

# UConn

## INFORMATION TECHNOLOGY SERVICES

The ongoing pandemic has transformed the world and how we operate within it. Information technology, in many ways, because the conduit that enabled people to continue working, and in the case of higher education, making progress towards degree completion and on scholarship and research.

This annual report covers ITS activities from May 2020 to June 2021, which is after many employees began working remotely and students were fully online. It documents our activities preparing our community for remote operation and supporting other UConn units in their efforts. Although we shifted priorities and resources this year, we did not lost focus on continuing progress on projects needed to bring the University to a contemporary standard.

As in previous reports, our accomplishments are organized by the long-term goals set forth in the Strategic Plan. These goals outline a path forward for our community, both in their roles as individuals and within their institutional groups, and for our IT organization as the provider of essential systems, services, and capabilities.

### GOAL 1

Pursue IT solutions that empower members of our community to successfully, productively, and securely engage in all of their institutional roles as individuals.

### Safe, secure, and full use of UConn's resources

UConn's transition to a virtual campus underscored how technology is increasingly foundational to fulfillment of the University's mission. Through online systems and services, our community was able to continue teaching, learning, and working. The quality of their devices and home network, however, affects their experience and could impede full use of available resources. ITS created and communicated broadly about device recommendations and then initiate purchasing/loan programs and targeted support to aid adoption.

## Device Requirements for Faculty, Staff, and Students

Working with faculty and staff, we have collaboratively identified minimum technical specifications for faculty, staff, and student devices. We released our recommendations and partnered with Admissions to announce the device requirements before the start of the 2020-21 Fall semester so that they would have adequate time to explore purchasing options. The faculty and staff requirements were announced shortly after and again, were designed to guide and inform purchases. For faculty and staff, we also emphasized equipment needed for effective web conferencing.

## Purchasing and Loan Programs

ITS created device purchasing and equipment loan programs, which provide our community with suitable equipment that meets published requirements and eases the financial burden for departments, units, and colleges.

## IT Support

**Students:** ITS created a comprehensive technology training course designed for students by students. Previously, we could rely on students receiving in-person assistance through Orientation and from the Technology Support Center. With a large number of students attending classes remotely, we could not expect this same type of interaction. Also, the emphasis shifted to new types of services, such as videoconferencing. We created this course, using a combination of text, links to Knowledge Base articles, and short videos, to provide information about device requirements, essential IT systems (e.g., HuskyCT, Student Admin, G Suite), security best practices, and services that support online teaching, learning, and working.

**Instructors:** ITS partnered with the Center for Excellence in Teaching and Learning (CETL) to develop “Tech Check” to help address at-home challenges that impede instructors’ interactions with students. Through this support service, instructors can schedule virtual one-on-one meetings with ITS staff who will assess workstations, audiovisual equipment, network speeds, and other aspects of home IT infrastructure and will make recommendations to improve performance.

## Security

A key role of enterprise IT is identifying security risks and protecting our community from them as much as practical. We implemented solutions to better protect personal as well as institutional data and educational initiatives tailored to individuals.

### Two-Factor Authentication

Two-factor authentication (2FA) significantly increases protection to the login process by requiring individuals to verify their identities using both their UConn credentials and an enrolled device. ITS expanded this protection on the following services:

- PeopleSoft accounts that have privileged access to student data

- ITS-provisioned Remote Desktop Gateway (RDG) to better secure remote connectivity to campus

### **Umbrella DNS**

ITS implemented a Domain Name System (DNS) filtering product, Cisco Umbrella, to enhance protection against web-based threats. Cisco Umbrella is a flexible cloud-delivered security framework that provides protection against threats on the internet, such as malware, phishing, and ransomware. Umbrella DNS filtering adds a layer of defense by managing and preventing access to names identified as dangerous.

### **Communication about Account Security**

ITS has been identifying UConn email addresses that have been exposed through an external breach, passwords that are compromised, or passwords that are clearly at risk. The we communicate directly with individuals whose institutional accounts have been identified as vulnerable and help them remediate the issue.

### **Phishing Education**

Phishing continues to be a threat to individuals at the University and introduces risk to the whole network. Although ITS maintains training materials on how to identify and deal with phishing messages, we added a more direct approach this year that provided us with data to better guide educational campaigns and exposed constituents to simulated phishing campaigns based on real-life examples. Faculty and staff began receiving quarterly mock phishing messages that mimicked frequently seen attacks. If they clicked on a link in the message, they would navigate to a webpage that provides immediate feedback and additional information.

