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V I S I O N

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ANNUAL REPORT 2020



Information Technology Services  
WASHINGTON STATE UNIVERSITY



# WSU Strategic Plan and Goals

ITS Strategic Plan and Goal Support



WSU THEME 1: ●●●●

## Exceptional Research, Innovation, and Creativity

**ITS Goals:** Collaborate across WSU campuses to create a shareable High Performance Computing Environment; restructure WSU's fiber networks for greater access, capacity, and strength.



WSU THEME 2: ●●●●

## Transformative Student Experience

**ITS Goals:** Enhancements for WSU's Learning Management System; ensure optimum student access in WSU's residence halls; deploy collaborative student success platform focusing on increased retention and graduation rates.



WSU THEME 3: ●●●●

## Outreach and Engagement

**ITS Goals:** Collaborate across WSU campuses to provide shareable services; establish strong communication presence across WSU through organizational transparency and strong customer focus.



WSU THEME 4: ●●●●

## Institutional Effectiveness: Diversity, Integrity, and Openness

**ITS Goals:** Collaborate with administrative WSU units to modernize HR/Payroll/Finance systems; implement Payment Card Industry (PCI) compliant networks and processes; centralize and upgrade imaging system; transition existing email and calendaring.



# Table of Contents



WSU STRATEGIC PLAN AND GOALS.....	2
A TIMELINE OF THE YEAR'S HIGHLIGHTS.....	4
LETTER FROM VP/CIO ITS .....	6
TEAMS COLLABORATIVE SOFTWARE .....	8
PLANNING FOR ENDURANCE: VIDEO CONFERENCING .....	10
EQUIPPING COUGS: LOANER LAPTOP PROGRAM .....	14
A FRESH CANVAS: NEW LEARNING MANAGEMENT SYSTEM .....	16
CURRENT TERM WITHDRAWAL SYSTEM .....	17
A CLEAR ROAD AHEAD: MYWSU ACADEMIC PLANNER .....	18
CRIMSON SERVICE DESK'S FIRST YEAR .....	20
GUARDING THE GATES: GLOBALPROTECT VPN .....	22
HELPING YOU GET THE JOB DONE: ENDPOINT MANAGEMENT .....	24
MULTI-FACTOR AUTHENTICATION (MFA) .....	26
THREAT PROTECTION STATISTICS .....	28
LOOKING TO THE FUTURE: WORKDAY AT WSU .....	31
BUSINESS SUPPORT BY THE NUMBERS.....	34
WSU'S COVID RESPONSE .....	37





# A Timeline of the Year's Highlights



2019



### ZOOM

Zoom video conferencing broke records repeatedly in its introductory year at WSU.



### CANVAS

Partnering with AOI and the Faculty Senate, ITS continued preparations for Canvas, WSU's new Learning Management System (LMS), set to be fully implemented by fall 2021.

2020



### MFA

Following two years of phased preparations, Multi-Factor Authentication came online as added security when accessing more than 90 WSU applications beginning August 4, 2020.



### WORKDAY

ITS preparations for the implementation of Workday continued throughout FY20 in coordination with the Modernization team, getting Cougs ready for one of the largest technology changes in the history of WSU.

JULY      AUGUST      SEPTEMBER      OCTOBER      NOVEMBER      DECEMBER      JANUARY      FEBRUARY      MARCH      APRIL      MAY      JUNE



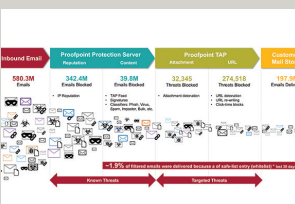
### LOANER LAPTOP PROGRAM

In response to COVID-19 shutdowns, ITS partnered with the Provost's Office to provide free laptops to Cougs who needed them to finish the semester strong.



### CRIMSON SERVICE DESK

In its first year, Crimson Service Desk took in 53,313 requests for assistance. With the new *Ask Butch* online resource, as well as more than 1,500 self-help articles, CSD remains the one-stop-shop for assistance at WSU.



### RISK MANAGEMENT

In FY20, ITS security stopped 382 million malicious emails.



### COVID RESPONSE

Throughout the pandemic, ITS has innovated new ways to improve and simplify technology to stay ahead of needs, including adaptive teleworking solutions like Zoom and MS Teams, upgrading virtual private networks (VPNs), and providing reliable, real-time support with Crimson Service Desk's virtual walk-ins.





## Letter from VP/CIO ITS

### Hello Everyone,

Another year has passed, but this time I felt that it went by rather quickly. I expected the year 2020 was going to be one in which there was a clear vision on the many things we wanted to accomplish. As fate would have it, we achieved many of those, in addition to others. COVID-19, the pandemic, took not only all the plans that we contemplated and modified them, but also challenged us to do more.

As the university rapidly switched to remote instruction after the Spring break, many dependable services that were offered on premises were moved to online. However, not all of our students were able to make this adjustment. I attribute this to the 3 A's: Access, Availability and Affordability. As I have said before, without Access to broadband connectivity, one cannot use the very many benefits that are online. In many places in rural Washington, availability of broadband and access to it is still a wish as opposed to reality. Even when one has access and availability to broadband, many of our students simply cannot afford it. The issue of the "digital divide" during these trying times became exacerbated.

To address this issue, working with the Provost's Office we launched the loaner laptop and the loaner hotspot program. The laptop program served nearly 300 students, while the hotspot program served close to 500 students. The responses from students were overwhelmingly positive, as one student indicated, "I am really relieved ...to still do everything I needed to do." Based on these responses from the students, we have increased the number of students that we are serving in the fall semester.

Working with Academic Outreach and Innovation (AOI), we piloted the use of Canvas as our next Learning Management System. We will reach full deployment of Canvas in Fall 2021.

Working with the Registrar's Office, we developed and now made available the ability for all of our students to utilize Academic Planner, which will help students keep track of their progress in their chosen field. This in turn will help them to graduate on time. We expect the use of the Academic Planner will improve the graduation rate of our students.

We deployed Microsoft Teams, a platform that integrates Office 365 with other tools for improved collaboration through the use of documents, alerts, messages, and videoconferencing. The adoption of Teams across WSU has been phenomenal. The President and Cabinet now only use this to conduct its business. Our videoconferencing service using Zoom now has become mainstay and is impossible to think of how we can conduct instruction and business operations without it. The use of Zoom continues to establish records daily.

Our contributions to deploying Workday is noteworthy and we are on schedule to do so in January 2021. This will set the stage for WSU to make more data-driven decisions and utilize predictive analytics.



This year marked the first time we were able to reduce the number of outstanding audit items to a handful. Several policies were published and collectively they have helped in reducing cybersecurity risks to the university. These will be put into practice in the coming fiscal year.

Another feature that we added to the Annual Report this year is the Quick Reference (QR) code. This will facilitate the reader to quickly go to the ITS website and request services covered in the report.

We were able to highlight only just a few of the items that our dedicated staff accomplished this year. I thank them for their continued hard work in serving WSU. Our measure of success is directly attributed to the successes derived by those we serve, our students, faculty, and staff. Often, this comes only through collaboration with these stakeholders. In other words, Innovating Together (IT) is our moniker.

We are very interested in your ideas and comments on how we can serve you and the WSU community even better.

As always, Go Cougs!

Sasi K. Pillay

**Sasi K. Pillay, Ph.D.**  
Vice President & Chief Information Officer  
Information Technology Services  
Washington State University





# TEAMS

## A University Working Together: Teams Collaborative Software



In January 2020, Information Technology Services (ITS) officially rolled out Microsoft Teams, a modern project management service that moved beyond simply replacing the Skype for Business communications tool university wide. A main hub for Office 365 programs like Word, Excel, and Planner, Teams makes student, staff, and faculty collaboration easier than it has ever been.

Users can set up channels, an organizing system, based on the needs of a project. Each channel offers the ability to create and collect a unique set of files, assignments, relevant websites, and other needed resources. Team members can then add, edit, and download project materials, while reliable version tracking ensures that document changes are transparent and flexible.

