

# 2023 UBIT Year-End Report & Evaluation

Office of the Vice President  
and Chief Information Technology

6/29/2023



## Overview

The University at Buffalo Information Technology (UBIT) division under the Vice President and Chief Information Officer (VPCIO) had a productive year in support of the faculty, students and administration at UB. As reported last year, 2021-22 marked the return to “near normal” operations after the pandemic, allowing the VPCIO team to “restart the IT engine” and focus efforts once more on delivering on-premise IT services to our constituents.

In this most recent year (2022-23), the VPCIO organization focused on the evolving “new normal,” which is a combination of the benefits gained during the pandemic with a digital twist on in-person values and expectation for instruction and research. These new expectations are the cornerstone of the digital transformation UBIT is strategically pursuing through major initiatives such as the enterprise-wide CRM program, the robust Wi-Fi6 wireless network (nearing completion), and exploring AI in operations, instruction and faculty/student effectiveness.

As described in this report, UBIT had many significant accomplishments in 2022-23 working with our academic and administrative partners across campus. Along with these accomplishments, UBIT continued to experience challenges in recruiting/retaining staff as well as some procurement delays due to a continuing lag in technology supply-chain markets. However, thanks to the tireless dedication of the VPCIO staff and detailed long-range planning and execution, these challenges can and have been effectively mitigated.

The VPCIO has personally focused on leading the institution in the digital transformation described above and in this report. The three themes of *Academic Excellence, Diversity, Equity, and Inclusion*, and *Resource Planning and Management* are woven into the fabric of our organization. All members of the VPCIO organization, as well as the extended IT staff across the decanal units, recognize and embrace the goal of becoming a Top 25 public research university as well as the value and responsibility of equitable treatment for all. We strive to honor these values, while targeting the best and most innovative usages of emerging technologies.

This report summarizes these efforts and describes the strategic direction the VPCIO area will take in the coming year to help UB reach the Top 25 and beyond.

All topics in this report will correspond to at least one of the three major themes of (*see below*). The following icons will accompany each topic as a reference.

 *Top 25 (Academic Excellence)*

 *Diversity, Equity and Inclusion*

 *Resource Planning and Management*

# Accomplishments

## Campus IT Communication & Engagement

New VPCIO video podcast showcases importance of tech at UB   

In May 2023, UBIT launched a new video podcast, “Tech Talk with UB VPCIO Brice Bible.” The video podcast is a means for viewers to gain an understanding of the importance of technology at UB, its constant evolution, the challenges involved with maintaining cutting-edge technology and the opportunities provided by UB’s strategy around technology.

Viewers will also hear from a variety of knowledgeable and expert sources. The first episode featured former UB Council Student Representative and “Boombox Guy,” A.J. Franklin.

“How’s the Wi-Fi?” campaign solicits feedback from students/community  



In an effort to improve Wi-Fi for the campus community, UBIT launched the “How’s the Wi-Fi?” campaign in March 2023. The campaign offers students, faculty and staff a chance to tell UBIT how the Wi-Fi is working in various locations throughout campus using stickers with a QR code. Ratings are completely anonymous and are viewed along with all of the other network diagnostics UBIT collects. UBIT received 332 sticker scans to report positive or negative

experiences, in addition to over 300 awareness advertisement scans on residence hall posters, bus headlines and Spectrum ads. Areas which received negative ratings are being actively investigated by UBIT staff.

“Silly Goose” campaign raises student info security awareness  

In fall 2022, UBIT launched a popular security awareness campaign for students which played on the abundance of Canada geese on campus. The “Don’t Be A Silly Goose” campaign leveraged several mediums to explain the importance of information security to students. Print advertisements were displayed on UB Stampede buses and residence halls as well as digital displays around campus, including public student computer backgrounds. A YouTube video at the center of the campaign has nearly 700 views and was widely shared on UB social media channels.



## Campus engagement

In all aspects of its work and vision, UBIT is a highly collaborative organization. From high-level committee discussions to informal listening sessions, UBIT does nothing without careful consideration of the impacts on UB's students, faculty and staff.

To better assess UBIT's efforts, faculty are invited to participate in focus groups every fall and spring semester and share their feedback directly with technical staff. Faculty are also surveyed regularly about campus technology through a collaboration with UB's Faculty Senate IT Committee, most recently with the 2023 UB Faculty IT Survey.

UB students are surveyed by UBIT annually. Now in its 26<sup>th</sup> year, results of UBIT's Student Experience Survey are available on the UBIT website (results dating back to 2007).

