

2018-19 Annual Report

Blend
central and self-
directed **support**

Enhance teaching,
student learning
and computational
research

Transform
data integration
and process efficiency

Modernize web
and mobile
platforms

Embrace cloud
and shifting IT
infrastructures

**Information
Technology
Services**



Carleton

ITS team highlights



Welcome to the 2018-2019 ITS Annual Report!

In this document we will highlight some of the accomplishments of ITS over the past year. Our goal is to throw back the cover on what is often an invisible set of activities among ITS staff and our campus partners. In this report, we will share statistics and stories that make visible our efforts to prepare for the future while supporting the technologies in use today and the users who use them.

We are guided by the shared campus goals of providing an excellent education to our students and helping the next generation to make wise and well-informed decisions about the role of technology in their lives and careers.

I hope you enjoy the information in this report as much as we enjoyed delivering these services over the past year. I want to thank the members of ITS, pictured here, for their hard work, and I want to thank all of you for your partnership and support.

Janet Scannell



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, including technical controls, user training, and policy & governance.

- Processed and received materials from over 70 purchase orders from nearly every department on campus, totaling almost \$2M.
- Piloted a New Employee Onboarding Program offering a one-hour personalized introduction to IT at Carleton.
- Revived vulnerability management program. Reintroduced scheduled scanning, identifying vulnerable systems, and prioritizing remediation efforts.
- Worked with the Carleton and St. Olaf information security advisory councils to craft a privacy policy and establish a privacy committee to meet obligations that arise from emerging legislation like the GDPR.



The **Technology Support Group** (TSG) supports Carleton community members in their use of information technologies in their offices, classrooms, labs, and event spaces. This includes visible aspects such as the Helpdesk and PEPS, and "behind-the-scenes" functions such as hardware and software purchasing, configuration, and distribution.

- Worked extensively in partnership with vendors McGough and EPA Audio Visual to prepare the labs and classrooms in Evelyn M. Anderson Hall for use in fall 2019.
- Implemented an automated monthly software update process to help fortify the security of Carleton-owned computers.
- Provided support ranging from consultations to full event support for more than 300 unique events during the 2018-2019 academic year.



The **Academic Technology** group (AT) consults with the community on current and emerging curricular and research technologies. This includes supporting class assignments and research projects, and finding ways to integrate digital thinking into the curriculum.

- Partnered with faculty to add gamification techniques to a Zen Buddhism class to positively reinforce good study habits.
- Helped political science students create 2D and 3D visualizations and learn the strengths and weaknesses of each format.
- Received over \$600,000 for three grants: a biochemistry augmented reality app, language learning software, and quantitative literacy resources.
- Supported Public Works grant projects that engaged communities in Northfield and beyond.



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

- Began overhaul of The Hub portal (Hub2021), with new screens for parents for reviewing and processing financial aid and payments.
- Automated the faculty review workflow, enabling online reading, review, and approval through OnBase.
- Upgraded a number of administrative databases that support print accounting, financial and other reporting, and room reservations.
- Supported departmental software selection by hiring a full-time analyst.



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

- Added a backup authentication system — useful in the event of an outage in the CMC Data Center.
- Collaborated on the design and implementation of network and data service in the new science complex, including amplified cellular service.
- Installed permanent WiFi on the Bald Spot and added new desktop access points for difficult-to-network locations.



The **Web Services Group** (WSG) develops and supports the college's overall web presence. In addition to helping departments and project teams deliver quality websites, Web Services is focused on migrating the college's web infrastructure from Reason to WordPress (Web2020).

- Implemented Carleton themes for WordPress sites.
- Migrated 66 websites to WordPress, including all academic sites.
- Launched Carleton's new donation form in partnership with the Annual Fund staff and new vendor GiveCampus.
- Maintained current Reason sites such as reunion registration, the annual report on giving, the senior survey, externships, and the AAR site.

ITS by the numbers

AY 2018 - 2019

100

hours per week of Helpdesk coverage

during terms,
at CMC and
Research/IT

responded to
10,162
Helpdesk tickets

314

telecom tickets
created

240

student computer
repair interactions

over
10 MILLION

malicious connection
attempts denied at
the campus firewall
every day

205

faculty and students use
an augmented-reality app
developed by Andrew
Wilson and Rou-Jia Sung

33.2

terabytes of Carleton
files stored in
Dropbox

50.9

terabytes of Carleton
files stored in
Google Drive

installed

180,000

feet of Cat6 data cable
in Evelyn M. Anderson
Hall
(just over 34 miles)

15.5 million
page views
at carleton.edu

moved
66
web sites to
WordPress
of over 600
active web sites
at Carleton




5,590,875
pages printed
908,784
pages copied
\$385,135
total cost

319
tablets
(iPad, Surface,
etc.)