The rollout of Teams across the university was initially conceived as a months-long process going well into the summer of 2020, however operations were sped up in early January to meet already growing community needs. ITS Information Systems Manager, Daniel Hamilton, Enterprise Endpoint Manager, Eric Jacobs, and the ITS Communications team quickly built out and delivered introductory user trainings in January to support adoption of the service, with more than 900 WSU staff and faculty attending. Early training and adoption became more important than anyone could have predicted once COVID-19 required the sudden shift to remote collaboration to support continued business and academic needs.

“We’ve gotten valuable feedback on how Teams is helping people communicate in remote environments,” says Hamilton. “It has helped WSU employees with the new, non-traditional work schedules and continued productivity.”

During the COVID-19 era, Teams offers a simulated office environment. With its easily navigable channels, one-on-one and group chat feature, and built-in filing system, teleworking staff easily check in with a supervisor or pass off documents for review.

In addition to staff and faculty, however, the most engaged Teams have been those run by students, with highly collaborative groups like the Associated Students of Washington State University (ASWSU) using some of the most active instances of Microsoft Teams at WSU.

“I can’t express how appreciative my team and I are for having MS Teams,” says one Voiland College of Engineering and Architecture student. “We love how easy it is to share documents, work on them together, and keep them organized.”

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“I think it’s the ease-of-use for chat, and the ability to easily collaborate,” says Hamilton of why students might be so drawn to Teams. “Also, mobile integration. Students have other tools for these scenarios, but I don’t think a lot of those other tools are as mobile-friendly as Teams.”

In addition to Teams’ ability to merge the workflows of large groups and organizations, the software has a built-in classroom component currently being explored through multiple pilot tests at WSU. AOI and WSU’s Faculty Senate are investigating the potential for Teams to augment the university’s existing Learning Management Software (LMS).

“There’s a lot of opportunity and value that the university can get out of Teams,” says Hamilton. “I think it’s important that we continue to explore the functionality and how we can use it to support WSU’s mission.”

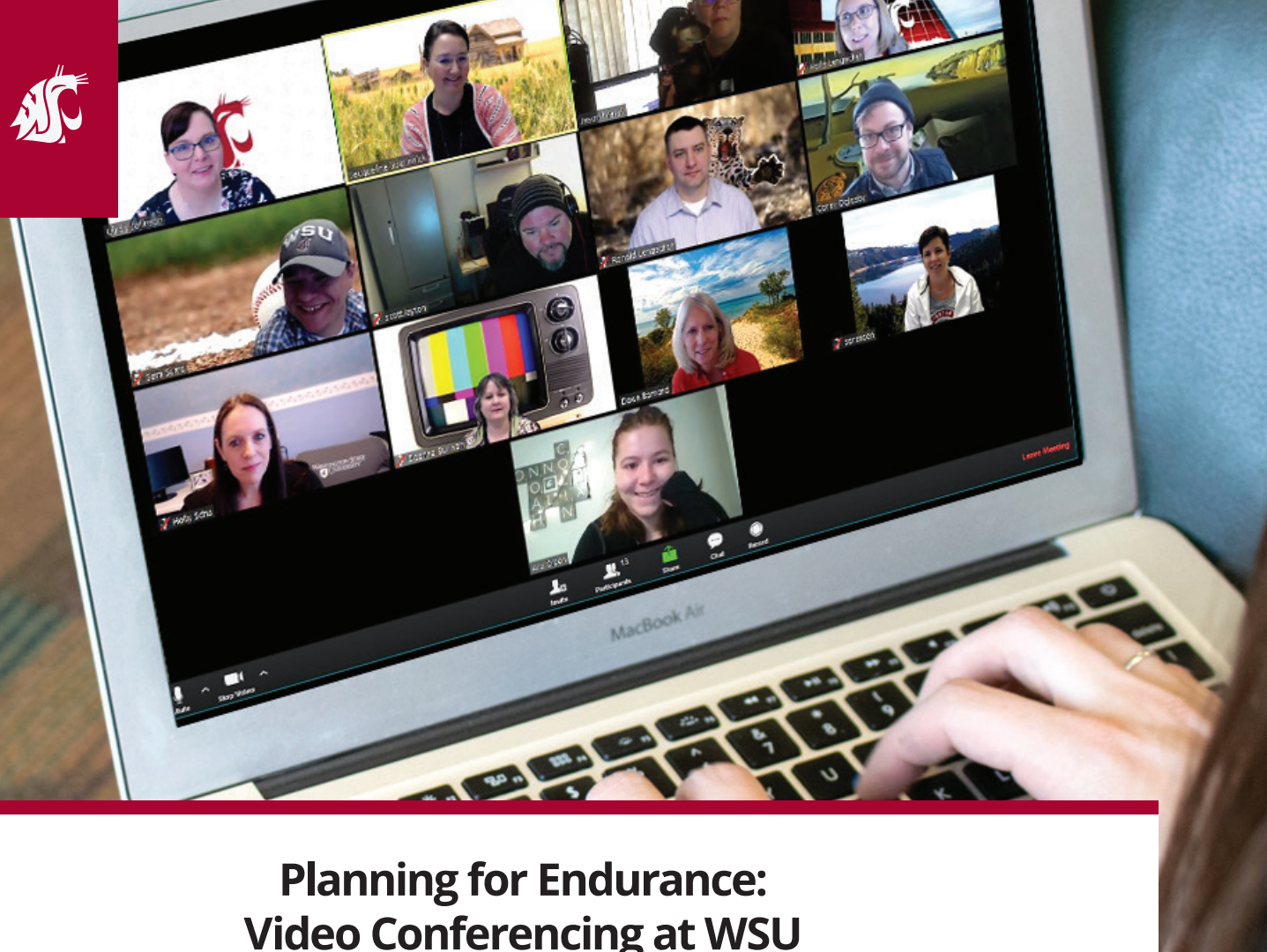
That Teams has been so well received, and still offers so much untapped potential, makes the service such a great fit for WSU’s current learning and work environment. As the academic experience continues to evolve and adapt to the fluid needs of today’s world, it will be tools like Microsoft Teams that help keep productivity focused, organized, and moving forward at the pace we have come to expect, no matter the obstacles.

“The ability to collaborate effectively as educators and students contributes to more effective research,” shared Dr. Sasi Pillay, VP and CIO of WSU, “Our goal with a tool like this is to allow students to go beyond anything they may have experienced in a learning environment and discover a new world of partnership through shared ideas and resources. The classrooms of today are not one-way conversations, but a dialogue using innovative technology such as Teams. These students and educators are building lifelong relationships that will change the world.”



<https://its.wsu.edu/microsoft-teams-services/>





## Planning for Endurance: Video Conferencing at WSU



When Information Technology Services (ITS) deployed the initial Zoom pilot at WSU in the summer of 2019, benefits offered by the new service quickly became apparent. Users are now able to schedule and attend small to large-scale meetings and webinars via a streamlined cloud application accessible anytime, anywhere on desktop, mobile, or web more easily. And with chat, recording, and screensharing utilities all rolled into the same package, Zoom offered users surprising simplicity in adopting a complex software.

Prior to the pilot, the ITS project committee tasked with assessing WSU's existing video conferencing system for both cost and effectiveness found the legacy system cost roughly \$150,000 a year plus periodic added upgrade fees and was limited in its ability to support an increasingly mobile university

community. Moving the aging system to the cloud and modernizing to include recording capabilities and other needed functionality would increase annual costs to over \$300k a year. Offering a cloud solution ready to go to work right out of the box at a flat rate of \$85,000 per year, Zoom's versatility and scalability solved multiple challenges at once.

Along with dramatic cost savings, the functionality confirmed Zoom is the choice for WSU's video conferencing needs. Whether it is two students connecting for a quick study session or an administrator broadcasting a webinar to the entire university community, Zoom offers a solution. It is the ad hoc nature of Zoom that makes it such an efficient tool, says Director of Infrastructure at Spokane, Bryan Valley.



"When we want to have a meeting, how many hoops do we have to jump through to accomplish this? With Zoom, one person schedules it, and the invitees accept it. No moderator requirement allows improved efficiencies and timeliness in our business and academic operations."

