2015-16
Annual Report

Information Technology Services

Carleton

CONTENT

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Chief Technology Officer

Soon after joining Carleton in 2013, I engaged the campus community in identifying its technology needs and setting shared goals. That process led to the creation of a three-year strategic plan with objectives across six areas: preparing students, enhancing teaching & learning, financial efficiency, embracing collaboration, people effectiveness and process effectiveness.

As we enter the third and final year of this plan, it seems a good time to reflect on our accomplishments and to start the next round of goal-setting and prioritizing. This document has a feature story for each of the six planks, along with brief statements and statistics about other achievements in each area.

As with any summary, it is not possible for this report to capture the thousands of tasks and conversations that are an essential part of providing technology support. On the back cover of this report you will find the names of all members of Information Technology Services - those who implemented the featured stories in this report, as well as those who worked on other efforts. I am honored to lead this talented team, all of whom are committed to doing their part towards Carleton's mission of providing "an exceptional undergraduate experience."

I am proud of what we have been able to accomplish in collaboration with our campus partners and look forward to the progress to come.

Janet Scannell

PREPARING STUDENTS

One of the imperatives identified in Carleton's 2012 Strategic Plan was the need to "prepare students more robustly for fulfilling post-graduation lives and careers." ITS has supported this critical campus goal through extensive support of the Career Center, campus advising efforts and enhancement of the professional development we offer our ITS student workers.

The Web Services Group has supported numerous Career Center initiatives, including developing a way to track student learning outcomes in the critical steps of career preparation. The Enterprise Information System (EIS) group moves student engagement data from the Tunnel (career center's tracking system) into the Data Warehouse, for analyzing student engagement and outcomes. Salesforce now provides a way for the Career Center to share information among their staff regarding their interactions with critical volunteers and others being approached to work on Career Center initiatives. ITS also created a space in Salesforce for the Carleton Careers Alumni Board (CCAB) to find information on alumni and track their interactions.

The Presentation, Events and Production Support (PEPS) team and the Career Center have been working together to weave professional development into the PEPS student positions. Through this collaboration, called the PEPS Professional Development Program, all 31 PEPS student staff worked with the Career Center an average of 6 different times throughout the 2015-16 academic year -- which is double the Carleton average. In collaboration with Academic Technology group, almost all of the PEPS students created a digital portfolio, and each had their portfolios reviewed by staff. Students continue to collect samples of their work to show to employers. In 2015-2016, half of our students completed an internship or externship or both!

ITS is pleased to be part of the Career Center's efforts towards the post-graduation success of Carleton students and to be upping our game to make sure that the 113 students we employee get the best possible learning opportunity under our mentorship.

ADDITIONAL ACCOMPLISHMENTS IN THIS AREA:

- Created online Student Document Archive in the Hub for easier access to and transferral of documents to advisers, including application essays and other materials that track student goals for their Carleton experience.

- Created an online resource for the Center for Community and Civic Engagement (CCCE) to collect student volunteer activity, which can then be distributed and analyzed to measure the impact of their engagement.

- Created a new student gateway website which makes it easy for students to find what they need quickly, including the top 10 web resources and a personalized dashboard of events and their Schillers balance.

- Developed student training and development programs including online student portfolios, badge credentialing and project specializations for students to work more in depth in areas that align with their interests.

1221
Alumni Profiles

754 Student
Career Profiles

30
Summer Student Research Projects

ENHANCING TEACHING AND LEARNING

The summer of 2016 saw the launch of CUBE (Carleton Undergraduate Bridge Experience), a pilot program that represents a significant experiment in moving beyond the traditional academic year model, by offering credit-bearing, online activities for incoming first-year students. ITS played a key role in this experiment. Staff in the Academic Technology group (AT) and the Web Services Group (WSG) are working closely with Melissa Eblen-Zayas, Associate Professor of Physics, to design, implement, and assess CUBE.

CUBE is a six-week, summer, online course designed to review and explore how quantitative skills are relevant to disciplines ranging from biology and physics to economics and psychology. CUBE participants will follow up the summer course with a face-to-face course. CUBE has two goals: 1) to strengthen the quantitative skills of incoming students and 2) connect participants to the Carleton community before they ever arrive on campus. The first goal will be addressed by having students reviewing and practicing their quantitative skills through self-paced work using an online adaptive tool, by working in teams to explore and tell a story using Carleton-specific data sets, and by collaborating on problems that explore how particular quantitative skills are used in the sciences and social sciences. The second goal will be addressed by weekly interactions with student coaches, alumni, and Carleton faculty, as well as light-hearted social media activities designed to forge personal connections between participants.

The CUBE experiment will be evaluated via pre-tests and post-tests of quantitative skills, along with self-reflective reporting of affective learning. We will also be tracking enrollment patterns and performance in courses that carry a QRE (quantitative reasoning encounter) designation for students with similar profiles who did/did not participate in CUBE. The earliest reporting on results to the Carleton community and to Carleton's Education and Curriculum Committee (ECC) will be this winter.

