-in hours available). Check out <https://ascc.wsu.edu/academic-services/>, or call 509-335-6000, and find help on your campus for managing stressful situations at <https://cougarsuccess.wsu.edu/wellness>.

Each of the 25 available messages are intended to supply the student with links and contact details of resources they should review prior to dropping the course. Additionally, some of the reason codes prompt an email to notify certain offices as a method to encourage the office to reach out to a student who may be struggling. Institutional Research collects each term's withdrawal codes for further analysis in course evaluations, providing continued course and institutional effectiveness decision-making resources.





Hacktober

Hacktober: It's Not **All** Fun and Games

As their first experience with independent living, many students come to WSU with little understanding regarding the value of their personal data in today's cyber culture. Tom Ambrosi, WSU's Chief Information Security Officer, indicated WSU's Information Security team blocked 40 billion malicious attempts to get past their significant security resources in fiscal year 2018. Forty billion attempts in a year equates to 110 million attempts a day, 4.5 million each hour, or roughly 76,000 each minute.

Helping students understand how these figures impact them today and as they move into the workforce is an important job, but there is no reason you can't have a bit of fun along the way.

"Why should your home WiFi be secured with a password?"

Information Security Services' (ISS) first Hacktober Trivia Contest, held in conjunction with October's National Cyber-Security Awareness Month, offered a month-long discussion with students regarding cyber-security, introducing information regarding risks and cyber-safety with a few perks along the way.

Daily trivia questions on ITS' social media channels offered students, faculty, and staff the opportunity to be included in numerous prize drawings, with hundreds of community members joining the fun and submitting responses.

ITS student employees staffed tables in the CUB, asking fun cyber-security questions and recruiting social media followers in the hope of continuing these important dialogues beyond the October event. Weekly prizes included WSU coffee mugs, blankets, sweatshirts, and the month wrapped up with grand prizes of two Kindle Fires.

Cyber-savvy and styling Coug gear, too!





Theme
03

Outreach and Engagement



ITS PROJECTS

Unified Service Desk

ITS Website and Social Media

Cyber-Security Awareness Month

JIRA: All About the Service



Unified Service Desk

Begun in January 2018 with a scheduled September implementation, ITS is consolidating multiple help desk groups into a single, shared Tier 1 customer support resource. As the central focus for the pooled support from CougTech and Enterprise Systems help desks, customers receive all of the benefit: one call or email takes a customer directly to needed assistance.

What is Tier 1? Is there a Tier 2...or Three?

Central ITS support is organized into four customer service tiers. Self-service through WSU's knowledge base (kb.wsu.edu) and ITS' website (its.wsu.edu) is considered Tier 0. Tier 1 is the support offered by email or phone through (consolidating) help desk centers. Tier 2 service takes the conversation to the technical production support team. They are called into action as needed following conversations between the customer and Tier 1 team.

The final Tier Three, is project planning. Tier 3 results from a need that goes beyond a quick solution, requiring more time and resources

to get the desired outcome for the customer. Tier 3 looks at a new solution that can very likely serve the needs of a larger group.

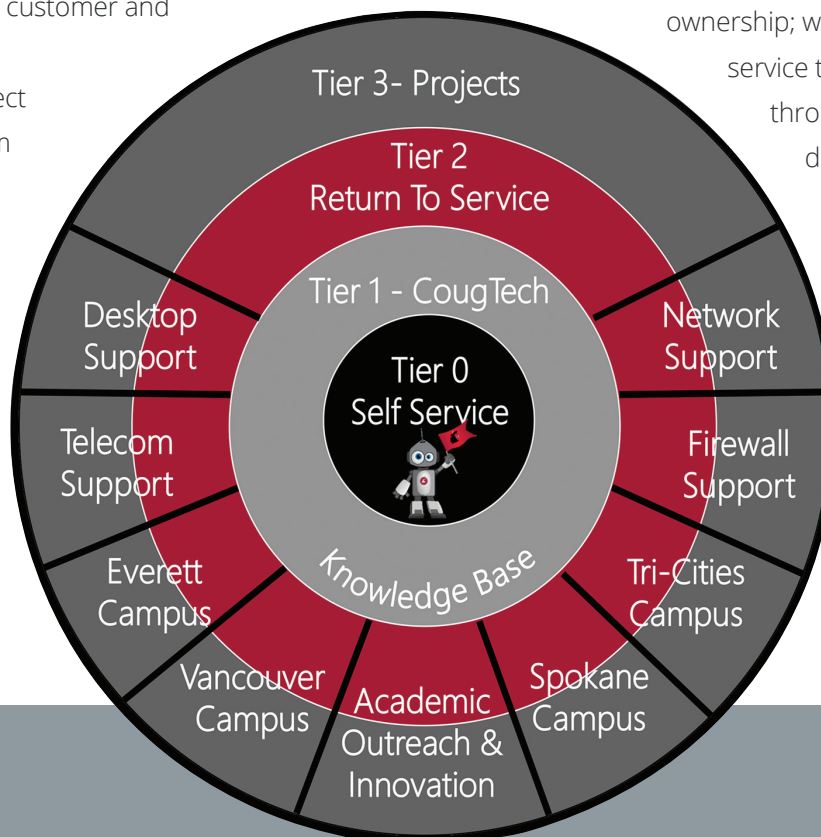
How does ITS measure success for the upcoming unified service desk?