Given the green flag to move the product migration ahead, the Video Conferencing Infrastructure team, led by Manager Travis Williams, fine-tuned a Zoom training and support system with no hint of the unexpected lifeline their team would offer to the WSU community in the coming months. When the spread of COVID-19 led to campus shutdowns in March 2020, thousands of students, faculty, and staff suddenly needed immediate access to the new application to continue working and learning in their new remote environments. The Zoom support team was ready. Newly registered Zoom users increased from 2,500 to more than 31,000 virtually overnight. Suddenly, data showed as many as 40,000 weekly Zoom meetings, including more than 600 concurrent sessions at any given time. Records were being broken daily, including total Zoom sessions held by an individual—almost 150 meetings in a single week by one WSU faculty member. Overnight, Zoom became the one resource almost no Cougar could be without, allowing heightened one on one student support during this challenging transition in learning environments.

"We were really, really fortunate that we evaluated this product at the beginning of 2019 and implemented it when we did," said Williams. And while the decision to move to Zoom could seem fortuitous, Associate Vice President and Deputy Chief Information Officer for ITS, Tony Opheim, sees Zoom's success at WSU as a combination of good fortune, good decision making, and good support.

"There's an old saying: 'I'd rather be lucky than good,'" adds Opheim, quoting Baseball Hall-of-Famer Lefty Gomez. "But my qualification on that? It's better when you're both."

On the development side, one of the more important aspects of Zoom's cloud-based format allowed the video conferencing team to prioritize user experience and support, rather than frequent hardware refreshes and other maintenance, paying off dramatically during COVID-19. "If WSU had still been using the old infrastructure, we wouldn't be able to do what we're doing today," says Williams. "The 30,000 users that are connecting from home? We couldn't do that."

Along with curbing the tide of Zoombombings by implementing heightened security measures and training faculty on best Zoom security practices, Williams' team quickly followed Zoom rollout with an upgraded option offering compliance with the Health Insurance Portability and Accountability Act (HIPAA). Users in sensitive positions at WSU can request HIPAA-compliant Zoom which allows disabled meeting recording, removes user data from the dashboard, and encrypts chat. As COVID-19 forced the high volume of WSU students, faculty, and staff who routinely work with

*"Zoom is a 360-degree solution, looking at WSU needs from all possible angles and investing thoughtful planning and skilled staff, as opposed to just throwing technology at a problem." Tony Opheim*

healthcare and other sensitive information into a telework context, being able to easily and affordably migrate such users to this version of Zoom was a valuable upgrade offered at an important juncture. And, best of all, the HIPAA-compliant version of Zoom came at no additional cost to the university.

"It is a testament to the product selection, preparation, and the talented support team in place that WSU's Zoom customers have experienced zero service outages," shared Opheim. "Zoom is a 360-degree solution, looking at WSU needs from all possible angles and investing thoughtful planning and skilled staff, as opposed to just throwing technology at a problem."



With Zoom, ITS is more capable of supporting reliable, high-capacity collaboration across WSU and beyond, while protecting our user community at the same time. As the university experience grows more complex in response to our changing world, Zoom, and the dedicated staff at ITS behind it, has made the road ahead seem far less daunting.



<https://its.wsu.edu/wsu-video-conferencing-services/>





## WSU ZOOM: July 2019 – June 2020

**537,723**  
*Meetings*

**2,567,334**  
*Participants*

**23,278,968**  
*Meeting Minutes*



**35,561**  
*Registered WSU  
Zoom users*



**359**  
*Webinars with  
12,287  
participants*



*Highest number of  
simultaneous meetings  
at one time*  
**912**



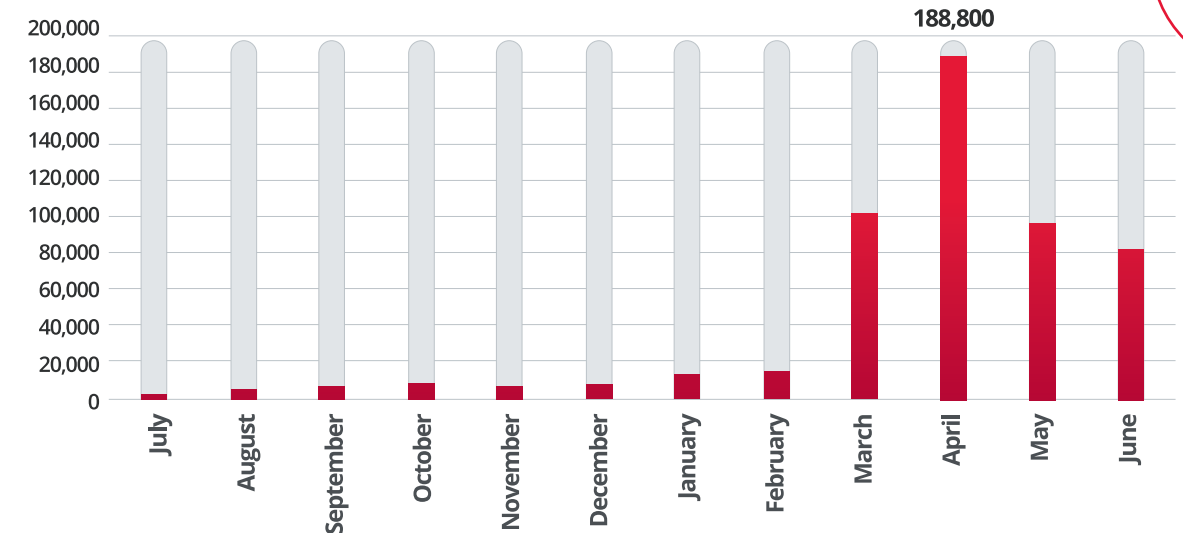
**Transformative  
Student Experience**



**464,266** *meeting participants completed post-meeting surveys*  
with **98%** *positive feedback*

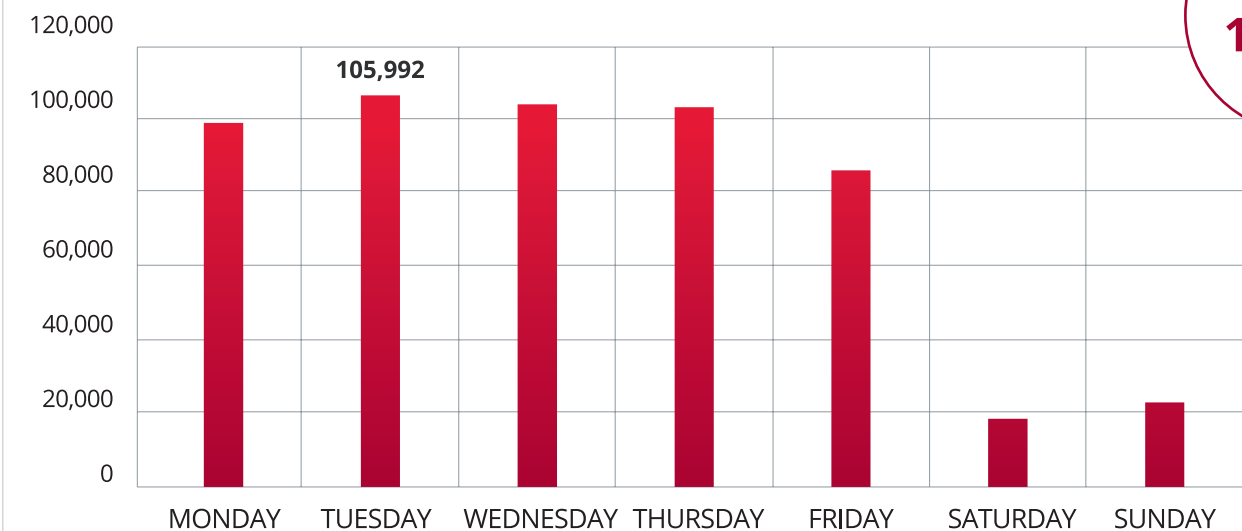
## WSU ZOOM: July 2019 – June 2020

### Total WSU Zoom Meetings by Month



**April  
188,800**

### Total WSU Zoom Meetings by Week



**Tuesday  
105,992**





## Equipping Cougs: Loaner Laptop Program



When WSU shifted the remainder of spring 2020 semester online following March's spring break, Information Technology Services (ITS) quickly rallied to respond to those students without the tools necessary to successfully transition to a fully online academic experience. In a matter of days, ITS partnered with WSU's Provost team to launch a program offering brand-new loaner Google Chromebooks shipped directly, free of charge, to Cougs in need.