CUBE has offered ITS the exciting opportunity to build new capacities and to exercise existing ones in our support of teaching and learning.

ADDITIONAL ACCOMPLISHMENTS IN THIS AREA:

- Fulfilled over 360 lecture and event videotaping requests last year. Also developed a process for implementing closed-captioning with Carleton's Disabilities Services.

- Renovated the IdeaLab with new equipment and redesigned the space to better facilitate active and collaborative learning and digital projects.

- Embarked on a 6-month project to evaluate the use of our learning management system on campus, including online surveys, focus groups and analysis of the LMS database.

- Successful lecture capture research with St. Olaf resulted in selection of YuJa as a campus-wide software. Installed hardware hubs in 3 specific locations this fall to enable live streaming and recording.

Recorded over

360

lectures/events

Installed

12

new projection systems

Gathered over

350

responses to
Moodle Evaluation and
Needs Assessment Survey
from Faculty, Staff & Students

Initiated
6
Future Learning
Technology Group-funded
"Signature Lectures"

FINANCIAL EFFICIENCY

This year, ITS partnered with External Relations and the Career Center to develop an interactive portal for our alumni volunteers. The Alumni Annual Fund volunteers raise $8 million in support of Carleton's operating budget and are responsible for outreach to classmates. External Relations needed highly flexible software to support the needs of and help coordinate communications across our sophisticated programs. After exploring the market for existing software applications, Carleton decided to license the Salesforce platform and create an interactive portal based on this world-class Customer Relationship Management (CRM) product. CRM platforms excel at providing access to data, monitoring planning activities, and tracking peer-to-peer interactions and engagements. Salesforce is mobile-friendly and works on any hardware platform that can connect to the Internet.

In the fall of 2015, the first Salesforce project started, with stated goals of bringing the Alumni Annual Fund (AAF) programs a brand new interactive portal. This portal went into production in the spring of 2016. We currently have 700 alumni provisioned into the portal with plans to grow the user base over the next 9 months. In addition to the AAF portal, we launched a similar project for the Career Center Advisory Board (CCAB) who now have their own space in the Salesforce portal to track their activities with alumni externships and alumni profiles. Over the next year the portal will be expanded to the alumni volunteer 50th and 25th reunion programs as well as the Alumni Council.
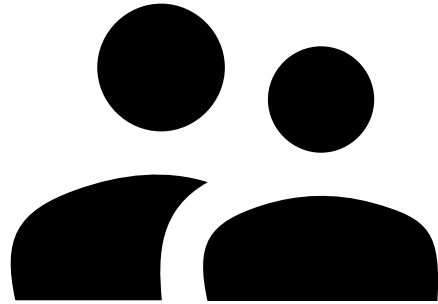
700
Alumni Volunteer Accounts

ADDITIONAL ACCOMPLISHMENTS IN THIS AREA:

- Both Carleton College and St Olaf received NSF grants that supported a move to 10 Gigabits per second Internet bandwidth with redundancy between our paths.

- Developed Data Risk Classification Guidelines and increased use of 2-factor authentication which has slowed the rate of increase of Carleton accounts being compromised.

- Crafted a Service Level Agreement with Computer Science faculty for datacenter co-location and hosting. This has eliminated the need to build separate datacenters in other buildings for research computing purposes.

1000
Interactions logged for alumni activity

150
Users enhanced their account security by adding a second "factor" for identity authentication

EMBRACING COLLABORATION

Carleton and St Olaf have a long history of collaboration, including a joint library system which encouraged us to do more technology together. For some types of technology projects, we can work with our friends across the river without needing to worry as much about the complexities of different academic calendars and course catalogs. There has been concerted effort to include one another in discussions about new technology, strategies around cloud and data preservation, and a lot more.

In 2015, Carleton deployed a new storage solution on NetApp technology which considerably improved the speed and reliability of our datacenter storage. This technology was selected based on a recommendation from our St Olaf colleagues, and built in such a way that we can seamlessly replicate our data to a paired device in St Olaf's datacenter, giving us important new tools to protect our most important systems. We upgraded and improved the shared OneCard system that manages card access at both schools and considerably expanded the capacity and reliability of our shared security camera solution. We assisted our libraries in the implementation of the new library system, 'Catalyst'. We are continuing to explore ways to work more closely with St Olaf, including the future possibility of hosting servers together on shared hardware.

ADDITIONAL ACCOMPLISHMENTS IN THIS AREA:

- Built twin 10Gbps network paths to Minneapolis in such a way that we can provide redundant connectivity for St Olaf, and vice versa, if our primary path should fail.

- Created security councils at both Carleton and St Olaf. Developed new security awareness training programs to be released October 2016.

- Several Carleton faculty and staff attended and presented at annual LACOL conference in June 2016. Taking the lead on an upcoming quantitative skills "hackathon".

- Developed plans to implement a unified helpdesk ticketing software system with St Olaf in 2017, continuing the process that started with a collaborative implementation of our screen-sharing product 'Bomgar' two years ago.