## Network Services

### Butler Mansion fiber reroute

After the UB Foundation's sale of the Butler Mansion, UBIT completed removal of its major fiber infrastructure. To remove UB's dependency on the Butler Mansion, UBIT installed new conduit infrastructure between the maintenance holes located on Delaware Avenue and North Street in Downtown Buffalo.

### Distributed Antenna System (DAS) installations on North Campus

UBIT continued with the installation of a Distributed Antenna System (DAS) throughout North Campus in the Mathematics Building, Cooke Hall and Hochstetter Hall. As of June 2023, the DAS has been installed in 34 buildings on the North Campus and two buildings on the Downtown Campus.

### Spectrum Communications services for UB tenants

To continue to protect UB against ongoing cybersecurity threats, UB will no longer provide Internet and phone services to UB affiliates, Startup-NY companies, and other tenants at the institution. In response, UBIT has been facilitating the migration of these services over to Spectrum Communications for Internet & Wi-Fi access. By the end of this fiscal year, approximately 90% of UB's tenants will be moved off the UB network.

### UB Phones (VoIP) & 9Line

UB's VoIP-based telephone solutions are becoming safer and more dependable. In January 2022, the Ray Baum Act went into effect, which states that organizations managing multi-telephone line services must provide dispatchable location information when routing 911 calls to a public safety answering point. In July 2023, 9Line service will launch at UB to provide precise, detailed location information to University Police with 911 calls using Jabber.

### Fiber riser conversion project

UBIT is upgrading cabled links, replacing legacy copper cable infrastructure with fiber optic cabling between telecom rooms in every UB building. Nearing completion, UBIT will have upgraded 109 sites in total.

## Wi-Fi upgrades

UBIT is continuing the largest update of Wi-Fi technology on campus since 2016, upgrading access points to the newest Wi-Fi 6 standard (802.11ax) and expanding the number of HP/Aruba access points in academic buildings and residence halls (10,200 interior and 70 outdoor access points). This Wi-Fi 6 standard promises better performance in crowded areas on campus. It will also increase maximum potential Wi-Fi speeds by about 40%.

During 2022-23, UB had a maximum of 35,800 devices on the Wi-Fi network, averaging 18,300. Our maximum number of customers using Wi-Fi has been 31,400, with an average of 16,400. Our maximum total traffic on Wi-Fi was 138.5 TB, with 74.1 TB of average traffic. In terms of overall Internet traffic, UB's max was 14.5 GB, with an average of 8.2 GB.

## Enterprise Application Services

### Ivy Chatbot "Virtual Vic"



Hi there 🙋 I'm Virtual Vic and I'm here to help! Start by selecting a button below, or just ask me a question about IT.

Virtual Vic, UB's online AI virtual assistant, made its debut on campus during Spring 2021 among a small pilot group consisting of UBIT, Student Accounts, and the UB Career Design Center. During the 2022-23 academic year, the chatbot was expanded across additional areas of the university with over with over eight units across campus, including Parking and

Transportation, Human Resources, the Registrar's office, Travel and the Graduate School of Education. UBIT is exploring the possibilities of integrating AI, SMS messaging, authenticated personal correspondence and targeted outreach to further enhance the platform's capabilities.

### PeopleSoft/PeopleTools

HUB is updated three times a year with enhancements, particularly for compliance and security. These updates not only ensure the platform's adherence to necessary standards, but also provide an opportunity for UBIT to introduce new features and functionalities.

### Ecostruxure (Schneider Electric) HVAC Building Efficiency System

The Ecostruxure HVAC has been successfully deployed and is now operational across all three campuses. Ecostruxure, a modern BMS platform from Schneider Electric, is replacing an older BMS platform, Continuum. Expected completion is late 2024. University Facilities relies on Ecostruxure to facilitate improved safety, reliability, energy efficiency, sustainability and connectivity within our campus building infrastructure.

### UB Card activation to support NFTA Fare Collection

This completed project enabled the use of UBCard for fare collection on NFTA transportation services.

### BrightSpace LMS

Phases one and two have been completed for the Brightspace Learning Management system, which will

replace Blackboard. UBIT's work has been completed in preparation for the Summer 2023 Brightspace Early Adopter program and the full rollout of Brightspace for Fall 2023.

### Student Health Point and Click

Completed the implementation of the "Point and Click" Electronic Health Records system. Point and Click is a significant improvement over the previous system (Medicat) and provides a modernization of many Student Health Services processes and practices.

### SIS Review

An evaluation is underway to explore potential future replacements for PeopleSoft Campus Solutions. This assessment aims to identify alternative systems that can effectively meet the needs and requirements of the campus, providing enhanced functionality and improved user experience. The evaluation process will consider various options and weigh their advantages and suitability as a replacement for PeopleSoft Campus Solutions.