Supporting students who are without access to important hardware has long been a passion of Vice President and CIO Dr. Sasi Pillay's, and when the moment arrived, the Provost's office was in a good position to pull the necessary fiscal resources together and quickly make Dr. Pillay's vision a reality. The team sorted through many details in a truly brief period to ensure the program's success. "The immediate challenge was finding a vendor who could deliver 200 machines, and do it quickly," said Associate Vice Provost, Dr. Craig Parks, who spearheaded the effort with Dr. Pillay. "Once we had the machines, [it was about] getting them inventory tagged, software installed, shipped out as fast as we could, and so on."

To make this happen, a small brain trust, as Dr. Parks calls it, was formed between departments, with Dr. Pillay and Dr. Parks leading and troubleshooting, Office of the Provost Communications Coordinator Todd Mordhorst working directly with students on requests, deposits, and returns, ITS Enterprise Endpoint Manager Eric Jacobs handling inventory, ITS Inventory Coordinator Sam Syms shipping the computers out to students, and Crimson Service Desk Manager Anden Lewis overseeing technical support.

Immediate decisions were made to use Google Chromebooks, as the machines were simultaneously affordable and right for students' current needs, which revolve heavily around video streaming and conferencing. Furthermore, the

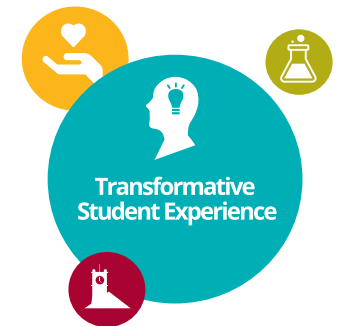
affordability of the Chromebooks made it easier for students to purchase their computers if they so wished, at WSU's cost of \$300, after having borrowed it for the spring and summer sessions.

"In this day and age, most people, including me, assume today's students have some kind of computing device at home, and that's not correct," says Dr. Parks. "I see the Loaner Laptop Program, and programs like it, as absolutely vital for our students."

Within two weeks, over 115 laptops shipped out to WSU students from every campus and throughout the country. To date, 162 machines are serving students in need. "I could not have been happier with how quickly we were able to get the program off the ground," said Dr. Parks.

The Loaner Laptop Program has been a remarkable success, even inspiring the Provost Office and ITS to once again partner to deploy the Wi-Fi hotspot program enabling students' access to the internet and WSU educational resources at no cost. Understanding how vital these kinds of access support initiatives are for students, Dr. Parks and Dr. Pillay aim to keep them running and expanding as WSU heads into the Fall 2020 semester and beyond.

"With programs like the Laptop Loaner Program," Dr. Pillay shared, "Cougs everywhere can leave worries about technology behind and focus instead on what really matters—their studies, and an all-around transformative student experience."







## A Fresh Canvas: WSU's New Learning Management System



WSU students and faculty are closer than ever to a more robust and user-friendly online learning environment with Canvas, the ultramodern Learning Management System (LMS) set to be fully implemented by fall 2021.

Following 2015 implementation, WSU's main LMS platform, Blackboard, began seeing concerns expressed by both students and faculty with both ease of use and its inability to fully integrate into the university's PeopleSoft Student Information System, myWSU. Responding to these concerns, an assessment team from WSU's Faculty Senate, Academic Outreach and Innovations (AOI) group, and Information Technology Services (ITS) began the important task of finding a suitable replacement LMS for the university in 2018.

"As technology has improved, we have a history of moving management learning systems," says Dr. Dave Cillay, AOI Chancellor. "If we find something better, we move towards it with the ultimate goal being to find the best fit for WSU."

Focusing on WSU faculty's experience and recommendations, the evaluation group selected Canvas for a multi-phase pilot beginning the summer of 2019. Starting with 400 students in a small number of courses during phase one, close to 1,000 students are added during each phase of the pilot, with the project team working toward their goal of full, university-wide implementation by spring 2021.

A particularly improved functionality of Canvas over its predecessor is its effective support capabilities for WSU faculty's grading process. With Blackboard, "faculty would have to [manually] do things like add leading zeros to the Excel spreadsheet, so everything was the proper number of digits in terms of student IDs, and then upload as a CSV file," says Dr. Gregory Crouch, Faculty Senate Chair. "It was painful." Canvas, on the other hand, eliminates much of the manual data entry and review required of faculty by providing easy integration with myWSU and similar applications. Canvas allows an instructor to transfer grades from the new LMS directly to myWSU with the simple click of a button.

Beyond streamlining the grading process, Canvas also offers faculty user analytics invaluable to student success. Within Canvas, administrative consoles can be configured that automatically alert instructors of at-risk students or groups who missed multiple assignments or have shown evidence of some other difficulty in class. Given this real-time risk assessment data, faculty can then implement the most effective solutions for students, improving student retention through effective academic support and resources.

*"Canvas' architecture is much more modern and intuitive from the end user perspective," says Dr. Sasi Pillay, VP and CIO of ITS. "Whether faculty or student, we expect the experience to be far better than what it has been in the past."*

Each year, students transfer to WSU from smaller two-year schools around the state. Adopting Canvas, a commonly used LMS by Washington State community colleges, allows for an easier transition for those students transferring to WSU from these community college programs. This familiarity for incoming transfer students, along with Canvas' integrative capabilities, are integral academic support resources as WSU moves forward.

While Canvas has clearly risen to the top LMS choice for the university, it will be the continued strength of the transitional partnerships that remain key to its success at WSU. "It's the partnerships," says Dr. Crouch. "We're focused on everybody working together to improve the faculty and student experience."

With the Faculty Senate, AOI, ITS, and a governance committee comprised of faculty and staff from every WSU campus, the unity of support behind Canvas ensures that its full implementation in spring 2021 will further optimize the student experience, helping every Cougar define clear pathways to success throughout their college career.

## Best Path Forward: Current Term Withdrawal System Supports Student Needs



Withdrawing from college can be a stressful decision for students, but that does not mean the actual process must be challenging as well. To better support Cougs considering withdrawing from the current semester or term, ITS partnered with the Registrar's Office to develop a Current Term Withdrawal System (CTWS) that allows withdrawal from all courses, not just a single course change or two.

Launched on May 11, 2020, the new CTWS streamlines student's withdrawals by housing the entire process within myWSU.

"Because it all takes place right inside of myWSU, we already know if the student has financial aid, whether they are recognized with veteran status, what their academic program is," says Richard Backes, Associate Director at Information Technology Services (ITS), "so we can customize the information they need based on information already provided."

Formerly, students needing to withdraw from a current term would log into a separate application where they must answer multiple questions about their status and experience as a student before sending the request into a general queue in the Registrar's Office.

"It is a very stressful thing, withdrawing from a term," says WSU Registrar, Matthew Zimmerman. "So, more information is always better than not enough."

Utilizing the fluid myWSU interface, ITS' Chad Jeffries, Trent Tunncliff, and Vicki Olson designed the new process to move from a traditionally complicated, multi-step process into an efficient, automated workflow that reduces delays and streamlines support on all sides of the operation. The new system can apply criteria regarding when and what offices need to be included in the process, allowing withdrawal requests to move through and get completed in a fraction of the time.

Briefly delayed by COVID-19, the new system went live just in time for summer courses. This timing is an unexpected benefit to the tool's continued development for those involved in the project, allowing for more opportunities to refine workflows during lower site traffic.

While student retention is always a top priority, Backes and Zimmerman view the new CTWS as another important ingredient for the best student experience.

"It gives the student a sense that someone's looking out for them," said Zimmerman. "They will know their advisor is in the loop and will more than likely reach out to them. It really adds a human aspect."

"Obviously, we're sad to see students go. But at the same time, if students can clearly communicate why they are leaving, that is helpful to WSU and other students," says Backes. "When they come back, they are coming back with positive feelings."