Vice President and CIO, Dr. Sasi Pillay prioritizes our ability to work within our service level goals to close all tickets within five days. Since conversion to JIRA ticketing in November 2017, ITS has an 80% success rate on the 60,000 tickets (or customer requests) processed. While that is a great start, it definitely leaves room for improvement going forward.

ITS is also monitoring total tickets resolved at Tier 1 that do not require additional Tier 2 resources. With a goal of 70% Tier 1 completion, percentage of tickets completed at that

level is very important as ITS focuses on total contact ownership; when assigned, a customer service team member sees a request through to resolution with zero dropped tickets.

Satisfied customers: A true measure of success for ITS.



ITS.WSU.EDU BY THE NUMBERS

pages viewed
1,540,816

total visits
343,240

1 page viewed every
34 seconds



new users

271,172

ITS Website and Social Media

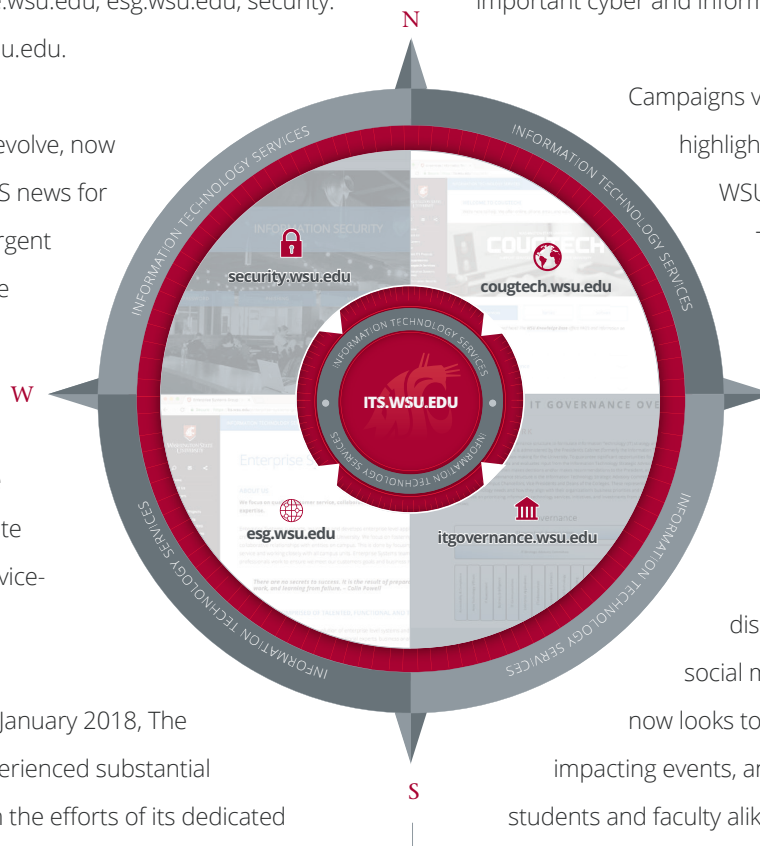
In FY 2018, the ITS web team continued its goal to streamline customer information resources. Five additional ITS websites were incorporated into the main organizational site including CougTech.wsu.edu, TechStore.wsu.edu, esg.wsu.edu, security.wsu.edu, and itgovernance.wsu.edu.

