

2020 Year in Review



Letter from the CIO

Dear Wake Forest Colleagues,

What A Year! If there is a silver lining in the daunting COVID-19 challenges, it certainly includes the all-hands-on-deck approach we adopted as a community to quickly transition to new mediums for course delivery, online learning for our students, and remote work for employees. Successfully responding to the pandemic required a significantly increased reliance on digital, technological, and network tools to sustain the mission, safety, and wellbeing of the University. Information Systems staff rose to the challenge and, in partnership with the faculty and staff, shaped new ways to engage with WFU students, the community, and each other.

The Information Systems Year in Review focuses on just a few examples of the efforts put forth to provide the infrastructure, tools, knowledge, and support that enabled - and continue to enable - faculty, staff, and students to be successful in these challenging times. In some of the other projects highlighted in this report, I trust you will see the many ways in which information technology aligns with Wake Forest's highest aspirations of exceptional teaching, research, and discovery.

As always, we are deeply grateful to you for your continued partnership.

Best, Mur Muchane

Vice President for Information Technology & CIO

“ All of us were radically dependent on the reliable services of the staff and systems of Information Systems. Let me thank [Information Systems] for their superb work keeping us connected.

Nathan Hatch, President, Wake Forest University



Photos provided by Ken Bennett

FACILITATING Evolving Teaching and Learning

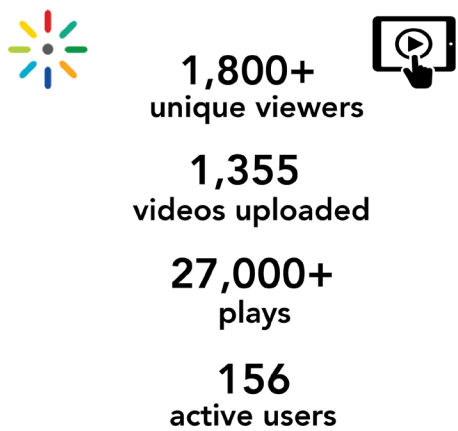
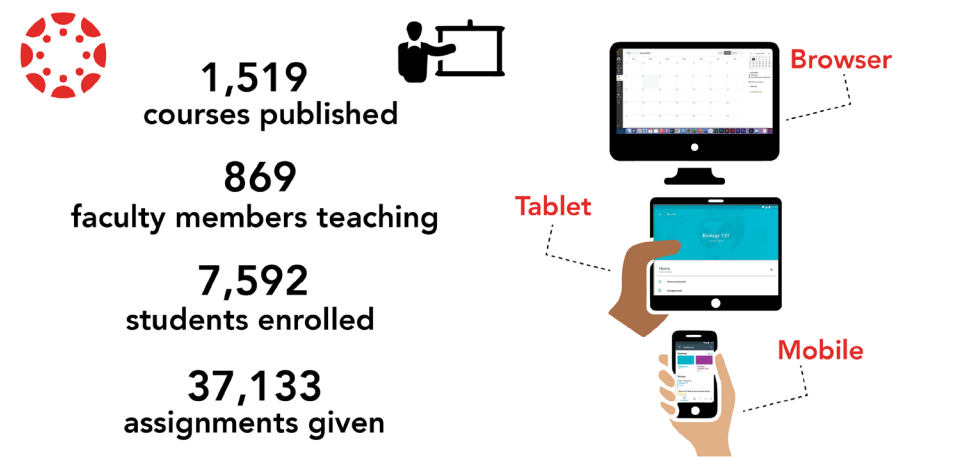
In the face of new challenges rooted in the pandemic, IS leveraged existing teaching and learning technology assets while advancing new tools, techniques, and initiatives.

Building digital pedagogy opportunities

In the spring of 2020, IS guided the University as it left its older online pedagogic platform, Sakai, and adopted the more robust Canvas Learning Management System. Canvas tools and integrations enabled faculty to transition their course materials and engagements as the pandemic accelerated digital requirements. Students, too, benefited from the new Canvas online learning environment, gaining structured remote access to classes through the platform.

The successful and quick adoption of Canvas by faculty and positive outcomes for students were supported by innumerable and varied training opportunities prior to the Fall semester. IS led extensive outreach, with opportunities for learning ranging from online instructor training to on-demand videos to one-on-one dialogue.

