Welcome to the 2022-2023 ITS Annual Report!

This annual report marks the end of my tenth year at Carleton. It’s been a productive and rewarding decade for ITS, but there’s no standing still in higher ed technology. In this report we will summarize activities from the past year and also forecast the challenges and opportunities on our three-year horizon.

Changes to Providing Support

Faculty, staff, and students reported in the biennial MISO survey that technology services have become more important to them. Given that, and the need for capacity to develop Workday training and support, ITS hired a professional to provide a full-time presence at the Helpdesk. Nolan Zippel joined us last July after having served a similar role at St. Olaf. I’m grateful that Workday project funding will be supporting this approach for two more years. To facilitate faculty and staff access to professional staff, we made a change during June so that callers to the Helpdesk can select “1” to get directed to Nolan. A dedicated staff member will triage issues and assign them to an appropriate person more quickly.

We have also been working to create more clarity about available technology services. For example, the account eligibility chart articulates the extensive range of user roles and their access to Carleton technologies. We have also been expanding and modernizing the ITS Knowledge Base to help community members find needed information right when they need it. This year we will be documenting available options for storing and managing data and providing a list of resources for new and departing members of our community. We welcome other suggestions for how to make technology services easier to find and to use.

The Arrival of Workday

By now, the Carleton campus is well-aware of the move to Workday, as the software that will replace The Hub, Colleague, Benefits Connect, PageUp, Bswift, and several custom applications that were written in Reason (our former web content management system, before the move to WordPress). ITS staff members in the Enterprise Information Systems (EIS) group migrated 5,121,168 data elements from Colleague to Workday - just for the HR, Finance, and Student Employment phase that launched on January 2, 2023.

This was a campus-wide effort — everyone was either making it happen or learning how to use it (or both). The implementation effort included nearly 600 meetings and thousands of test scenarios. While I am proud of their success, none of us want to sugarcoat how difficult this was for our campus community. There were a number of things to fix and improve since January, which has needed 449 hours with our implementation partners. We also recently purchased a new module called Workday Help, which will dramatically improve the ability to get assistance on a task that you don’t do very often. Stay tuned for more info about that.

ITS and our campus partners will complete the Workday implementation with the roll out of registration and advising functionality by the end of this academic year. We will also continue to enhance and leverage Workday for the years and decades to come. You can find more information about this effort and its benefits for Carleton at: www.carleton.edu/seams
Identifying Campus Needs for the Future

ITS started a strategic planning process this year. Two factors contributed to this timing. First, the college’s financial auditors have made a number of requests to encourage the maturation of IT operations at Carleton. One of their recommendations was a strategic plan with more detail and more oversight than the prior three-year planning processes that I had conducted in 2014 and 2018. Second, the College’s strategic planning process was a logical time to align known technology needs and opportunities with needs that will emerge in support of the College’s strategic aspirations.

To identify current campus technology needs, ITS did a number of things, including: review the MISO satisfaction survey data from 2022, have small group conversations with several dozen administrative department heads, offer a survey for academic department feedback, offer two tabling sessions for students, review the Educause Horizon Report, and review the intentions of the Carleton 2033 strategic planning initiative.

Samples of feedback and suggestions we received:

- People appreciate our guidance about which technologies to use to meet their needs.
- They wish to have more attention to project management and expectation building.
- They are aware of the time and capacity pressures on ITS while also indicating that resource availability creates issues in getting the support they need.

Looking forward

We are at a transformational moment for Carleton, for higher education, and for the emerging technology landscape. Over these past 10 years, technology has become infused throughout our work lives and our personal lives, in some cases becoming pleasantly invisible and in other cases being too visible (I’m talking about you, generative AI).

For ITS, it’s essential to periodically step back and reflect on the evolution of the services and changes in priorities. During Fall Term, we’ll continue to develop the steps we’ll be taking over the next three years to support Carleton as it plans a path towards 2033. If you have suggestions that you haven’t expressed recently, please do let me know.