The home page continues to evolve, now providing maintenance and ITS news for customers, as well as a new urgent notification banner that can be activated in the event that regular communication channels are inaccessible. Now customers can check the ITS website for up to the minute information regarding any service-affecting events.

Enjoying their first birthday in January 2018, The ITS social media channels experienced substantial growth this fiscal year through the efforts of its dedicated

student team. Through Facebook, Twitter, and Instagram, the team successfully worked to balance embracing a lighthearted collegial relationship with the university while educating on important cyber and information technology topics.

Campaigns varied from Where's WSU WiFi, a highlight of all the locations students enjoy WSU Wireless services, to WSU Myths, Truths, and Legends, a campaign exploring mysteries around WSU campus. Myths drew the most campaign engagement, even pulling in WSU alumni conversations. However, the single most engaging post for the year, regarding a network service disruption in February, demonstrated ITS social media success. The WSU community now looks to @itswsu for timely updates on service-impacting events, and ITS' message is readily shared by students and faculty alike.



iPad

2:44 PM

100%



Photo



itswsu

Washington State University



[View Insights](#)

[Promote](#)



Liked by [wazzu fcs](#) and 9 others



Cyber-Security Awareness Month

As part of October's annual National Cyber-Security Awareness Month, Information Security Services (ISS) hosted its second Cyber-Security Awareness Summit Oct. 25 in the new Elson S. Floyd Cultural Center with livestreaming to Spokane, Vancouver, and Tri-Cities campuses. Agnes Kirk, the state's Chief Information Security Officer, kicked off the day with her keynote address highlighting that Information Security is a team sport and all of us need to engage in cyber-security.

In a message often repeated at WSU, Kirk reminded attendees,



Additional industry experts continued to share best practices and trends in data security throughout the daylong event, encouraging attendees to enhance cyber-knowledge, join the cyber-security career field, and always be diligent regarding cyber risks while avoiding a culture of fear.

ISS reminds us: When you receive a suspicious email, err on the side of caution. Forward every suspicious email to abuse@wsu.edu. The response team is quick to let you know the steps taken to shut down any malicious activity. As Kirk pointed out, our data is valuable:

"Don't click on links. Go to that url yourself...the sophistication of malware is tremendous."

"We are the commodity, so it is up to all of us to engage thoughtfully and with great care."