### **End-Point Detection & Response**

With the need for improved security wherever we may be working, ITS has begun to deploy new software on endpoints that helps to identify potential attacks as they happen based on known Indicators of Compromise (IOC's). Different from traditional anti-virus programs which primarily look to match signatures, EDR looks at system behavior to alert, reducing the processing load on the computer, and providing better insight into the activity that triggered the alert.

## **Communication Channels**

### **Evolution of myUConn Mobile App**

myUConn is the official UConn mobile application that connects our community to a collection of information and services which enhance campus life and online experiences. In concert with University Communications, ITS modified the app to update the interface and enable capabilities for on- and off-site engagement. These new features included:

- Personals, which allow you to select a role at the University (commuter student, residential student, faculty and staff, or visitor) that best fits you. This feature gives the University a channel in the app for communicating critical information, and once this is set, you will see audience-specific content and can receive targeted notifications.

- New modules, such as Back to School and Campus Tour, that provided pertinent information to the campus re-opening and virtual view of UConn.

### Updates to the IT Status Page

ITS maintains the IT Status page ([itstatus.uconn.edu](http://itstatus.uconn.edu)) to communicate information about planned and unplanned outages, service disruptions, and other community impacting situations. Content on this page is fed from our ticketing and change management system. This allows the page to reflect the status of an issue, from identification through resolution. We have updated the design to better display announcements and streamlined the internal workflow. These changes will allow the community to more easily locate relevant information and ITS to more effectively maintain timely and accurate status.

### Self-Service Capabilities

ITS created an Account Sponsorship application on [netid.uconn.edu](http://netid.uconn.edu) that enables full-time employees to create, manage, and expire affiliate, student work, and NetIDAdmin accounts. Previously, requests were submitted to ITS to have affiliate accounts created and managed. This utility is available on our management hub for digital identities, [netid.uconn.edu](http://netid.uconn.edu).

## GOAL 2

Pursue IT solutions under the guidance of our academic partners that facilitate effective research, enrich teaching and learning, and enhance institutional competitiveness for extramural funding.

### Flexible Online and On-Site Learning

When the University began navigating the complexity of reopening for the 2020-21 school year, ITS focused on giving instructors flexibility to teach their chosen modality.

#### Classroom Technology

ITS added self-service lecture capture capabilities to an additional 150 classrooms on the Storrs and regional campuses before the start of the 2020 Fall semester. In classrooms equipped with self-service capabilities, instructors can stream or record their lectures on the fly and do not need additional support from technicians. With this added flexibility and with the optimal speakers, cameras, and microphones installed in the classrooms, instructors could more easily deliver a high-quality experience for online or hybrid classes.

#### Web Conferencing Improvements

The University supports Webex, Microsoft Teams, and Collaborate for video and web conferencing, and all three can be used to deliver coursework virtually. All three platforms released updates and new

features frequently, such as cohosting capabilities, breakout rooms, and refined interfaces, which we implemented and communicated about as they became available.

We also integrated Webex into HuskyCT. Because they are separate systems, instructors and students had to move between them to send meeting links and session recordings or to complete other common tasks. ITS received feedback that instructors and students wanted a more streamlined experience when using Webex with online classes. In response, we have researched and enabled a plugin that allows instructors to schedule Webex meetings within Blackboard, post session recordings, and manage office hours.

### GOAL 3

Pursue IT solutions in concert with functional partners that support the business of the University and increase operational effectiveness.

## Updates to Major University Systems

IT systems are the backbone for many of the business functions of the University. These systems require teams of ITS technicians to implement, maintain, and upgrade them. These teams work in concert with our functional partners to identify and implement improvements that align with community needs.

Many times, ITS performs a major upgrade of a system to ensure the University remains on a current and fully supported version of the product. Major updates, however, are disruptive for those who use the software and require months of preparation and coordination with stakeholders. With the updates this year, we have positioned the University better for long-term supportability. Changes made to Kuali Financial Systems (KFS) and the Student Administration System enable us to adopt an incremental framework, where we can perform minor updates and avoid outages, and prepare for future transitions to the cloud.