This Annual Report also serves the purpose of making visible the efforts of Carleton’s ITS staff members. My thanks to them, and to you, for your partnership and accomplishments over the past year.
To identify current campus technology needs, ITS did the following:

a. Reviewed the MISO satisfaction survey data from 2022
b. Held two tabling sessions for students
c. Had a series of small group conversations
d. Offered a survey for academic department feedback
e. Reviewed the Educause Horizon Report, Top Ten Issues, and LSRS Guidelines
f. Surveyed multiple peer institutions (45 respondents)
g. Reviewed the intentions of the Carleton 2033 strategic planning initiative

What we’ve Learned

1. Relationships

Technology has become so pervasive it is often a silent facilitator of college initiatives. All IT services have grown in importance since 2014, some of them by as much as 65%. As a result, more collaboration is needed to “bridge the middle ground” between technology and college departments. Carleton users expressed appreciation for ITS support and also shared thoughts like: “more detailed project planning would’ve been helpful” and “either a helpdesk ticket gets resolved very quickly or it sits with no action.” ITS staff shared the impact of last-minute requests to support a campus effort and the challenge of balancing proactive and reactive tasks. ITS needs more planning and analysis capacity to meet the project and support needs of our campus partners.

2. Learning Experiences

Rapidly emerging technologies require timely guidance, intentional education, and accepted frameworks (e.g., Universal Design for Learning) to ensure confident and careful use in teaching and learning. Nationally, faculty cite lack of time as the biggest hurdle to participating in workshops but they highly value instructional technology support. At Carleton, faculty value interactions with the LTC and AT but, just like the national survey findings, frequently do not have the time to participate in in-term workshops. ITS needs to become even more nimble in sharing innovative ideas and resources to support opportunities for enhanced student learning.

3. Learning Environments

Learning and collaborative spaces are a foundational part of creating a sense of belonging for all students, faculty, and staff. Designing comfortable and inclusive learning spaces helps create environments conducive to learning. National research has noted increased student desire to learn in classrooms equipped for hybrid learning, requiring higher quality video and audio solutions. Faculty at Carleton are frequently requesting camera equipment for hybrid learning opportunities. To improve student-centered learning, easy sharing of devices has become equally important. However, some faculty at Carleton indicated that they are not aware of available resources. ITS needs to raise awareness of existing classroom technology features, while investing in the future infrastructure expected of modern learning spaces.
**In response to these identified needs, ITS is proposing:**

1. **Build campus relationships** that lead to a greater ability to align priorities and to support innovative projects collaboratively
2. **Support cross-discipline learning and creative problem solving** in academic and co-curricular environments in a fast-paced technological environment
3. **Provide and support a variety of flexible learning & collaboration environments**

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**what we’re planning**

### 1. Relationships

- Build communication outreach to new members of the Carleton community to raise awareness of ITS services and technology adoption processes
- Increase the number of services that can be investigated in real-time (e.g. WiFi) and centralize the tracking of ticket resolution
- Meet regularly with campus stakeholders and identified liaisons to create a stronger sense of partnership across all types of technology projects
- Work toward a dedicated project management role and increase capacity for business analysis

### 2. Learning Experiences

- Build UDL-focused instructional technology support and workshops
- Build on the AI CoP by partnering with LTC to provide timely info to faculty about AI implications & opportunities
- In the redesigned IdeaLab, offer lunch-hour workshops to raise awareness for research and teaching technologies
- Partner with faculty & staff to develop guidelines on evaluating and choosing digital resources (e.g. digital textbook components)
- Pilot ePortfolios with Library interns and Spanish TAs
- Partner with faculty and staff on technology-intensive projects, with the potential for cross-institutional collaboration

### 3. Learning Environments

- Evaluate Weitz 236, Boliou 104, and the AGH meeting room to add video and audio equipment for teaching and events
- Raise awareness about wireless presentation technology in classrooms
- Add better monitoring capabilities for consistent uptime of classroom technology
- Collaborate with facilities and stakeholders for innovative room redesign that focuses on inclusion and equity, based on Learning Spaces Rating System results (Weitz 235)
- Create regular opportunities for faculty to practice effective use of classroom technologies
4. Student Experiences

The pervasiveness of technology has made it imperative that liberal arts colleges provide opportunities for students, regardless of their background or prior experiences, to develop digital literacies. Many higher ed institutions are incorporating content into required first-year courses, covering topics from information and digital literacy to data analytics and privacy. Student feedback showed a need for more student computing services (repairs, loaners, software licenses) and self service options such as a student resources page that has available tech support locations, general troubleshooting tips, and greater visibility of campus events. It is clear that ITS needs to invest more in helping students to use technology and to engage wisely with a broad range of digital literacies.