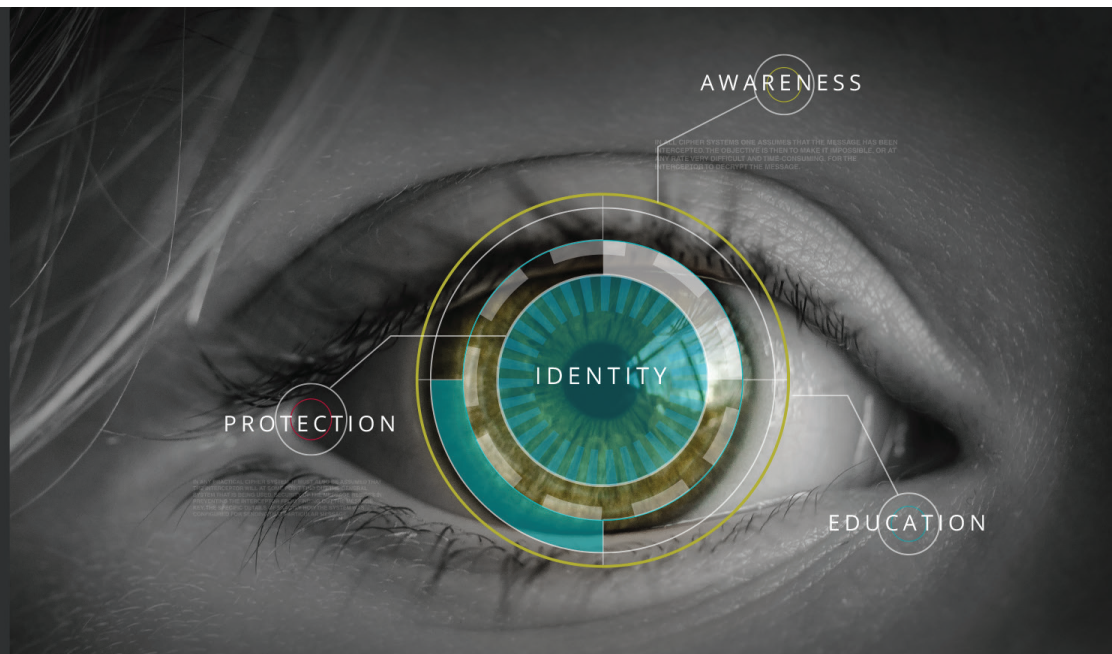
THE 2ND ANNUAL



**CYBER
SECURITY**

A W A R E N E S S

S U M M I T





JIRA: All About that Service

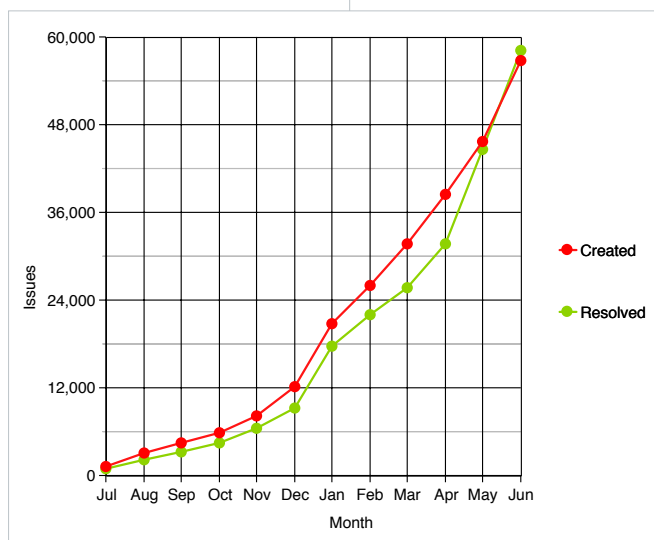
Enterprise Systems launched a new era of customer service with the November ITS migration to JIRA's Service Desk for all customer service tickets. The prior ticketing system's limited functionality created challenges for tracking progress, communicating among impacted users, and offered limited or no data reporting and collection.

Now, when a customer emails an ITS departmental email account such as esg.wsu.edu for assistance with services like data warehouse or epay business systems, JIRA logs the request into a project tracking system and provides customers and support teams a communication resource with excellent time and effort tracking. This embedded effort tracking allow more informed, data driven decisions, aligning ITS' resources when and where there is customer need.

Since implementation in November, ITS has processed roughly 60,000 tickets with 90% request completion within service level goals-a terrific start!

Once the ESG team supported the ITS implementation, they took lessons learned, benefits gained, and began offering JIRA to other service-based WSU units. Through end of

fiscal year, eleven other units on campus have implemented Service Desk including AOI, ASIS, Carson College of Business, Digital Measures (Provost Office), EAB (Provost Office), International Programs, Sponsored Programs, and Student Financial Services.



“ Partnering with ITS to utilize JIRA provided a number of benefits and opportunities for Student Affairs. Our Resident Technology Assistants’ (RTA) lives were simplified by reducing the number of help desk tools they used for problem reporting and escalation. The JIRA portal provides a better experience for our customers and staff.”

– Craig Howard, Housing and Dining Services



Theme 04

Institutional Effectiveness: Diversity, Integrity, and Openness



ITS PROJECTS

Heads in the Cloud

Workday, For WSU's Modern Age

WebCenter Imaging

Activity Insight: Getting Faculty Effort Noticed

Okta: Next Level Security

Information Security: 40 Billion

Accounts Payable, Payroll/HRS, E-Commerce





Heads in the Cloud

Over the past five decades of technology development for WSU, ITS built a strong on-premises infrastructure model which offered a local equipment network upon which many WSU business and academic applications still rely.

However, today's world technology environment is rapidly moving to a new model known as cloud service. Cloud-based or Software as a Service (SaaS)/Platform as a Service (PaaS) business solutions may be confusing to those unfamiliar with this new resource, but the concept of utilizing infrastructure, applications, networking and data storage through outside providers via the internet is an integral developmental focus within ITS as it guides WSU toward 100% cloud-first resources.

"In today's technology environment, physical equipment's limitations and maintenance needs can be a distraction to developing new services for our WSU community."

– Mike Corwin, Associate Vice President of Enterprise Systems

"Every minute focused on managing and replacing on-premises equipment takes resources away from new integrations the WSU community needs." By proactively choosing and deploying cloud applications in an integrated, thoughtful way, ITS can prevent information silos that disrupt progress toward WSU's goals, instead designing data pipelines that strengthen research and business resources.