## A Clear Road Ahead: myWSU Academic Planner



When it comes to ensuring a smooth and successful academic experience, Cougs need tools that will keep them on track that are easy to access, exact, and timely. With technology-enabled advising tools at the forefront of modern Integrated Planning and Advising for Student Success (iPASS) solutions, Information Technology Services (ITS) has been hard at work improving the student advising experience at WSU with a new Academic Planner (AP) tool within myWSU.

Currently in the pilot phase, myWSU Academic Planner uses a technology-enhanced student advising model for a high-quality, customizable

advising experience for students. Supplying a real-time, digital degree planning service that uses up-to-date course information, this planner supports student progress toward their degrees using the most direct path possible, removing the possibility of taking inappropriate or irrelevant courses and making semester mapping a quick and uncomplicated process.

"We're building the planner in a way that functions well in the rhythm of the student experience," says Darren-Michael Yocum, project lead and executive director within ITS.



"It shows you all of the courses you need in one place, ensuring confidence the student has all the information they need to move from setting goals to accomplishing them."

For the myWSU Academic Planner to work most effectively, it requires a partnership with all academic departments. They will be critical to student planning success through effectively mapping all four years for every degree. The payoff for colleges has tremendous potential through real-time data informing colleges exactly what specific course offerings would be most beneficial to their students in the years ahead. All parties benefit from reducing scenarios where senior year students do not have timely access to the remaining classes required to complete their academic program and graduate on schedule.

"Also, departments could better evaluate transfer credits at the beginning of the student's WSU career, rather than at end," adds Yocum. "Without that, both students and departments are not really working from a fully informed picture."

*"[The Planner] shows you all of the courses you need in one place, ensuring confidence the student has all the information they need to move from setting goals to accomplishing them."*

*- Darren Michael Yocum, Executive Director ESG*

Academic Planner also makes it easier for students to explore paths toward alternate degrees. Using artificial intelligence technology, or Watson as it is affectionately known, students engage on a self-service evaluation of their own academic options by receiving real-time, reliable answers to their questions.

"Maybe a student wants to look at other paths or degrees," says Yocum. "The planner would quickly offer solutions such as: based on what (degree) you want, here are the quickest four ways to accomplish this."

A technology-supported academic planner offers a positive impact on not only student degree progress, but also retention, graduation, and advisor effectiveness, all important aspects of WSU's missional goals to support transformational student experiences through institutional effectiveness. While still early in its developmental life, myWSU Academic Planner is just one example of ITS' enduring dedication to using technology to optimize the student experience at WSU.





# Where Technology and Teamwork Meet: Crimson Service Desk’s First Year



Introduced in spring 2019, Crimson Service Desk (CSD) combined student-facing CougTech and business-facing Enterprise Systems Help Desks to supply a one-stop-shop for the WSU community’s technical help needs. Since then, Crimson Service Desk has grown into an invaluable resource for the university, successfully navigating many unanticipated challenges its inaugural year.

Crimson Service Desk’s support was immediately evident following its 2019 debut, pooling a library of over 400 self-help articles, real time email, phone, and web support, and a three-tier support structure ensuring business and academic customer needs would be met regardless of the scale of assistance required. By the end of its first year, Crimson Service Desk took in 53,313 requests for assistance, with a staggering 40% of those requests coming during the first two months WSU responded to COVID-19.

The level of support required during the university’s move to remote access in March was both immense and unexpected, but thanks to an already well-established and expanding infrastructure, Crimson Service Desk was prepared.

By the time the Crimson Service Desk’s office in the Smith Center for Undergraduate Education on Pullman campus was forced to shut down following spring break, CSD Manager

Anden Lewis had already begun transitioning the help desk into a virtual format. Thanks to the recent introduction of Zoom, Lewis took advantage of breakout room functionality to implement a daily Zoom meeting during CSD’s hours of operation where customers could enter the meeting and immediately be moved into live one on one help in a breakout room. The availability of technical assistance for the WSU community continued uninterrupted during a time

*“In the past year, [ITS has] taken giant leaps toward making Crimson Service Desk the one-stop-shop for technical assistance, university-wide, a significant resource for a university working toward Top 25 ranking.”*

of particularly critical need. more than 200 customers were supported via the service desk’s Zoom portal during COVID response.

In addition to retaining the virtual walk-in aspect of Crimson Service Desk for its customers, the move to remote service also helped the student staff working at the service desk by offering them flexibility around the necessary adjustment to their changing academic environment.

“At first we were worried about what would happen to our student workers’ shifts,” said Lewis. “But because they were able to work remotely, our students were able to increase hours, and flex shifts to fit their new schedules. We’re definitely considering keeping the Zoom portal going even once campus reopens.”

Also, this past year, a new artificial intelligence tool, “Ask Butch,” was added to the Crimson Service Desk’s online self-service portal, [crimsonservicedesk.wsu.edu](https://crimsonservicedesk.wsu.edu). Powered by IBM’s “Watson” artificial intelligence (AI) technology, Ask Butch has seen an average of 52 conversations a day since its implementation, ranging from the most common, “I need to reset my password,” to “Butch, tell me a joke.” Other university groups such as Student Financial Services and Admissions have joined the AI party, hosting their own Ask Butch resources. WSU continues growing 24/7 self-service support access for the university community.

find one’s grades in Blackboard to tutorials for developing new WSU mobile applications.

Of the 53,313 service requests Crimson Service Desk completed during its first year, less than 10% have required escalation to higher level service or subject matter experts for ultimate resolution, illustrating the service desk’s well-equipped support coverage. And with new articles being added weekly that cover an increasingly wide range of university-related topics, the Crimson Service Desk is on its way to establishing itself as WSU’s central assistance hub—technical and otherwise.

“It’s a lofty goal,” Lewis says. “But in the past year, we’ve taken giant leaps toward making Crimson Service Desk the one-stop-shop for technical assistance, university-wide, a significant resource for a university working toward Top 25 ranking.”

Given Crimson Service Desk’s innovations and commitment during FY2020, such goals do not seem so lofty.