In addition to Canvas, IS also introduced campus partners to Kaltura, a video management and hosting service that integrates with Canvas and aids new learning experiences through features like screen capture, in-video quizzing and interactive video. Initial reactions from faculty and students have been positive and Kaltura’s full rollout will be in the spring of 2021.



Boosting pedagogy and faculty connections

As Wake’s faculty prepared for a Fall semester of blended, face-to-face, and online teaching, an innovative peer-to-peer learning effort launched to help meet the challenge. Initiated in summer 2020, the Center for the Advancement of Teaching (CAT) collaborated with staff from the Office of Online Education, ZSR Library’s Digital Initiatives, and IS Academic Technology to share pedagogical best practices with a group of faculty who then facilitated disciplinary-based Peer-to-Peer Learning Communities. More than 92% of Wake’s instructors joined these faculty-centered learning communities, sharing experiences and guidance as over 600 instructors prepared to teach in the fall.

Peer-to-Peer **LEARNING COMMUNITIES**



Responding to changing technology needs for faculty

New technology requirements emerged as classroom teaching necessarily adjusted and on-line course delivery became a normal event. Through the Emergency Education Technology Procurement program (EETP) and the Teach from Home Grant, the University allocated funding for additional teaching technology, with IS coordinating and delivering technology components such as webcams, headsets with microphones, and external monitors. In all, more than 630 new pieces of technology, distributed to over 330 faculty members, are benefiting online and in-person teaching at Wake.



Enhancing University Technology Support

As COVID-19 dramatically impacted daily life, IS services had to be exceptionally agile and adaptable, and IS staff dedicated their efforts so the Wake community received exceptional technology assistance.

Advancing Wake's technology accessibility and inclusion

In 2020, the new campus-wide Technology Accessibility Program (TAP) launched to continually improve the accessibility of Wake's technological and digital ecosystem. Accelerated digital interactions brought new attention to the impact of equitable and accessible technology, and TAP partners and allies illuminated emerging accessibility considerations to shape the development of supportive assets and outreach. In this first year, accessibility was promoted through efforts like remote consultations with numerous partners, the IS Technology Accessibility team's captioning training for over 100 staff and faculty, crafting and sharing best practices, and the Accessible Content Working Group's first annual web accessibility challenge, held in partnership with other North Carolina schools.



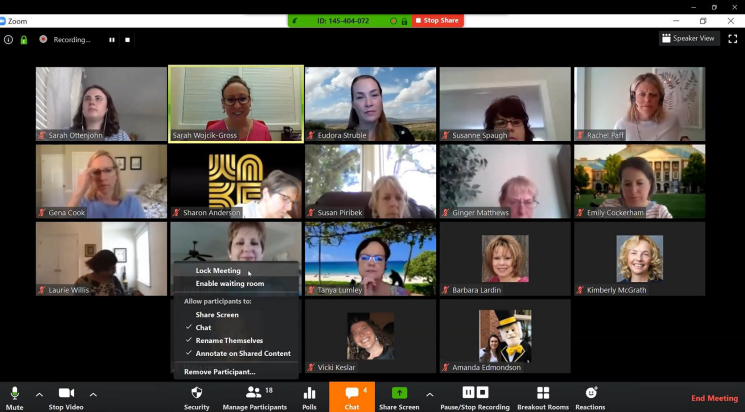
Providing a robust comprehensive academic portal for students

While COVID-19 impacted much of the working agenda of IS in 2020, one important planned project was a new registration portal for the university. IS Enterprise Systems and Infrastructure partnered with the Office of the University Registrar to implement the new portal that allows students to make their academic plan, register for classes, and view a class schedule remotely. Extensive testing ensured that the student experience was optimized and that the system was robust enough to manage high volumes of traffic.



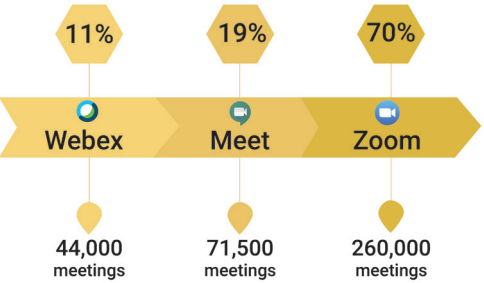
On opening day of registration, students from 37 countries across 5 continents were able to view their academic schedules and register for classes. The new system was successfully able to handle large spikes in use, with over 2,600 students logging in to check their registration details for Fall, all while safely distanced.