Theme 04

Workday for WSU's Modern Age

Since the 1980s, WSU has gone from one to six campuses, employed almost 4,000 more faculty and staff, doubled its research expenditures, and quintupled its operating budget. However, throughout this era of growth, WSU experienced no updates to the core processes and systems supporting the corresponding business growth. WSU's legacy processes and their supporting electronic systems are paperwork heavy, obsolete, and at growing risk of failure with each passing year.

Today, the WSU Modernization Initiative, a partnership across multiple units of WSU—including a technical team led by ITS' Associate Vice President, Michael Corwin, is setting the stage to update human resource, payroll, and financial processes and systems. This past fiscal year, the Modernization team accomplished several key milestones on the path to revolutionizing WSU's business structures. During the winter months, top vendors presented potential cloud-based business solutions to WSU audiences following calls for system integration and software vendor proposals.

While students were planning spring breaks, Prosci, an outside training partner, provided the first change management training to a packed house both locally in Pullman and via live stream to attendees across the state.

Collaboration between Human Resources, Finance & Administration, and ITS generated numerous evaluation committees across Pullman campus whose feedback supported the cloud-based comprehensive Enterprise

Management System, Workday, as the best choice for WSU's modernization needs. Following feedback from on-site interviews, reference checks, and internal WSU evaluations, a thirteen-member WSU team named Deloitte as the strategic integration partner to work with WSU and Workday going forward.

With vendors chosen, the next Modernization focus became the funding model. While costly to implement at a time when WSU is scaling back spending, this initiative is long overdue and critical in driving improved business efficiencies for years to come. In WSU's strategic landscape, Modernization efforts strongly support WSU's need to reduce expenditures, streamline countless business resources, and ultimately

strengthen WSU's drive to become a Top 25 university.

In light of its critical nature, the Modernization team gained budget approval by the WSU Board of Regents in May, 2018, allowing for continued progress to implementation phase. With full implementation to begin late in 2018, the university expects to be fully converted by summer of 2020.

Over the remaining two years of this project, ITS is excited to continue to partner with the other modernization development team members across the university to teach, engage, and build stronger relationships as they build WSU's supporting business structure into a truly modern, cloud resource.

WSU has grown from one to six campuses with more than 4,000 additional faculty and staff.



BUSINESS SUPPORT BY THE NUMBERS

Accounts Payable

Payment Requests in FY 18:

105,332 for
\$803,155,199

Payroll/HRS

Total WSU payroll contributions
on behalf of employees for FY 18:

\$159,454,897

Employees paid in FY 18:

19,222

Number of new hires for FY 18:

5,723

Total gross payroll for FY 18:

\$542,062,002

E-Commerce

Tuition and housing payments from eCheck
64,139 for **\$128,960,280**

36
Number of
e-commerce
merchants

Number of departmental e-commerce transactions

134,921 **for**
\$12,771,278

Tuition and housing payments
from credit cards

39,104 for
\$28,807,475

Student Direct Deposit Refunds:
32,063 for
\$88,420,852

Employee Direct Deposit Refunds from Accounts Payable:

15,750 **for \$11,381,372**

Theme 04

WebCenter Imaging

As part of the new Oracle Webcenter Content: Imaging & Capture platform, Enterprise Systems launched a pilot project in May, 2018, to scan and index more than 200,000 financial documents. This effort confirmed the robust new platform offers large volume, searchable digital imaging and is the solution for WSU's substantial imaging needs.

Phase II partners ESG with hundreds of users across all campuses for a full migration of human resource, financial aid and admission documents from the legacy Oracle Imaging system by October, 2018.

Offering improved record processes and efficiencies that translate to cost and labor savings, this updated digital scanning platform is an excellent resource for the university in moving one-step closer to paperless records management that further supports WSU's Modernization Initiative while adding no operational expense to individual departments.



Activity Insight: Getting Faculty Effort Noticed

In early 2017, Information Technology Services, in conjunction with the Provost Office and Institutional Research, began work on an institution-wide implementation of Activity Insight, a faculty activity reporting cloud tool selected by faculty committee as a replacement for WORQS, a homegrown, outdated system, no longer compatible with new institution hardware.

The implementation process began with consulting with colleges and units across the state to understand reporting needs, designing the resulting product customizations, and mapping needed information fields from existing source systems.