5. Robust & Secure Network

The role of a campus network has exploded over the past 10 years in the face of hybrid work and increased student and administrative expectations. The network “must be ubiquitous and must support everything from the Internet of Things to a home-like experience for resident students.” Student frustration with the network as a whole starts with issues connecting personal devices to the campus WiFi. ITS staff articulated issues with our current ISP’s approach to redundancy and also identified a lack of redundancy in Carleton’s aged network closets. The college needs to invest in upgrading its network infrastructure in order to meet the accelerating dependence on reliability and availability.

6. Institutional Data Stewardship

The exponential growth of cybersecurity threats is increasing financial and reputational risks. Privacy and cybersecurity laws are proliferating at the state, federal, and international levels; recent court rulings are also changing the privacy landscape. Good data includes data governance, data definitions, and increasingly, integrated data. The campus has a growing need for support in evaluating specialized software solutions and in moving and aggregating data between systems. The completion of the Workday project, the implementation of Workday Prism, and the establishment of formal data stewardship practices will enable the safe and effective use of enterprise data to drive decision-making across campus.
In response to these identified needs, ITS is proposing:

4. Enhance student support opportunities to improve digital literacies
5. Provide a robust and secure network that meets campus needs
6. Protect institutional data and use it effectively

What we’re planning

4. Student Experiences

- Increase capacity for repair services and loaner laptop availability
- Increase funding for low-income students, including more support for laptop stipends and equipment repair
- Increase opportunities for internships and using both the academic and practical uses of technology for career preparation
- Increase the availability of licensed software, accessibility tools and campus event outreach
- Develop a computer literacy course for incoming students
- Develop a student resources page on the Carleton website

5. Robust & Secure Network

- Conduct regular surveys of wireless (WiFi) coverage
- Create a plan for closet review and coordination with Facilities on wiring upgrades in 10 buildings and timing of network switch redundancy in closets
- Create a plan for expanded network capacity to support multi-year Facilities utilities management project
- Evaluate ISP options with St. Olaf
- Expand security management of endpoints (EDR and MDR)
- Finalize business continuity and disaster recovery plans

6. Institutional Data Stewardship

- “Go Live” with Workday Student in a series of rollouts during 2024
- Pilot a project for financial data aggregation in Workday Prism
- Review workflows that reside in OnBase or WordPress to determine which should be migrated to Workday
- Review policies and procedures for data handling, especially for downloaded data
- Develop a security and data champions program, including a curriculum for onboarding new data users
- Perform an audit of sensitive data and the security controls protecting it. Map findings to available staffing & resources
Total number of new tickets: 10359
- 3437 via email
- 3231 via the client portal
- 1484 via phone
- 902 walk-up
- 150 via chat

Average number of daily threats blocked by firewall: Over 15 Million

Number of Zoom meetings: 63277
Number of countries with Zoom meeting participants: 142

Total number of invoices paid by ITS: 1441

Number of videos created or uploaded into Panopto: 2687
Total views and downloads of Panopto material: 85,925
Knowledgebase* views: **88,687**

- **588** published articles
- **2486** article revisions this year, averaging 4.22 revisions per article
- **9609** tickets with attached KB articles
- **141** article feedback submissions

* Launched in Fall 2021

Carleton’s storage in Google Workspace for Education: **Approximately 133 Terabytes**

Number of enterprise systems brought into production:

1
(Workday)

Number of data elements moved from legacy system to new enterprise system (first phase only):

5,121,168

Number of people in ITS who forgot to bring their laptop to work:

>1
The **Technology Purchasing Coordinator** orders all of the hardware, software, and IT equipment for the campus. The **Information Security Officer** is responsible for all dimensions of Carleton’s IT security program. The **Senior Project Manager** coordinates the Workday Student project and communications.