448
Windows
desktops



361
Mac laptops

2419

Carleton-owned devices in
faculty and staff offices and
loaner pool

933
Mac
desktops

308
Windows
laptops

automated
13
new OnBase
workflows

50
Chromebooks

over
20 GB
of network traffic
inspected for malware
every day

ITS partnerships

AY 2018 - 2019

Working closely with HR this spring, we piloted an hour-long 1-on-1 training session for new staff, covering topics like Duo, e2Campus, and secure file storage. Prior to the training, we reach out to the employee's manager to identify specific things that they would like covered. The pilot has gone very well and we are expanding to include new faculty

We are always looking for ways to streamline and automate workflows that require repeated, manual time and effort. As part of this, **ITS and the Writing Program** partnered this year to digitize part of the Sophomore Portfolio process, collecting scores and comments from readers. Watch for refinements of the portfolio process as well as other automation efforts.



Two years ago, Rika Anderson came to ITS in search of data storage. While individual research systems were historically purchased using faculty grants or startup funds, Dr. Anderson combined resources with Carleton's \$350K NSF Cyberinfrastructure Grant to purchase a 211 TB storage array. This past year Dr. Anderson and other faculty conducted research on an NSF funded server with 56 core processors, which is being managed by a new **Computational Research Users Group**. Faculty can now pool their resources, giving each researcher access to significantly more computational power.



After two terms under our **new support model for classrooms**, we surveyed faculty. 76% of respondents were satisfied with the quality of the response to a reported issue, and 73% were satisfied with the timeliness. 96% felt the classrooms were as stable or more stable than prior years, despite changing both the underlying technology platform and our vendor.

With the Target and Facebook data breaches in the news and over 3 million threats detected daily at the edge of the Carleton network, it is no surprise that **Carleton and St. Olaf** decided to permanently share an Information Security Officer. In Kendall George's first year, he led the institutions in the creation of a new privacy policy in response to the European GDPR, and he designed and implemented a new logging environment that analyzes 20 GB of activity data every day.

The spark for classroom innovation can come from anywhere. When Jeff Ondich was approached to help preserve the Dakota language, the project grew to involve Carleton Linguistics faculty, student interns, and ITS staff. Carleton's Public Works grant provided a portable recording studio and lecture capture software to **connect Sisseton-Wahpeton Oyate elders with Carleton students** in the classroom. Those recordings and their associated metadata are now contributing to the effort to preserve the Dakota language for future generations.



WRITING CENTER

Carleton has offered free student computer repair for 14 years, but we also knew that 5-10% of students didn't bring a device. After two years of **providing Chromebooks to 25 students**, Carolyn Livingston and Janet Scannell wanted to know more about the impact. Mavis Gustafson and Celeste Sharpe partnered with Kathy Evertz to conduct an informal study. **Students reported improvement** in their productivity, ability to meet faculty expectations and a reduction in social stigma.

"When I work in a group we usually all meet somewhere and all have our laptops pulled out, like typing at the same time on something... we never meet in the Libe to all go on one huge desktop thing."
- Focus group participant

The process of **integrating technology into the fabric of Evelyn M. Anderson Hall** required active and continuous collaboration between ITS, numerous vendors and campus partners. Over the past 18 months, ITS staff reviewed thousands of pages of schematics and attended countless meetings and walk-throughs to ensure that the ideas came to life accurately. In addition to activating over 300 ports, the networking team installed more than 34 miles of Cat6 cable and 60 wireless access points. The classroom technology team configured roughly 40 computers in 17 classrooms and labs, often collaborating with faculty or academic staff, including Jonathan Cooper from Geology.



With the move away from Reason, the Math Department was in need for a different way to deliver math placement exams. Carly Born worked with Mike Tie and Eric Egge to make Moodle, with its multiple choice functionality, the **new home for the Math placement exams**. This year's incoming students are getting introduced to Carleton's learning management system early and are able to see their placements immediately. Their results are synchronized to Colleague—allowing students to register for the appropriate math class—all without grading or entering data by hand at any step along the way.

"The collaboration of Carleton's redesign team—including members of the athletic department, College Communications, and Web Services Group—was instrumental in producing an attractive and functional site that meets the needs of our various audiences." - Dave Pape

As part of Web2020, Web Services is working with departments to make the best use of vendor options and the WordPress toolset. In some cases, functionality that was originally written just for Carleton can now be provided without custom coding. This summer, **Media Relations and the web team partnered** to migrate the Athletics site to a 3rd party vendor platform, called Sidearm, which is made especially for athletes and athletics departments. Check it out, it looks great!



GETTING SUPPORT

For help with a work-stopping issue:

Call: x5999

For help with an urgent classroom issue:

Call: x7070

For help with a non-urgent issue:

Visit: <http://go.carleton.edu/servicecatalog>

Email: helpdesk@carleton.edu

Call: x5999

To check whether an ITS service is down (or was within last 24 hrs):

<https://apps.carleton.edu/campus/its/>

To sign up for e2Campus technology alerts:

- <https://apps.carleton.edu/emergency/service/>
- Select "change modification settings"
- Select "groups"
- Click to subscribe to "ITS Emergency Notifications"

To discuss an idea or get connected to specific expertise:

Contact any of the ITS managers or

Janet Scannell, CTO, at: jscannell@carleton.edu