The development team mapped data from five source systems (AIS, myWSU, ORSO, the Office of Commercialization database, and WORQS) into the new software solution and followed with extensive data validation. The implementation process also included the custom design of multiple tables and screens within myWSU to manage accounts, troubleshoot web services, and establish security roles.

The tool, complete with dozens of standard and customized screens, providing a broad array of information reporting options, became accessible for all faculty on January 1, 2018. While the primary purpose of implementation initially was annual faculty review, other benefits will eventually include collecting metrics for WSU's strategic plan and Drive to 25, measuring research outputs, state reporting, accreditation needs (both at institution and program levels), and USDA Extension reporting.

Now that implementation is complete, Activity Insight receives weekly data updates, offering dynamic faculty activity reporting access. ITS effort continues, working with the Provost Office and Institutional Research on further custom report development, tailoring the tool to continued reporting needs across the university.



Okta: Next Level Security

Security for any organization boils down to managing access to information technology assets, and information security is no different. WSU has traditionally used passwords to verify identity before a user can be authorized to access to WSU resources. However, times are changing.

Multi-Factor Authentication (MFA) is a method of confirming a user's identity using a combination of factors such as passwords, keys or tokens, or user biometrics.

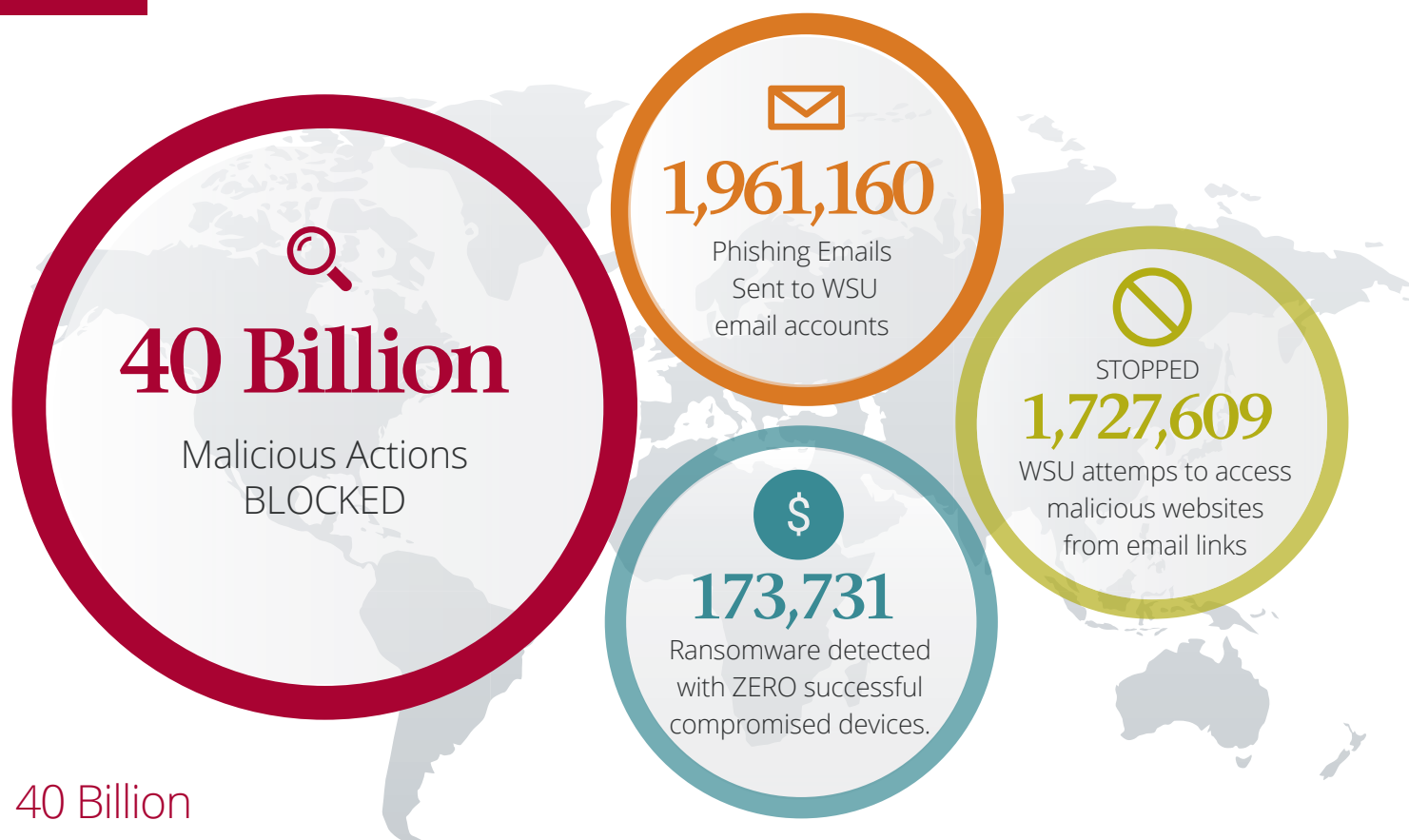
With the purchase and upcoming deployment of Okta, WSU Information Technology Services (ITS) will have capability to implement MFA services and to require multiple security elements to verify a user's identity before being granted access to certain enterprise applications and/or sensitive data. Okta is a cloud native, Software as a Service (SaaS) solution and a market leader in the Access Management solution space.