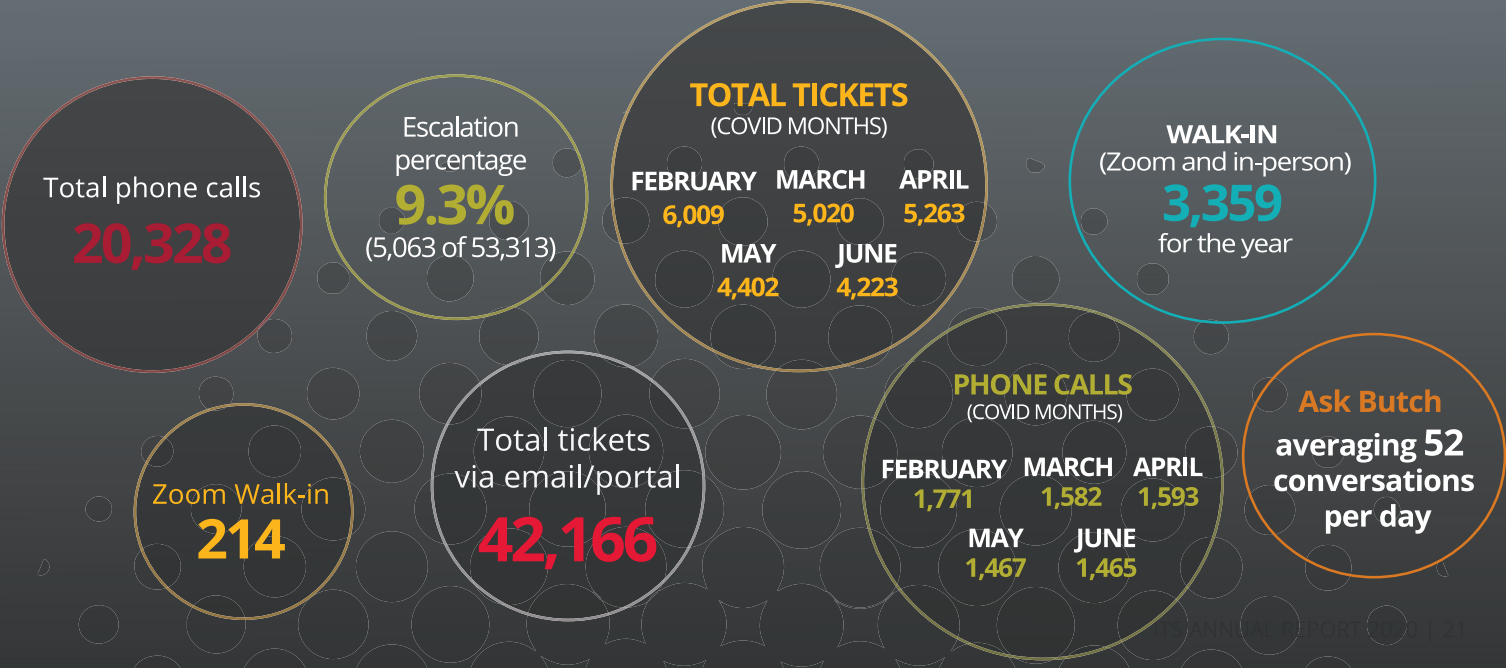


At the heart of Ask Butch, however, is the vital library of self-help articles, which the tool combs through to find solutions for users in milliseconds. Supporting Butch’s growing list of programmed questions, CSD currently offers an expanded library that has grown in the past year from 400 articles to nearly 1,500. The database covers topics ranging from how to



<https://its.wsu.edu/csd>

## CSD NUMBERS







## Guarding the Gates: GlobalProtect VPN



WSU life is increasingly mobile these days. With so many faculty and staff accessing WSU resources and research via secure remote connection, Information Technology Services' (ITS) responded with implementation of a robust virtual private network (VPN) software application, GlobalProtect, on July 8, 2019.

As part of the shift from old to new, the team supported both systems for an extended period while support teams updated processes and prepared to move to the new secure access resource. GlobalProtect ran parallel with Cisco's limited, aging legacy SSLVPN service at WSU's Pullman and Spokane campuses. It quickly became clear in spring 2020, as COVID-19 forced much of WSU to remote work locations, that WSU would be transitioning to an entirely online workplace. The result? Completing the move of Pullman and Spokane's VPN users to GlobalProtect became an instant, urgent priority.

*"[GlobalProtect] VPN puts the university in a position to more effectively satisfy security requirements," says Bonner. "So, we're now seeing better security audit results, a top priority for our service team as we support WSU's mission for institutional effectiveness, innovation and engagement."*

ITS Network Security Engineer Laurie Hickey's team was faced with an enormous task, similar to a war room scenario. The team dropped all other priorities, whiteboarding questions, solutions, vital resources, partners, all to configure an entirely new network architecture in a matter of days.

"They upgraded every single WSU Palo Alto firewall across the state, ensuring remote access to critical WSU resources for users being introduced to telework in a very abbreviated schedule" recalls Tony Opheim, Associate Vice President and Deputy Chief Information Officer for ITS. "And they burned the candle at both ends to make it happen."

In a partnership with the Collaboration and Directory Services (CDS) at ITS, the network engineering team did make it happen, with the first big push to the new VPN successfully executed on March 19—just one day after campuses shut down.

"It was impressive to see," says Network Security Engineer, Brian Russell, of the effort. "These were tasks that should have taken four or five months, and the team did them in three weeks."

With all of WSU's VPN users ready to access GlobalProtect, the next question to answer was could it truly keep up with such a dramatic spike in demand right out of the gate. Maximum number of potential concurrent users prior to COVID-19 with the legacy VPN was ample at 508. The new

service's limit increased concurrent user access to more than 65,000 slots available. WSU's VPN service changes were not unlike going from a horse drawn carriage for getting around the land grant university, to hitting 200 mph behind the wheel of a 700-horsepower stock car. Almost at once, the network engineering team saw instances of more than 1,300 VPN users at a time, reflecting a 60% increase in VPN use with room for exponential added growth.

"This change benefits everyone at WSU," says Bill Bonner, Director of Network and Cloud Engineering at ITS, "faculty, and staff, but also students, who can now gain access more readily to library resources and some of their private college resources, as well."

The GlobalProtect VPN also offers the network engineering team greater control over remote user access. When the team assembled the new infrastructure, they rerouted VPN authentication to now pass through administrative groups, meaning activity within individual networks could be more tightly controlled and monitored by specific area and systems managers. Better controls mean improved security posture which mean better protection of WSU data from research to personally identifiable information (PII) for students and employees, and much more.

"The new VPN puts the university in a position to more effectively satisfy security requirements," says Bonner. "So, we're now seeing better security audit results, a top priority for our service team as we support WSU's mission for institutional effectiveness, innovation and engagement."

Though the campus shutdowns and massive shift to teleworking presented many new challenges, the success of the new VPN infrastructure and the team that continues to support it is helping the WSU community move forward with more ease, support, and confidence.



<https://its.wsu.edu/ssl-vpn/>





## Helping You Get the Job Done: ITS Endpoint Management



Tucked away in a quiet hallway of the IT Building, ITS' Endpoint Management team is a group whose mission is to ensure ITS employees can focus on getting the job done each day with the best endpoint equipment and service possible. Keeping computing equipment up and running for more than 130 busy professionals in a normal year is a fulltime job for the team.

Fiscal year 2020 began with upgrading building conference rooms to collaborative Zoom meeting rooms, a prototype model for future WSU meeting spaces. Eric Jacobs and his crew's updated spaces quickly became a heavily relied upon resource for the modernization training teams, offering dozens of employees from across the university a shared learning and engagement experience until COVID-19 paused everyone's training.

As with most at WSU this year, Endpoint Management's work took an abrupt turn in March when the state shut down to support COVID-19 reduction efforts. Now those 130 supported ITS staff suddenly must work in 130 different places, all away from campus, all needing endpoint support more than ever to successfully establish new

*"If you are looking for a group who truly live out the 'all hands on deck' mentality of providing excellent support in a critical moment," says Dr. Sasi Pillay, "Endpoint Management is as far as you have to look."*

workstations in their kitchens, living rooms, and spare bedrooms. "Work still had to get done," and Eric's crew "became very nimble and flexible to meet the challenges of COVID-19 and the new remote workplace."

Working 60 hours a week, the team requested to remain onsite as essential staff, successfully preparing endpoint workstations to accommodate the state mandates on time. They adopted Zoom's remote-control feature for enhanced distance support and adjusted receiving and repairing equipment with sanitation and customer safety in

mind by scheduling pickups and drop offs, wearing masks and maintaining necessary social distancing. The new wild west of COVID-era life quickly became organized timely responses to ITS employee needs.

Showing continued flexibility and focus on WSU's broader institutional effectiveness and transformative student experience missions, Endpoint Management also joined the Provost's team's facilitation of the new loaner laptop program by providing equipment support, resetting and cleaning the Chromebooks for re-deployment. The innovative program continues to offer students access to resources critical to continued academic success during remote summer coursework, and Endpoint Management is on the job as long as they are needed.

"If you are looking for a group who truly live out the 'all hands on deck' mentality of providing excellent support in a critical moment," says Dr. Sasi Pillay, "Endpoint Management is as far as you have to look."







## Taking Cyber Security to the Next Level: Multi-Factor Authentication (MFA)



Following two years of phased preparations, Multi-Factor Authentication is set to come online as WSU's new guardian when accessing more than 90 departmental and university-wide applications beginning August 4, 2020.

Whether it is phishing emails with links to malicious websites collecting personal credentials, ransomware holding individuals and organizations hostage until they pay up, or groups waging all out cyber warfare, it is becoming increasingly challenging for

information security teams to stem the tidal wave of bad actors in today's digital landscape. Many everyday technology users struggle to navigate these heightened security risks, often using the same passwords across personal and business accounts.

Even the strongest passwords are security dinosaurs, far too easy a target for today's cyber-criminals. "In regular assessments prior to Okta password management implementation last year," shared Tom Ambrosi, WSU's Chief Information

Security Officer, "numbers showed an average of 1,000 compromised accounts each month that required reset by our information security team."