### Door access centralization

The migration process for campus door access support and oversight, shifting from SENS to centralized support, is being completed. Furthermore, the servers will be migrated to UBIT, and the SENS rule program will be replaced with a custom application developed by Lenel. This transition aims to improve efficiency, enhance system functionality, and streamline support processes under the centralized framework.

### Preferred/chosen name, pronouns and gender identity

Partnering with the Registrar and Office of Equity, Diversity and Inclusion, UBIT is continuing to incorporate chosen name, chosen pronouns and gender identity fields into data feeds to UB systems.

### SUNYID

To align with SUNY directives and facilitate seamless integration with SUNY systems, SUNYID is being integrated into UB's software systems. This integration ensures compliance with SUNY requirements and enables smoother data exchange and interoperability with other SUNY-affiliated systems and platforms.

### Title IV attendance compliance

The process of inputting grades into the LMS has been modified to align with Title IV attendance compliance requirements. Grades now have the capability to indicate whether a student attended class consistently throughout the term. This change ensures accurate reporting of attendance information, which is essential for maintaining compliance with Title IV regulations and guidelines.

### Real time account activity to include anticipated aid

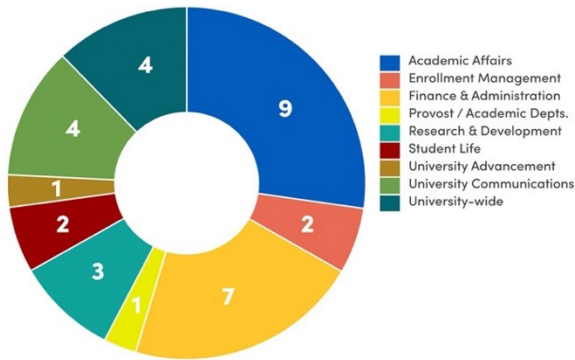
Students will now see their anticipated financial aid included in their student account balance calculation to make it as accurate as possible.

### Red Hat OpenShift and API

A new CaaS (Container as a Service) environment using Red Hat's OpenShift was successfully

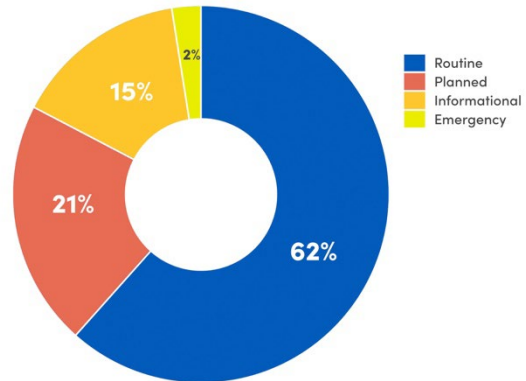
implemented for local software development purposes. This implementation led to the decommissioning of two legacy environments, namely Webapps and Entapps. All applications previously running in the two legacy environments were seamlessly migrated to the new CaaS environment. This transition enhances efficiency, simplifies software development processes, and ensures a consolidated and optimized environment for running applications.

## Strategic Portfolio Management



Completed projects by department

In terms of projects, the VPCIO area completed 34 customer projects during the 2022-23 academic year. 59 projects are currently active and four projects were cancelled.

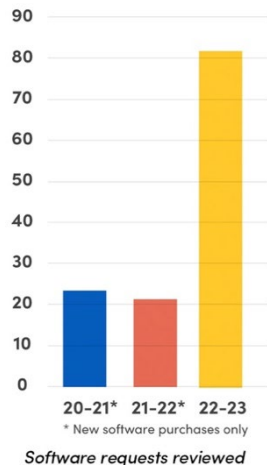


Change/Updates performed

### Change Management Report for May 2022 - May 2023

UBIT Change Management (including a formal Change Advisory Board) ensures the implementation of standardized procedures to facilitate the efficient and timely handling of any modifications made to the IT infrastructure. This includes the introduction of new services, management of existing ones and resolution of issues. The adoption of a standardized process allows UBIT to effectively plan and schedule changes, minimizing potential risks and maximizing the stability of UB's technology services.

During the past year, the VPCIO's area handled 687 changes, with just 12 unsuccessful changes and 37 cancelled.



### Vendor Questionnaire Review Requests

The Vendor Questionnaire is currently undergoing a process update. The newly formed Software and Web-based Services Vendor Assessment team is reviewing and evaluating the software and web-based services utilized at UB. As part of this process, an assessment is mandatory for the procurement of new software, the renewal of existing software licenses, requests for integrating add-ins with existing services, utilization of cloud/web-based services, or any other technology that involves the creation, collection, or processing of data on behalf of the university. This requirement applies to both paid and free products or services, including those developed within the campus.