Bolstering success for changing modes of interaction



IS leveraged input from partners across campus to assess new digital requirements and build guidance for the video conferencing platforms that quickly became vital to remote work, teaching, and learning. As engagement shifted, the Zoom platform was rapidly moved from a small pilot with the free version to a resourced solution with a few thousand licenses and full integration in Canvas.

While Zoom's features served the goals for many situations, IS also increased support for other popular meeting tools, such as Google Meet and Webex, to address the greatest variety of campus roles and functions.

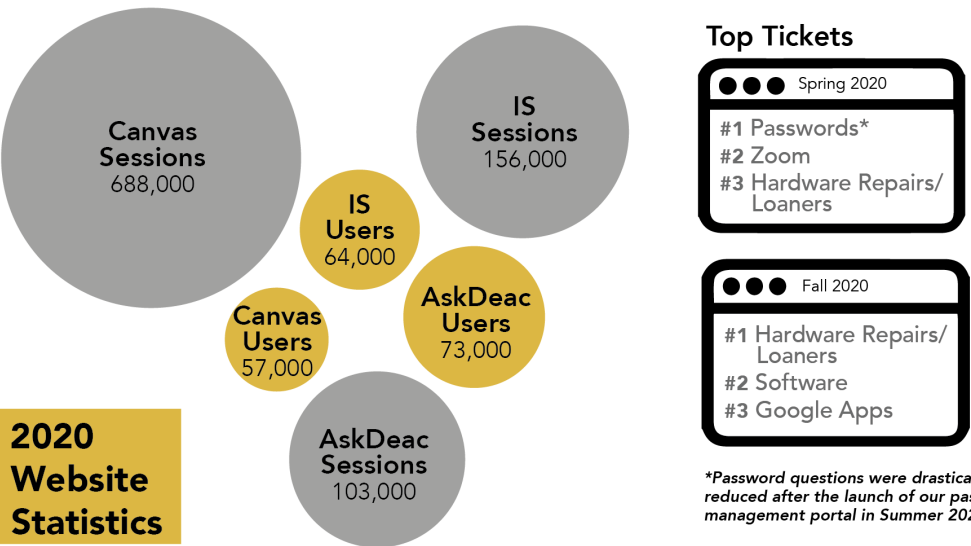


Amplifying the reach and breadth of assistance

Taking into account the diverse situations of campus members and the changing conditions, IS effectively enhanced online resources, training, and internal processes. Alongside support for meeting platforms, training and aid were offered for an array of other virtual tools and topics. In all, more than 200 open labs and online classes were hosted on digital topics including Google Meet, Excel, Zoom Basic and Advanced, New Windows and Apple Training, security essentials and best practices, captioning, and Adobe Creative Cloud Applications.

The IS Service Desk worked diligently to ensure its important services remained aligned with campus circumstances, maintaining a small and safely-distanced in-person presence on campus as well as offering digital engagement.

The online help portal, AskDeac, enabled IS to effectively manage high and fluctuating volumes of requests for assistance. In addition to its other efforts and existing resources, IS added new and timely additional best practices documentation to its website, partnered on the important Keep Teaching and Keep Learning websites that helped the campus shift to new modes of operation, and produced a comprehensive list of technology resources to benefit academic and business continuity.



ENABLING Community Wellbeing

Wake Forest University's wellbeing is inextricably tied to the ways that our campus members and broader community thrive. This year, IS brought resources, innovation, and determination to leverage technology to further our community wellbeing.