MFA is an industry best practice that adds one or more layers of protection in addition to your WSU network ID and password.

The initial roll-out of MFA services will be conducted in two phases. During the initial phase this fall, WSU ITS will roll out MFA services this fall for access to sensitive self-service pages within myWSU Student Information Systems. Later this calendar year, the second phase will begin as

WSU prepares to support the approaching changes within the multi-million dollar Modernization project.

Funding this change through savings efforts, Information Technology Services teams are maximizing financial and technical resources to drive WSU forward into a new era of user security with stronger authentication functionality to better protect WSU identities and WSU information technology assets.



40 Billion

Roughly 40 billion malicious actions took place against WSU's information network this past fiscal year. While that number sounds implausible, WSU's ITS security team, led by Chief Information Security Officer, Tom Ambrosi, faces this quite astounding truth every day as they work to identify and manage cyber risk for the WSU community.

For every blocked hacker, many more launch new attacks. According to a 2016 University Business report on higher education cyber vulnerabilities, higher education is the industry sector with the highest number of data breaches: since 2005, higher education institutions have been the victim of 539 breaches involving nearly 13 million known records.

This should come as no surprise considering the enormous amount of sensitive data held within a university's business and student information systems-data that includes the personal information of current students and faculty, applicants, administrative staff, alumni, collaborators, research and project participants, vendors, and even parents.

Along with the volumes of data, WSU's information infrastructure is tremendously complex, constantly moving across national and international connections and allowing personal student devices access for needed research, academic work, and entertainment. Protecting data integrity in the face of constant movement and volumes of information creates a pressing need to both identify and prioritize acute areas of risk.

The No. 1 issue for higher ed IT leaders (in recent years) is information security, according to EDUCAUSE, a nonprofit association of higher ed IT leaders.

So how does ITS prioritize information security risk management at WSU? Where are resources directed when trying to manage five million malicious actions per hour and thousands of malicious emails every day?

In FY 2018, Ambrosi's team prioritized front line protection, confronting the two million phishing emails received. They focused on user education to slow the growth of impacted students who fall victim to these very convincing emails, stopping 1.7 million attempts to access malicious websites through incoming email links.

Ambrosi offered cyber-security discussions and education resources for the WSU IT community, bringing information security partners to WSU to educate and discuss the future of cyber-security.

Next-generation security technology planning included concentrated effort toward cloud security as WSU works

toward cloud-first solutions with many of this year's technology integrations and updates including the WSU mainframe cloud migration, the modernization project's selected cloud-based vendor, Workday, myWSU, Office 365 Exchange Online, SharePoint Online, and more. "The cloud can provide strong security capabilities and terrific productivity resources for WSU," Ambrosi said, "however, it requires a heightened level of diligence in our information security efforts."

Multi-factor authentication vendor, Okta, sets the stage for WSU to add to its access management capabilities. Once implemented, Okta allows WSU to require additional verification steps when accessing WSU information resources, but in return for the extra steps, user information is significantly more secure.

WSU deeply values an open, collaborative academic environment that provides transformative student experiences, and exceptional innovation and creativity in research. Information Security Services is the guardian of those models every day, striving to provide safe passage on WSU's journey to being a top 25 school.

Top Higher Ed Information Security Concerns



Phishing



User Education



Cloud Security



High-profile information security strategies



Next-generation security technology planning



Identity access and management



Governance over data security



Unsecure personal devices



Information Technology Services

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