## Microsoft Contract Renewal

The Microsoft Contract Renewal project is currently underway. As part of this process, the top-level needs of SUNY campuses have been collected and documented. Additionally, efforts are being made to coordinate with SUNY purchasing, Chief Information Officers (CIOs), Microsoft, and other relevant groups to facilitate negotiations for the upcoming contract renewal. A focus on research opportunities is a priority largely for UB and Stony Brook.

## CRM Initiative

UB has entered into a partnership with Salesforce for the implementation of a central Constituent Relationship Management (CRM) initiative. After completing a comprehensive multi-year strategic plan, the focus has now shifted towards building the initial phase of the Marketing Cloud deployment.

The CRM will offer the ability to effectively track and analyze interactions with various UB populations, including students and alumni. UB's eCRM system enables comprehensive monitoring and analysis of engagements, fostering improved relationships and communication with key constituencies.

Several activities have supported these efforts, including:

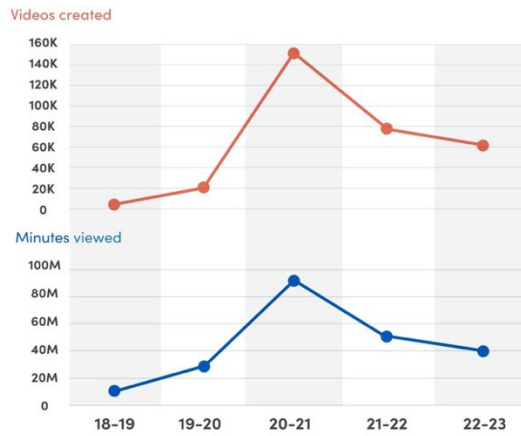
- Issued CRM RFI, evaluated six solutions, and selected Salesforce CRM as enterprise platform.
- Developed a Statement of Work and contracted with Salesforce for Strategic Planning Engagement professional consulting services and Marketing Cloud (Digital Communications) implementation services.
- Convened CRM Advisory and Enterprise Digital Communication Strategy Committees.
- Completed the evaluation and selection of Alumni and Donor Management as well as Event Management solutions.
- Projected Marketing Cloud initial launch in August 2023.

## IT Customer Service & Support

### Academic and administrative application tools

After the significant expansion of Zoom and Panopto (lecture capture) during the Pandemic, UB has experienced a decline in the academic uses of these technology tools. However, it's important to note the usage remains significant and it is estimated around 20% of the total lecture time during an academic year has been captured in Panopto. Metrics for Zoom (left) and Panopto (right) can be found below.

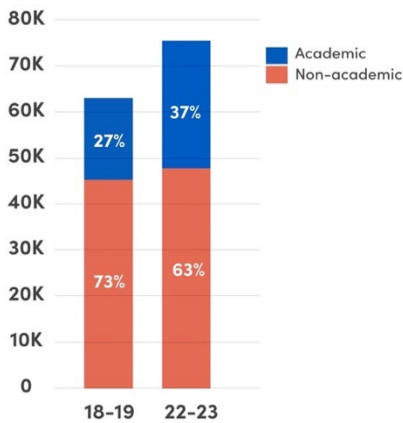




### Improved desktop support experience

Thanks to an improved Mobile Device Management (MDM) experience, UBIT can now utilize services like Microsoft System Center Configuration Manager (SCCM) and Jamf Apple Device Management to update and manage devices remotely from anywhere across the university. This MDM experience reduces the need for UBIT staff to travel to a student, faculty, or staff’s physical location to perform desktop support services.

### UBIT Help Center support volume



Tickets to the Help Center significantly increase since pre-Pandemic. In 2018, the compromise of Chegg, which many students used for coursework, led to a higher percentage of non-academic, security-related incidents. (See graphic below.)

With remote learning and work continuing to some capacity, and more instances of virtual meetings, technology support needs have increased at the university. A higher percentage of academic tickets likely can be explained by course capture recording requests and assistance.

### The Office of Medical Computing

The Office of Medical Computing (OMC) collaborates closely with UBIT to ensure effective coordination and resource management. This partnership involves various activities such as aiding in the development of job descriptions for newly required positions, addressing audiovisual (AV) requirements in critical areas, and making progress on the relocation of backup data storage to UBIT facilities. This collaborative effort falls under the umbrella of resource planning and management, aiming to optimize the utilization of resources and enhance operational efficiency between UBIT and the OMC.