WSU is not alone. Across higher education, more than 80% of recent data breaches are due to compromised login credentials, i.e. compromised passwords, according to recent Educause data. Universities are significant targets for cyber criminals due to the collaborative culture. A single university account holder might have direct access to multiple academic and business department data, including research, payroll, student information, and more. Get those passwords and hackers get the keys to the kingdom.

*"We are striving to exceed identity protection standards established by the financial industry, who set today's gold standard in customer protections," shared Dr. Sasi Pillay, Vice President and CIO. "WSU students, faculty, and staff should feel their information is safe whenever accessing WSU resources. We are accomplishing that with MFA."*



The move to heightened information security is timelier than ever, considering COVID-19 pandemic's need for distance compounded technology vulnerabilities. The expanded attack surface, or potential opportunities across cyberspace worldwide, inspired a 350% increase in global phishing attempts between January 2020 and March 2020 according to Google's Transparency Report.

August's major MFA rollout is the last step in this multi-phase security platform transition. In spring 2019, WSU shifted to cloud-based identity management offering improved self-service and recovery of network passwords. Phase two in December 2019 piloted identity verification, an added code when logging in, on one of WSU's student information system, myWSU. WSU's customized myWSU application serves as an important central resource for students, faculty and staff when managing academic schedules and needs, accessing employee resources, and more. Protecting this extensive database of personal and

business information offered an ideal first stop for MFA, and WSU's 50,000 active community of users quickly adopted the new process.

In addition to increasing cyber security at WSU, the implementation of MFA for so many important university assets moves the university one step closer in its Drive to 25 mission, as every one of the top 25 universities in the country, as well as all of WSU's peers in the PAC 12, are currently using some form of added identity verification.

Phishing emails are still the most common and successful method of compromising accounts. However, MFA at WSU is an effective new tool in WSU's information security arsenal, dramatically reducing the threat posed by compromised passwords. A hacker may succeed in obtaining login credentials but is unable to access target accounts since they are unable to obtain the added authentication code provided to the true owner of those credentials.

"We are striving to exceed identity protection standards established by the financial industry, who set today's gold standard in customer protections," shared Dr. Sasi Pillay, Vice President and CIO. "WSU students, faculty, and staff should feel their information is safe whenever accessing WSU resources. We are accomplishing that with MFA."



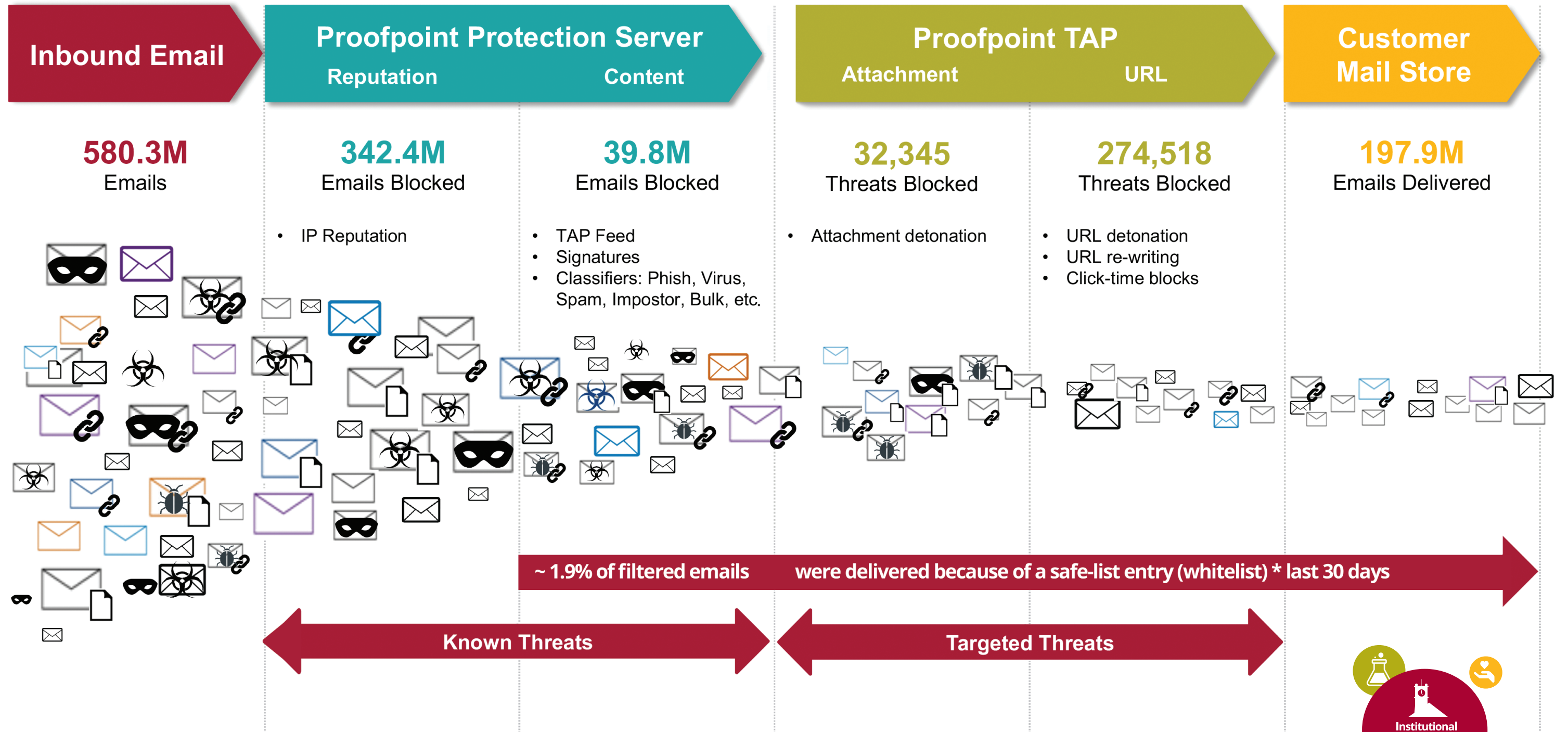
<https://its.wsu.edu/mfa>





## Threat Protection Statistics

July 1, 2019 to June 30, 2020







## Looking to the Future: Workday at WSU



After close to forty years, five university presidents, five added campuses, and thousands of graduates, WSU's once-innovative, mainframe-based business support software, Administrative Information Systems (AIS), is being replaced. Following Board of Regents funding approval in 2018, the business modernization initiative at Washington State University is expected to roll out to university users on January 1, 2021.

Typically, organizations of WSU's size utilize an implementation partner for the technical implementation once a final product is selected. This work often includes the creation of integrations, conversion files, and report construction. The implementation partner often employees a team to build integrations and reports. WSU's modernization team, sponsored by Finance and Administration, opted to go a different route after selecting Workday as their new cloud-based business solution, partnering with Information Technology Services (ITS) staff to carry out the technical integration, conversion, reporting work, and security implementation. Uniting with the project's leadership team and outside implementation partner, Deloitte, ITS undertook several key technical project areas.

The ITS implementation team quickly focused on creating the new WSU Workday environment, preparing millions of data records to be loaded into tenants, developing business reports, and working with numerous departments on external integrations for applications sharing data to and from Workday. Finally, ITS staff went to work ensuring user and application security would support WSU's data integrity for decades.





## Looking to the Future: Workday at WSU (cont'd)



The first implementation piece focused on tenant builds, or constructing the application environment. Data mapping identified systems and information needed for pulling data into Workday. Many groups across the university partnered with ITS and Modernization for months, mapping and validating data for each new tenant, and refining business processes for Workday configuration. WSU's move to a new software system required the marriage of existing data with updated business processes.

The conversion team completed five successful tenant builds over the course of the project, with two more planned prior to rollout this January. Each tenant is built from the ground up, including the creation of customized fields, configuration of business processes, and loading of data to ensure the processes are robust and able to be replicated. By the third environment build, WSU's data load success exceeded 99%, a number not typically expected in these implementations until conversion processes have matured and the team is much closer to final tenant build. Today, data load success is closer to 99.8%, closing in on the goal of 99.9%.

While a solution for many WSU business needs, Workday will not replace all existing software for business, research, and academic support. Marrying data transfer between Workday and external software is essential. The Workday integration team collected more than 160 software integration requests, collaborating with more than 40 WSU departments and outside vendors to complete close to 100 separate application integrations to date, along with numerous supporting data load processes. With technology

needs constantly changing, integration will become a long-term sustainment process in WSU's Workday team.