### Kuali Financial System (KFS)

KFS is a comprehensive software suite that serves as the University's financial system of record for accounting and other fiscal operations. The upgrade includes enhanced usability with a redesigned interface, navigation, and search. Additional features, such as the general ledger transfer, introduce new functionality and improved financial controls.

### PeopleSoft Campus Solutions (CS) for our Student Administration (SA) system

This is the authoritative system of record for student academic data, the administrative environment supporting numerous academic processes, and a service portal for students. ITS, in collaboration with our functional partners, upgraded CS to the latest version. This upgrade improved the performance of the internal search engine, simplified navigation, and enhanced mobile responsiveness.

### Additional System Upgrades

All IT systems evolve and need to be updated in order to remain under support and perform well for our community. Below are the systems upgraded during the span of this report:

- AIM Facilities Management System
- Unifier Project Management System for UPDC
- Meridian Facilities Management System Document Management
- Pinnacle Telecommunication Management System
- Filenet Document Management System upgrade
- LEAP online form/workflow development tool upgrade
- CTL M Job Scheduling System
- WEBFocus Reporting system

### Implementations and Integrations

ITS collaborates with our functional partners to implement new software solutions and perform integrations that support the business functions of the University.

### Qualtrics for Health Attestations

The University needed a way to collect, analyze, and act on large amounts of health-related data so that students could return. This initiative required tight collaboration among ITS, Student Health and Wellness (SHaW), and Student Affairs IT (SAIT). ITS identified a solution provided by Qualtrics, an industry leader for survey software that specializes in capturing event-driven, actionable data from people, and we coordinated the technical implementation and integrations. SHaW determined the content of the surveys and information they needed to quickly and effectively address cases, and SAIT assisted with medical records integration. Through this partnership, we were able to effectively deliver essential health attestation and contact tracing survey capability in mere weeks.

### Flexible, Security Vendor Payment Options

ITS collaborated with Accounts Payable and the Office of the Bursar to transition the University to a new electronic payment solution. Previously, the process of paying vendors with Quali Financials involved verifying and securing the corporate bank account information of our vendors and printing and mailing paper checks. ITS integrated Quali Financials with the Comprehensive Payables service offered by Bank of America (BoA). This service verifies and stores corporate bank account information, instead of the University, and provides a virtual card option, where a subscribed vendor receives University payments

on a dedicated credit card. This integration has enabled Accounts Payable to discontinue local check generation altogether and instead have them printed and mailed directly by BoA.

### **Additional Support for Campus COVID-19 Efforts**

Many areas at UConn were responsible for implementing procedures that would better protect our community during a pandemic and facilitate continued operation. ITS collaborated with these units to implement and update systems to enable needed capabilities. Below is a selection of some of these activities:

- Provided GIS work to facilitate wastewater tracking
- Implemented AIM inventory module to facilitate PPE tracking and distribution
- Implemented a process in AIM to manage, report and alert on building and room locations impacted by COVID-19.
- Updated Parking system to provide option for refunding thousands of parking permits
- Updated Mail system to facilitate touchless package distribution.

### **Remote Workforce Solutions**

Over this past year, UConn has prioritized enhanced flexibility in how our community teaches, learns, and works. Hybrid work perpetuates these needs as academic and administrative areas strive to maintain productivity from different locations. ITS found and implemented solutions that enhance workplace flexibility.

### **Call Center Software**

With much of the workforce working remotely, employees needed to answer and initiate calls from their university number while off-site. We implemented Unified Contact Center Express (CCX) as a replacement of the previous call center solution. This VOIP-enabled technology routes calls to both local and remote endpoints and helps manage volume when there are more calls than agents. We piloted the technology with Financial Aid, and based on their positive feedback, migrated the remaining university call centers to Unified CCX, and began implementing to other university units on request.

### **Updated Audio-Visual Design for Conference Rooms**

ITS piloted technologies in conference rooms that gave participants and presenters more options. Groups at these locations successfully integrated their preferred web-conferencing platforms, shared content wirelessly, and easily used either the room's computer or their personal laptops. We incorporated these technologies into the conference room design and began offering these capabilities broadly and at a lower than historical price point.

## GOAL 4

Pursue IT solutions that assist technical partners at all UConn locations to successfully provide for the specific needs of their respective communities.