### Learning Space Manager (LSM)

Realizing the need to improve forecasting reports during the COVID era to improve classrooms for

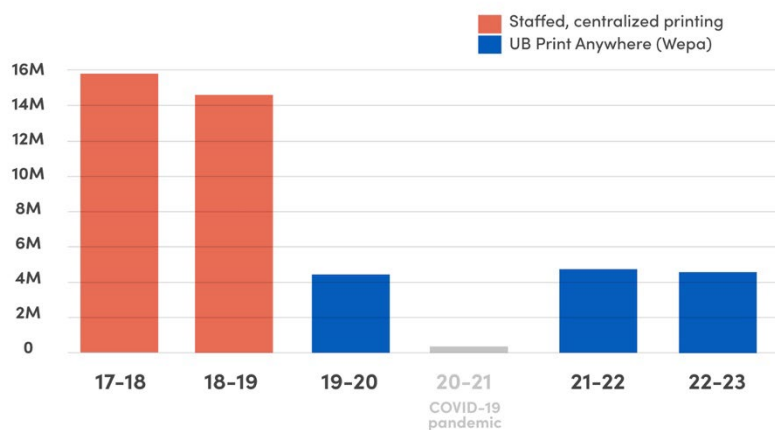
hybrid-flexible teaching, UBIT utilized Learning Space Manager (LSM) for all classroom facilities. It's a collaborative service between UBIT and the Registrar to track all centrally scheduled classroom fixtures, furniture, audio-video systems, and equipment to give a comprehensive view of service needs in a classroom. UBIT tracks over 12,000 items spread across over 200 centrally scheduled classrooms, conference rooms and other spaces. This collaboration will help forecast the future needs of classrooms and show opportunities for cost-saving benefits.

### Endpoint Lifecycle Management

UBIT incorporated Endpoint Lifecycle Management, a cloud-based asset management software. This service allows UBIT to maintain an accurate device inventory, plan for replacements and upgrades, optimize performance and security, and manage data effectively. Endpoint Lifecycle Management also helps UBIT make informed decisions about IT infrastructure to enable a productive, secure, and cost-effective technology environment.

### Student printing services

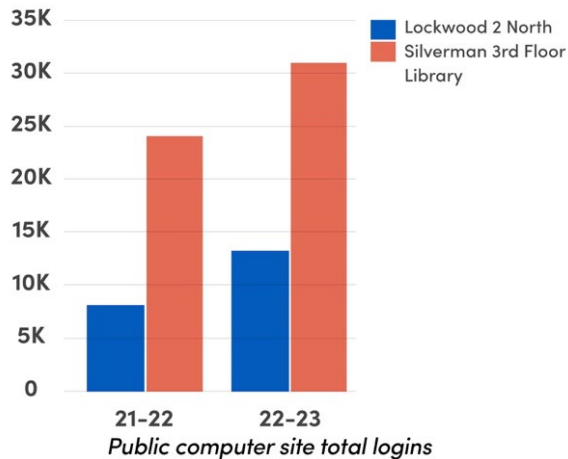
The following graphic shows the significant reduction in student printing due to the implementation of our self-service printing solution.



### Classroom audio/video enhancements

UBIT installed robust audio and video technology in 53 UB classrooms including classroom course capture software, ceiling microphones, and pan-tilt-zoom (PTZ) camera systems. The enhancements in these classrooms allow faculty to present effective multimedia presentations while recording and archiving their lectures for students to access at any time for review. It also allows for remote learning and the ability for faculty to bring in guest speakers from anywhere in the world.

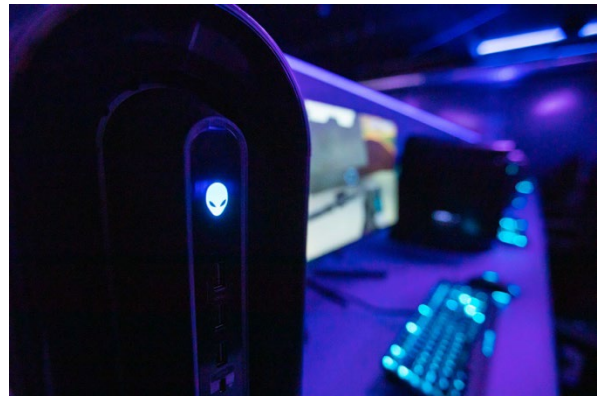
### Bring your own device UltraWide monitors



In August 2022, UBIT added new 49-inch curved monitors in the Level Up Lockwood 2 North computer lab as a direct result of UB student feedback. Students can bring their own laptop and connect directly to these monitors by using the included HDMI or USB-C cable. The addition of these bring your own device (BYOD) UltraWide monitors helps students with their productivity and equips them with the necessary resources to excel academically. In addition to the original 49-inch monitors, UBIT will deploy 34 38-inch monitors in the Silverman Library for Fall 2023.