A robust resource within Workday, business reporting is a financial planning tool identifying how well WSU is managing its resources. Working with Deloitte's implementation team, more than 1,000 identified reports have been reduced to less than 500 by the reporting development team. However, the number of requested reports is growing daily. "Reports are a moving target," shared Corinna Lo, project lead. "As people learn this new system, they realize Workday's process changes require reporting changes. Workday's capabilities offer new ways to view and manage data."

The final piece of the development picture is security. There are two primary types of security roles built into WSU's Workday



environment by project lead Stacy Combs and her team. The first role is position-based and remains with a position once provisioned, regardless of staffing changes. When new hires are assigned into an existing position, they will have the required working access on their first day to information for that position.

The other primary security role is user-based, assigned to individual workers. Once hired, employees receive a Workday

role providing them access to needed self-service resources in the software. Employees track their time, leave, complete travel requests, expense reports, and more. Supervisors and employees who approve time and leave receive added security provisioning allowing them access to view and approve their staff's leave reports.

*"Once Workday is implemented WSU will see streamlined, efficient financial processes leading to timely financial reporting and analytics."*  
- Dawn Barnard, Area Finance Officer



In the past, security provisioning for new hires required days or weeks of paper forms moving manually between departments. Additionally, WSU's Workday structure now offers unique security roles for a broad list of functions including purchasing, hiring, and much more. "We've incorporated Multi-Factor Authentication, so users will have secure, seamless access between Workday and myWSU. Workday is an efficiency win for both the employer and the employee in so many ways," shared Combs.

Each step along this journey, Workday's implementation team continues to partner with functional areas to find and meet needs. The many months of end-user input is essential to the successful implementation of Workday on January 1. Dawn Barnard, Area Finance Officer for Information Technology Services, is just one of the numerous functional area Super Users within Workday's Change Network tasked with facilitating her unit's staff, managers, and leadership into their new roles in Workday as quickly and seamlessly as possible. Participating in end-user input sessions and numerous planning and testing discussions over the past two years, she believes the Workday Financial, HR, Payroll systems and integrations will transform all administrative processes and procedures as we know them today. "Once Workday is implemented and processes are stabilized," she commented, "WSU will see streamlined, efficient financial processes leading to timely financial reporting and analytics."

"The modernization initiative at WSU offers a much-needed business solution," shared Dr. Sasi Pillay, Chief Information Officer for WSU. "Responsive, integrated business workflows and reporting are essential to effectively supporting WSU's mission. We are excited to partner with the project leaders on the technology development for a project so important to WSU, and I am proud of the work my team has done."



*"Workday is an efficiency win for both the employer and the employee in so many ways,"* -Stacy Combs, Project Lead





## Business Support by the Numbers



### ACCOUNTS PAYABLE



PAYMENT REQUESTS IN FY 20:

**85,940** for  
\$901,754,108

### PAYROLL/HRS

TOTAL WSU PAYROLL CONTRIBUTIONS ON BEHALF OF EMPLOYEES FOR FY 20:

**\$165,895,735**



NUMBER OF NEW  
HIRES FOR FY 20:

**4,897**

EMPLOYEES  
PAID IN FY 20:

**17,982**

**Total gross payroll for FY 20:**  
**\$563,116,823**

### E-Commerce

TUITION AND HOUSING PAYMENTS FROM ECHECK

**67,076** for **\$153,119,569**

NUMBER OF  
E-COMMERCE  
MERCHANTS

**23**



NUMBER OF DEPARTMENTAL  
E-COMMERCE TRANSACTIONS

**103,961** for  
**\$10,095,874**

TUITION AND HOUSING  
PAYMENTS FROM CREDIT  
CARDS

**38,285** for  
**\$32,289,241**

**40,286** for  
**\$97,145,285**

STUDENT DIRECT DEPOSIT REFUNDS:

EMPLOYEE DIRECT DEPOSIT REFUNDS FROM ACCOUNTS PAYABLE:

**13,645** for **\$10,120,644**





# WSU's COVID Response, Coming Together in an Extraordinary Time



Working through the technology needs arising from WSU abruptly shifting from six campuses to thousands of home offices seems comparable to transferring a saddle from one horse to another in the middle of a race-while the rider is still in the saddle. Working in WSU's central Information Technology Services during CoVid-19 felt similarly chaotic as the virus response created immediate operational changes and technology became an all-consuming topic each day.

Throughout the growing strain on customers and partners, Information Technology Services (ITS) staff kept the WSU community safely in the saddle and able to complete the remainder of spring semester. Where support could be completed remotely, certain ITS team members continued working on site as the state shutdown extended repeatedly, ensuring network connectivity and security remain at the level needed for displaced students and instructors alike.







## WSU's COVID Response (cont'd)



Repeatedly during these past weeks, Information Technology Services staff innovated and implemented new ways to improve and simplify technology to stay a step or two ahead of needs.

- WSU's new telecommunication resource, Zoom, broke record after record, going from approximately 2,500 registered users in February to more than 31,000 users in March with millions of minutes in Zoom meetings. The top individual Zoom user, a WSU faculty member, hosted 132 Zoom meetings in a single week.
- Microsoft Teams rolled out earlier this spring, just in time to offer state of the art file sharing and collaboration for students, faculty, and staff. Since its rollout, Teams users completed 13,000 group calls or meetings via Teams, over 2 million chat messages, and over 50,000 channel messages, by the more than 10,500 new users.
- "Teams saw dramatic increases in utilization," shared project manager, Dan Hamilton, "doubling and quadrupling across various application elements such as calls and chat messages in those first few weeks of WSU's stay home, stay healthy initiative."
- Crimson Service Desk (CSD), the ITS technical help desk for users across the university, created a first of its kind Zoom virtual service desk model where customers could join anytime during business hours and receive live assistance. Along with introducing Zoom service desk, CSD fielded more than 12,000 email and phone requests for assistance during March and April, and saw dramatic increases to self-help knowledge base resources online while also supporting the very new 'Ask Butch' live online self-help resource.
- The ITS website, designed to offer centralized information and resources including the Cougs Online Toolkit, experienced more than 32,000 visitors reviewing 61,000 pages of information; information such as instructions and links for obtaining secure remote access via the brand new GlobalProtect.
- Barely having replaced the end of life Cisco AnyConnect, which allowed a maximum of 500 users, GlobalProtect gained more than 5,600 users almost overnight who could suddenly work from the safety of their home while still accessing secure business resources behind WSU firewall protections.

*"ITS, and WSU, were fortunate to already have the next generation of remote access to enterprise applications and data on deck and ready for implementation," shared Deputy Chief Information Officer, Tony Opheim, "The project team instantly responded to changing needs and effectively accelerated GlobalProtect's rollout for thousands of customers across WSU, offering a timely solution in a time of crisis."*

- Individual identity security continues seeing some of the most targeted threat levels thanks to the changing technology landscape at WSU. CoVid-19 inspired malicious actors hoping that remote workers and students are not safely tucked in behind robust organizational network security. WSU's security walls continue to stand strong thanks to technology and trained staff already in place, ready for days like these.

WSU's technology environment dramatically shifted during this unprecedented safety initiative. Thankfully, Information Technology Services is the perfect pairing of dedicated staff and industry-leading resources that made it possible to continue teaching, paying people, and performing groundbreaking research.

With May's commencement exercises behind us, WSU can officially claim success in navigating an amazing and strange spring term. However, ITS teams are already months past the end of spring

studies. Amid CoVid-19 support, project teams have also been preparing for future technology solutions, software updates, and user trainings. The technology needs of WSU today, even in the face of a worldwide pandemic, were prepared for over the past year. And the technology needs of tomorrow are already well laid out plans being finalized and carried out.

"ITS, partnering with numerous technology and business professionals across WSU," said Sasi Pillay, Chief Information Officer and Vice President, "celebrates the completion of spring semester and the approach of summer term. We made it, Cougs! And we did it together." #WSUtogether







Information Technology Services  
WASHINGTON STATE UNIVERSITY