### Purchasing Program that Support Local Efforts

Our community needs technology that operates effectively and securely in our computing environment. For faculty and staff, newer workstations perform better and faster, operate more reliably, and meet the requirements to run current operating systems and other software. They also help the University maintain a safe and secure IT environment because machines are equipped to run supported, fully patched software. Up-to-date workstations are better protected against security vulnerabilities that jeopardize your personal information and that could potentially produce result system-wide compromises.

IT professionals that serve targeted constituents are charged with coordinating these purchases. If multiple areas operate independently, however, the University does not have the leverage with our vendors to get the best practical price. ITS initiated a purchase program in 2020 to help departments replace end-of-support workstations and begin a five-year lifecycle schedule. We negotiate bulk prices with our vendors and then coordinate the ordering process with IT professionals and fiscal officers. To assist with the expense of this program, ITS offers a subsidy of up to 50% on select laptops for academic areas.

## GOAL 5

Pursue IT solutions that can best be provided centrally and deliver them securely, efficiently, and robustly at scale.

### Expansion of Capabilities

Microsoft 365 and all of its Office applications are widely used by faculty, staff, and students. We made updates to licensing and decisions about services that support full use of the tools available within the software suite.

### Upgraded the Microsoft Enterprise License

ITS negotiates an annual Microsoft enterprise license on behalf of UConn that allows our community to install Windows and Office products on university-owned and personal devices. This year, we upgraded



to a new education plan (Microsoft 365 A5). It includes elements that we had previously purchased separately, making it a more cost-effective selection, and provides enhanced security, larger mailbox size and access to new applications.

#### University-Wide Transition from Skype to Microsoft Teams.

Microsoft announced plans to formally retire Skype in lieu of the more feature-rich Teams. To prepare for this change in advance, ITS transitioned the University to a Teams-only environment. Teams is formally integrated into the Microsoft 365 environment, giving our community access to more messaging, conferencing, and document sharing capabilities. To support the transition, ITS arranged for training sessions on Teams and developed our collection of support articles. We executed the change in August of 2021.

#### Microsoft Outlook Modern Authentication.

The University was using basic authentication on Microsoft Outlook, and we transitioned the community to the more secure modern authentication in spring 2021.

### Network Upgrades

ITS has completed the second year of the Wired Access Layer Refresh (WALR) project. The purpose of this multi-year project is to update networking for all campuses and bring the whole University to a contemporary standard. Upgrades include installation of new equipment, selective closet or room construction, and replacement of outdated cabling where needed.

The pandemic altered University operations, and new safety protocols limited our access to buildings in the first half of the fiscal year. Intrusive cable work in residence halls had to be deferred. While this meant that we could not improve the raw underlying bandwidth, we were still able to prioritize the installation of new equipment and improve overall wireless coverage for the start of the Fall 2020 semester. When safety protocols relaxed, ITS resumed previously deferred cabling for residence halls and completed installation of network equipment in remaining residence halls. We also substantially upgraded eight academic buildings and developed the designs for buildings at the Law School and the campus at Avery Point.

### File Storage

ITS has been evaluating and implementing strategies for safe, secure, and sustainable file storage. We implemented file archiving on the departmental file storage (Q: drive) and research drives (R: drive) this year. Files on these drives that have not been accessed or modified for a minimum of six months are moved to from faster, more expensive primary storage optimized for immediate access to slower, less expensive secondary storage designed for long-term file retention. With this approach, our community retains access to all their files, and ITS can better manage space concerns on primary storage.

## High Availability Strategy: Disaster Recovery Testing

ITS annually tests the campus emergency disaster recovery (DR) plan to validate our ability to restore and operate essential IT services from our remote site in Groton. In previous years, we would practice failing over and then restoring the test environments of IT services. This year, we more closely simulated a DR situation and response by moving the following tier 1 production environments to Groton and then back to Storrs: Student Administration, Quali Financials, Aurora (Wordpress Service), and NetID. The testing was completed in June and provided us with valuable insight.

## Enterprise Security Update

The data center houses servers and applications for ITS as well as other university customers. The network firewall protecting and monitoring traffic for these services will be end-of-life in September. ITS has migrated servers and applications hosted in the data center off of the old firewall onto the new one. In conjunction with the migration, we are adjusting firewall rules in an effort to improve our overall security posture.