### Instruction incorporation of Level Up gaming lounge

Level Up gaming lounge has transformed the student experience at UB. This year, Level Up was incorporated by faculty members to provide experimental teaching and learning opportunities for UB students. Instructors from Greek 101, Introduction to Japanese Culture, and the Honors College included Level Up in their curriculum.



### Laptop loaner program

UBIT and UB Libraries continue to see success with the popular laptop loaner program. The program addresses technology needs for students lacking a reliable laptop and provides equal opportunities for all on campus. This past year, laptops were loaned to 112 Pell-eligible students, over 400 graduate students, and 100 loaners were put in reserve for unexpected student needs through the semester.

## Information Security

### Security monitoring position added

The ISO (Information Security Office) has introduced a new technical position to enhance the depth of support services. This addition aims to bolster the ISO's capabilities by doubling the security operations staff, thereby strengthening their ability to handle security-related tasks effectively.

### Cybersecurity Maturity Model Certification (CMMC) Compliance Review

The Cybersecurity Maturity Model Certification (CMMC) Compliance Review project has been successfully completed. CMMC will be required by DoD for grants as early as 2024. During the review, certain gaps were identified that need to be addressed in order to achieve CMMC certification. To tackle these gaps, a comprehensive work plan has been established to guide the remediation process. The work plan outlines the necessary steps and actions required to address the identified gaps and ensure

compliance with the CMMC standards. By following this plan, the organization will be able to rectify the identified issues and work towards obtaining CMMC certification.

### Expanded Canary defensive presence by 300%

Canaries, which are commercially supported "honeypots," serve as deceptive devices within UB systems, appearing to be potentially vulnerable to malicious actors. When a malicious actor attempts to access or exploit a Canary device, it actively records and forwards their actions to the ISO (Information Security Office) while providing misleading information to the attacker.

### Splunk Advanced Threat Monitoring

ISO initiated a series of Splunk Learning Seminars for IT Staff on campus. The log information provided to Splunk by the different VPCIO units and distributed IT staff holds valuable operational insights beyond IT security. However, it is essential for these units to understand how to access and manipulate the data within Splunk to fully utilize its capabilities.

A series of new Splunk Dashboards tailored specifically for UB have been developed to streamline and expedite security investigations, with a focus on academic excellence.

The ISO staff regularly discovers and receives indicators of compromise (IP addresses, attack tool fingerprints, etc.) from both internal investigations and external sources. These indicators are actively utilized by malicious actors in their attempts to compromise systems. These advancements enable the ISO to identify malicious actors more rapidly and effectively limit their ability to infiltrate UB's systems.

### Performed tabletop exercise

In May 2023, the ISO hosted a simulated cyber-attack scenario involving student and patient data exfiltration, a phishing campaign and vulnerability exploits.

This exercise was led by UB's incident response partner, Mandiant, with involvement from infrastructure, applications, registrar, database, communications and emergency management staff. The session focused on detection and response to ransom to include notification with both internal and external constituents.

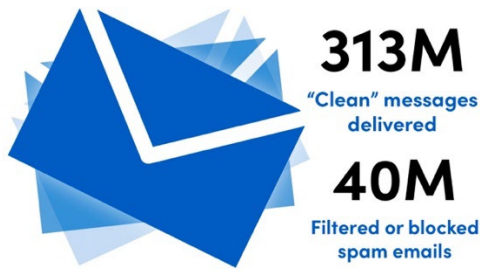
As a result of the tabletop, participating staff understood a need to focus on the ability to correlate cyber events into a coordinated attack effort. Another outcome was identifying the need to a proper safe communication channel when systems are suspected to be compromised.

## Systems Infrastructure Services

### NIST virtual computing environment

UBIT is upgrading its National Institute of Standards and Technology (NIST) virtual computing environment to be complaint with Cybersecurity Maturity Model Certification (CMMC). UB's NIST environment is for faculty who need secure computing environments for research.

### Email system upgrades and consolidation



UB alumni are joining the thousands of students, faculty and staff using Microsoft 365. UBIT started the migration for alumni to Microsoft 365 from Gmail in late 2022. UBIT also redesigned the email flow across campus, which simplified and eliminated 40 servers.

### Data storage system upgrades

UBIT upgraded and simplified UB's storage infrastructure, making it more resilient and eliminating \$200,000 in data storage system licensing. UBIT also eliminated all data

storage backup tapes, transferring backup media to storage disks. UBIT is currently managing data on 1,100 servers.

File storage has grown slightly, but not dramatically. Box saw about 100 TB of increase to 1,900 TB, Microsoft365 SharePoint and OneDrive grew by 80 TB to 230 TB, and UBfs (on-premise file storage) grew by 150 TB to 750 TB.