Employing accurate data visualization in the time of COVID-19

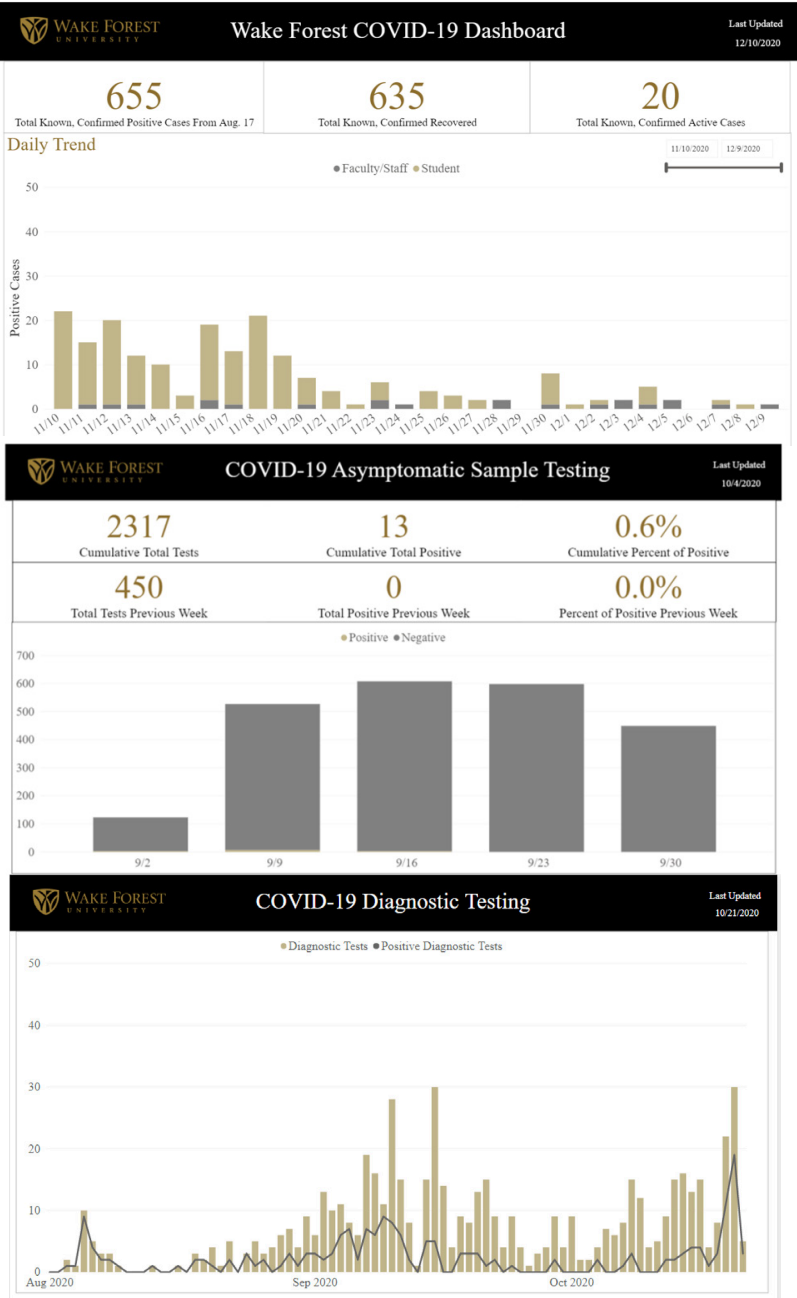
The scope and influence of the pandemic meant understanding the health of Wake's community was of increasing impact to campus operations and wellbeing.

IS Analytics and Data Governance partnered with campus stakeholders to create vital tracking dashboards to support University operations and decision-making during the pandemic. The data's accuracy, timeliness, and clear presentation were foundational to IS's work, as campus used this data for key decisions and also to coordinate asymptomatic testing and manage logistics to ensure care for those in isolation or quarantine.

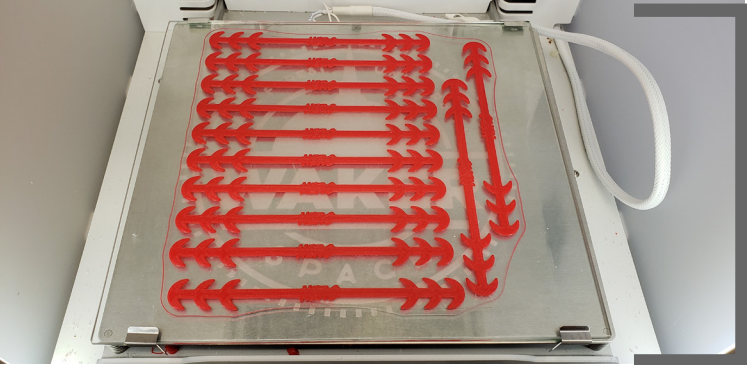
The heavy use of certain dashboards illustrates their user friendly nature and importance, for example, the University COVID-19 dashboard (top) was accessed over 335,000 times, the Asymptomatic Sample Testing dashboard (middle) was accessed over 187,000 times, and the Diagnostic Testing dashboard (bottom) was accessed 107,000 times. These dashboards will continue to play important roles in campus health and wellbeing throughout the Spring 2021 semester.