- Implemented Denial-of-Service protection on the firewall, safeguarding the campus from malicious actors trying to take down Internet access
- Moved all subnets off the legacy core network switch thereby improving reliability and the security posture for all devices on the college network
- Performed biennial security self-assessment. Aligned security program with new & stricter federal regulations
- Launched Carleton E911 Limitation Awareness Training

The **Systems and Infrastructure Group** (SIG) builds and maintains Carleton’s core technology infrastructure: datacenter, servers, storage, and networking. This includes authentication and identity management across hundreds of applications. SIG works closely with the information security officer to safeguard the systems under our control.

- Replaced homegrown (in Reason) identity provider for authentication with a vendor product that supports more modern federations
- Improved security by migrating away from old Cisco router to a newer paradigm which puts user access policy under “one pane of glass” rather than some policy in the firewall and some policy in the network switches
- Moved all name server services to new infrastructure, giving us the ability to do split horizon DNS to hide our private IP address space from the outside world

**Web Development** (WebDev) partners with Communications and all campus departments to create and support the Carleton web presence. WebDev is focused on maintaining the web infrastructure and identifying the best ways to deliver solutions for more specialized needs.

- Completed the transition from Reason to Wordpress, with a few services awaiting their 3rd-party replacements
- Launched a new, interactive campus map
- Moved the submission of digital signage posters from Reason to a Gravity Form
- Recreated multiple custom applications from Reason in WordPress
The **Technology Support Group (TSG)** supports the use of technology in offices, classrooms, labs, event spaces, and remote locations. This includes services such as the ITS Helpdesk and PEPS, and functions such as hardware and software purchasing, configuration, and distribution.

- Hired a dedicated professional staff at the ITS Helpdesk to support faculty and staff directly and to expand capacity for Tier 2 support and user training.
- Improved call center routing so that faculty and staff can more easily reach the experienced staff even from non-campus phone numbers.
- Repaired over 100 student laptops and provided loaner laptops to 75 students.
- Supported 52 incoming students who were eligible for the new laptop stipends.
- Imaged and deployed nearly 1000 computers to faculty, staff and public spaces.

**Academic Technology (AT)** consults with the community on current and emerging curricular and research technologies. AT supports all learning and teaching with technology, centering on strategies and tools for inclusion, diversity and equity. They partner with faculty to integrate digital thinking into the curriculum.

- Upgraded Moodle to version 3.11 with significant changes to its user interface.
- Sharpened our focus on Universal Design for Learning, piloting the use of Ally (in Moodle) and developing closer collaboration with the Office of Accessibility Resources.
- Worked with faculty to explore what Artificial Intelligence (AI) may mean for their teaching and research.
- Developed resources for managing the growing ocean of cloud storage, including tools for finding large or unneeded documents.

**Enterprise Information Services (EIS)** administers software applications for campus student information, financials, human resources, document management, reporting, and data warehousing. EIS also provides analysis and process review for interested campus departments.

- Launched the HR and Finance phases of Workday.
- Sunsetted the HR and Finance modules in our legacy application (Colleague/Hub) and eliminated the need for several separate applications.
- Formed a campus-wide report-writing team to partner with the Workday implementation vendor.
- Formed an integration team that deployed a new iPaaS tool (SnapLogic), which will be the key tool we use to move data between software systems.
For help with a work-stopping issue:
Call:  507 222 5999

For help with an urgent classroom issue:
Call:  507 222 5002

To check whether a service is down:
Visit:  go.carleton.edu/its-service-status

For help with a non-urgent issue:
Visit:  go.carleton.edu/helpdesk
Visit:  go.carleton.edu/servicecatalog

To get technology alerts via text:
Visit:  go.carleton.edu/tech-alert
Follow the instructions to add your cell number

To discuss an idea or get connected to specific expertise:
Contact any of the ITS managers or
Janet Scannell, CTO, at:  jscannell@carleton.edu