### Data security & research

UBIT is collaborating with UB Libraries, Jacobs School of Medicine and Biomedical Sciences, and the Vice President for Research and Economic Development team to investigate new data storage services and security for UB research data.

UBIT continues to protect the university against outside cybersecurity threats. The encryption on all passwords on campus was upgraded, improving password protection. UBIT expanded Duo two-step verification services to keep the university and its community members' accounts secure. Outside vendor access and retiree services now require Duo's two-step authentication. Microsoft 365 services were also strengthened against cybersecurity threats. UBIT is incorporating a new Oracle database and new data restoration service for the campus.

### Hardware and software upgrades

UBIT conducted many hardware and software upgrades to support important services at UB. Over 30% of servers at the institution were replaced or upgraded. Several servers were upgraded from Microsoft Windows 2012 to 2019. 200 Linux servers were also updated from version 7 to version 8. UBIT upgraded 120 Microsoft and Oracle databases.

## Resource Planning and Management

Similar to many UB departments on campus, UBIT is currently in a strong financial position. The state-imposed expenditure cap during the COVID-19 pandemic limited our ability to move ahead with planned equipment upgrades, end of life replacements and other enhancements, delaying those projects and expenditures to future years. Our five-year technology plan will result in strategically spending down our carryforward on crucial IT services for the institution.

UBIT is actively exploring ways to complete more projects per year by supplementing our current staff resources with implementation vendors. Some quick wins in this area have already been realized with

targeted outsourced classroom technology installations and network electricians. As funding is available, targeted staff additions have proven to help complete crucial initiatives.

The VPCIO division conducts a comprehensive multi-year (5-year rolling) budget planning process that engages all levels of the organization with input from IT Governance. On an annual basis, we identify strategic technology opportunities, review software and hardware contracts, target areas for professional development and training, renew scheduled infrastructure upgrades, refresh out-of-date hardware, evaluate staff turnover and position management, plan for the upcoming student workforce and determine priority areas for investment and improvements.

The VPCIO division collaborates closely with Internal Audit and Compliance to ensure UBIT and the university is operating in a strong fiscal environment. We participated in a recent fixed asset audit, and Kara Kearney-Saylor remarked, “Your area was the best managed/well controlled out of everything my office reviewed for Fixed Assets. You have a great team.”

### Diversity, equity, inclusion and belonging (DEIB) in VPCIO workforce

Over the past year, the VPCIO area has focused attention on creating a centralized human resources/diversity division. A new Director of Human Resources/Diversity Officer was hired in May 2023.

The new HR Director and Diversity Officer is responsible for planning, coordinating, and managing all human resources functions for our unit. This position will set a high standard of vision and direction for human resources, diversity, equity, inclusion and belonging (DEIB) efforts.

This initiative will begin by addressing current policies and practices affecting DEIB. We will analyze VPCIO current staff diversity to identify areas of concern. The office will implement initiatives such as changes in policies and practices, staff training, targeted recruiting and DEIB awareness events.

### UBIT electric vehicles

In June 2023, UBIT replaced two older vehicles with two new electric vans to its vehicle inventory, bringing the total of electric vehicles to four. These vehicles help UBIT align with UB’s sustainable practices for the environment, reduce cost, provide fuel efficiency, and noise reduction as well as enhance efficiency for UBIT staff members.

### Updated IT policies

The VPCIO recognizes the critical role in maintaining up-to-date IT policies and procedures for the institution. Updates include:

- UBIT Voicemail Retention Policy
- UBIT Rave Mobility Guidance
- UBIT Procedure for Accessing Accounts of Deceased or Incapacitated Individuals
- UBIT Cisco Jabber Policy

The Level Up memorandum of understanding between UBIT and Student Life was revised and finalized.

The following security policies have been through the revision process and are currently undergoing the review process:

- UB Computer and Network Use Policy (University Policy)
- IT Services in UB Owned Spaces (University Policy)
- UBIT Standards for Approving Software Use at UB
- UBIT Standard for Protecting Category 2-Private Data
- UBIT Minimum Server Security and Hardening Standards
- UBIT Standard for Category 1 Data
- UBIT Guidance Requesting Administrative Access for Your Customers
- UB Minimum Security Standards for Desktops, Laptops, Mobile, and Other Endpoint Devices
- UBIT Guidance for Retention of Security Log Data

## IT Governance

UBIT's portfolio is managed through an established governance model based on collaborative shared decision-making. The *Data Governance Council* is composed of campus leaders who meet regularly and oversee the university data decisions and related IT project prioritization.