Community care through connectivity

Acting to assist the broader community, IS responded to a request for aid from Imprints Cares, an early childhood education nonprofit that has benefited Forsyth County families for 50 years. IT Infrastructure swiftly worked to install wireless networking to provide local students and teachers with connectivity at a time when such access was vital.



Making a difference with creativity and innovation in the WakerSpace



Wake Forest University's makerspace, WakerSpace, originally a hands-on experiential hub for students and faculty on campus, nimbly adapted to the current environment with a combination of online and in-person options. The WakerSpace offered almost 750 virtual workshops, or VirtShops, focused on improving the digital creative skills of students, staff, and faculty in a variety of platforms, from Zoom to creative design using Adobe applications.

Knowing that creativity and socializing are key in wellbeing, the WakerSpace team combined hands-on and remote activities to hold WakerSpace Take and Make Challenges. Students could safely participate in weekly challenges by picking up "Challenge" bags, then joining Zoom gatherings to receive instruction, socialize, and share their creations. In the Fall semester, over 230 challenge bags were distributed.

In addition to nurturing the campus community, members of the WakerSpace reacted to the urgent needs of healthcare workers and utilized WakerSpace 3D printer technology to create 6,600 mask clips for workers at Wake Forest Baptist Health and Wake's Student Health Services. The donation of these 3D printed mask clips helped protect the faces and ears of healthcare employees who must wear masks daily as they serve our community.

Raising awareness and staying on the leading edge of IT security

The year's increased digital interactions led to a rise in phishing and other potential cybersecurity challenges. IS added to its training and awareness efforts on campus to educate our community on cybersecurity issues. In addition to partnering with departments to offer targeted training, IS disseminated training videos, spread awareness on known phishing attempts, and held its annual event for National Cybersecurity Awareness Month (October). Along with this campus outreach, IS also continued to stay abreast of rising cybersecurity concerns, and addressed over 130 cybersecurity-related incidents.



This year's theme was 'Ready Player 1834', a spin on the movie, Ready Player One.

EXPANDING Campus Technology Access

With shifting conditions, IS implemented some typical and atypical technology updates and enhancements to ensure that the campus technology ecosystem remained well functioning.

Furthering technology hardware access to promote reliable digital engagement

Leveraging the established and robust WakeWare Program, IS was able to ensure that the majority of Wake students had laptops capable of enabling successful remote learning. Technology Grants, covering the cost of standard WakeWare computers and related insurance and warranties, are a key part of the WakeWare Program, with over 1,700 technology grants issued since the program's founding.



To meet the circumstances of staff, faculty, and students in a remote-focused environment, IS marshaled its resources to provide additional and updated technology to campus members. Some of the technology addressed stable internet connectivity and some related to laptops and other hardware. With adaptability and responsiveness, IS provided 75 wireless hotspots to students and 50 to faculty, increased its pool of loaner laptops by almost 50% to build availability in the face of an anticipated surge in hardware repairs, and distributed 325 loaner laptops to ensure campus had access to functional technology.

Improving connectivity and infrastructure

To best serve the evolving connectivity requirements of campus members, IS coordinated with campus partners to enhance and reengineer the network and VPN capacity.



Updated access switches



Updated wireless access points



Reengineered wireless at Deacon Place



Enhanced WiFi at isolation locations



Increased VPN user capacity

Furthering technology hardware access to promote reliable digital engagement



Knowing that the ability to teach and work remotely rely on having uninterrupted access to reliable technology, IS teams redesigned the summer and fall Faculty/Staff Computer Exchange to include contactless and flexible exchange options to accommodate work and life demands.

A total of 188 Mac and Windows computers were deployed over the summer, with 136 exchanged in the Fall semester. The IS Training team offered online training via on-demand videos or live training sessions, helping users to get up to speed on their new computers.

“I am so grateful to have been witness to this community's incredible care for each other in "our new difference." We have faced each trial that has come our way with imagination and resolve. May this new year ahead continue to hold us together in its powerful glow.





The Office of Information Systems is the primary resource for all things computing at Wake Forest University.

Our mission is to empower the WFU community in the use of information and digital technologies towards intellectual exploration, informed institutional decisions, and the creation and dissemination of knowledge.