There are several other key committees that feed information into the shared IT governance model. These committees include the *Information Security and Privacy Advisory Council (ISPAC)*, the *Data Stewardship Committee*, the *Enrollment and Academic IT Support Committee*, the *Faculty Senate IT Committee (FCITC)* and *IT Leadership group* attended monthly by central and distributed IT directors.

The *Faculty Senate IT Committee* served a very valuable role during the past academic year providing input and guidance on the transition to the new LMS (Brightspace), continued input into end user security policies, and oversight of the bi-annual faculty IT survey.

## Planning for the future

### Network and systems infrastructure

For the 2023-24 fiscal year, UBIT will begin implementing the new network aggregation and telecom switches acquired at the end of 2023. The current switches will reach end of life (no vendor support) in 2024, so the latest generation network gear by Cisco has been tested and selected for enterprise UB use. These new switches increase the network speed, security, and flexibility necessary for UB's research growth and expansion.

The combined VPCIO technical teams have recently completed a solicitation for a systems/services monitoring service with enterprise-wide implementation anticipated during 2023-24. This will greatly expand 24-7-365 monitoring of the UBIT operations and reduce the response time in the event of an outage or issue.

UBIT is working with the town of Amherst to utilize a road trenching project to add UB-owned private fiber between Campus Leadership, Erie County and ECC Technologies on the viability of UB participating in the ErieNet Fiber project.

Finally, the VPCIO organization will undertake an Identity Management (IdM) system review during the upcoming year including gathering input from various administrative, research, and technical constituents across the institution.

### Constituent Relationship Management (CRM)

As described earlier, the first year implementing the UB enterprise-wide CRM was very successful. The upcoming year will include completion of the phased rollout of Marketing Cloud as well as full implementation of the Donor and Events Management solutions for UB Advancement. The Events Management system (Blackthorn) will be utilized by other units across the Institution for special events.

The VPCIO team will also lead implementation of a shared data cloud solution to allow the vision of the “golden record” to become a reality. This unifying solution will finally move UB toward a shared data environment and away from the siloed approach so common to large universities.

Finally, building on the successes of the initial phases above, the CRM team in partnership with Academic Affairs and Student Life will begin integration of student success services into the CRM ecosystem. Arguably the most valuable component of the CRM strategy, this phase will fully incorporate student, faculty, and administrator success for a unified view for each constituent.

### Continuing to enhance IT security

Information security continues to be a rapidly evolving and increasingly complex challenges for all organizations, but especially leading research universities. Building on the strong security UB environment, UBIT is focused on the following major initiatives during 2022-23:

- Support the Academic units in achieving compliance with the end user device security policies.
- Acquisition of a managed security operations center service. Although UB maintains effective compensating controls, the state of NY and SUNY have stated they will require 24/7 third-party log management for all institutions. It is anticipated some of the costs associated with this service will be covered by SUNY from their 2023-24 capital funding.
- Providing compliant services and support for research faculty with grants requiring higher level security controls

### Research data support and protections

Completion of the Cybersecurity Maturity Model Certification (CMMC) gap analysis revealed several areas for improvement. These areas will be addressed during 2023-24 and third-party certification will be obtained in support of the \$30M annual and growing DoD grant portfolio.

The VPCIO also led a subcommittee of the Research Storage Task Force led by Venu Govindaraju focused on IT storage, compute and compliance needs to achieve Top 25 aspirations. This subcommittee report recommended acquisition of a trusted data broker and technical/functional support staff for researcher assistance. It is hoped the VPCIO area will lead implementation of these recommendations in 2023-24.

Additionally, UBIT is working with the VPR and other faculty experts on the potential uses of AI at UB. The retention of recorded information from Zoom and Panopto as well as other data sources may be an important step to pursue.



## Student Information System (SIS) review

UBIT led an internal group to gage the potential opportunities for the future of the SIS during 2022/23. This review revealed several alternatives including an open-source initiative which will be explored during the upcoming fiscal year.

## UPlan budgeting system

UBIT and VPF&A anticipate finally moving forward with this initiative during the upcoming year. This will require substantive participation by VPCIO technical and functional staff.

## Immersive technology evaluation and selection

This technology has significantly improved over the last couple of years and may be applicable to both instruction and research at UB. A demonstration in May 2023 resulted in strong interest among faculty. UBIT will work with our academic partners during 2023-24 to further determine best uses across UB.

## Conclusion

With every effort, UBIT strives to align with the university's priorities of *Academic Excellence, Resource Planning and Management, and Diversity, Equity, and Inclusion*. We are excited about the future of UB, and eager to continue to be a strong partner with the Institution in providing technology resources to advance UB's vision of becoming a Top 25 university.