42 TB of storage in our new shared NetApp system

7 Times in the last twelve months our redundant internet connections shared with St Olaf have prevented an outage on one campus or the other

+6 Shared positions between Carleton and St Olaf requiring new solutions around computing, access to systems and digital resources, etc.

PEOPLE EFFECTIVENESS

Over the last academic year (2015-2016), Carleton transitioned from our hosted email service, Zimbra, to Gmail. The change was prompted by Zimbra's increased unreliability and our hosting partner's decision to stop providing the service. The process started in the fall with an in-depth evaluation. After extensive testing by faculty, staff, and student volunteers, the College decided that Gmail was a better fit for our current environment and positioned us strongly for the future.

Having selected Gmail as the appropriate platform for Carleton, the project team designed an implementation schedule around the sometimes conflicting schedules of our faculty, staff, and student clients. Three "early adopter" groups migrated during April and May; each group was treated as a dress rehearsal for the larger faculty, staff, and student migrations planned for June and July, with a complete round of pre- and post-migration communications and training sessions. All email messages, address book entries, and calendar appointments were seamlessly copied from Zimbra to Gmail, with an error rate well below 0.01%. More than 220 faculty and staff attended in-person training sessions, and many more took advantage of the extensive online training options the team provided.

The new functionality Gmail and Google Calendar provide, coupled with the opportunity to reimagine how we approach everyday communication, has positively impacted productivity. Several features that Google Calendar provides, such as Appointment Slots and the easy integration of personal calendars, have increased efficiency across campus. The powerful integration between Google Drive and Gmail has reduced the number of attachments we send via email, helping to ensure people are more often looking at the current version of files. And the proven stability of Gmail as a platform has increased the campus's satisfaction with our email service.

ADDITIONAL ACCOMPLISHMENTS IN THIS AREA:

- Implemented and debugged a Helpdesk call center system which allows employees calling from a campus phone to wait in a queue for professional staff.

- Are now keeping up to 5 years of Moodle course pages on the production server, streamlining access to past coursework for students and making it easier for faculty to migrate information forward for new courses.

- Designed and implemented a new student name recording feature of the campus directory which debuted at Senior Showcase in spring 2016.

- In partnership with our faculty advisory committee, identified and implemented a group of changes to The Hub. This was one of our first strategic plan efforts and remains one of our most popular.
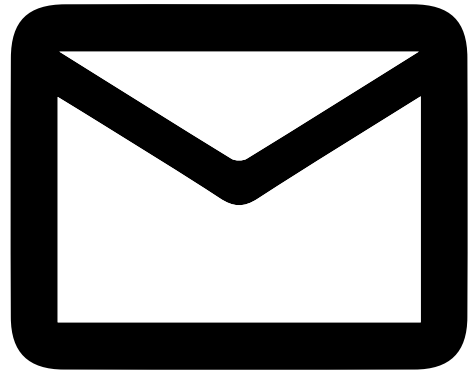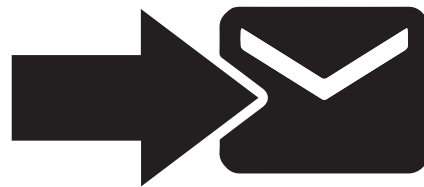
250,000
Email messages are delivered daily to the Carleton community

9118
Web HelpDesk tickets closed in the last year

42,691,087
The total number of messages and calendar appointments moved during our migration to GMail

PROCESS EFFECTIVENESS

In September 2015, ITS launched phase one of the Catalog of Services on the ITS website. This was an exciting step toward meeting important service goals and creating a more sustainable support model. Service goals include making sure that people in the community know how to make a request for help, who to contact for each service, and how to access self-service options for support. In addition, the catalog provides greater transparency for services offered and products available on campus.

The catalog currently houses 52 service pages, with many more in the works. In most cases, pages in the catalog describe the service and provide additional information about how the service works. They may also include information on how to do specific things or links to additional information, providing the user with details that may solve their problem or answer their question on the spot. Each page also identifies a point person that can be contacted for more information or additional assistance.

Fall 2016 site stats confirm that self-service options, such as managing passwords and gaining access to Carleton's wireless network, are in high demand and are being utilized. ITS recognizes that meeting the ever growing demand for self-service support both allows us to provide service options for our clients when we aren't available, such as evenings and weekends, and increases our capacity for other types of work.

This will be an ongoing work in progress as we adapt to the community's needs and learn from the way it is being used. Comments and suggestions from the community are welcomed, and can be entered on the "Not Finding What You Need" form from any section of the catalog.

ADDITIONAL ACCOMPLISHMENTS IN THIS AREA:

- Implemented Siteimprove to monitor over 700 of our most visited web pages for quality and accessibility issues. Over 200 broken links have been reported to site maintainers.

- Created an OnBase workflow to route purchase requisitions through the review process, which involves 4 departments and 18 separate tasks.

- Introduced Google Calendar, including Appointment Slots which allows faculty and staff to schedule appointments with students.

- Partnered with 63 departmental liaisons aka "SuperHeroes" who guided their departments through a smooth transition to Gmail and Google calendar.
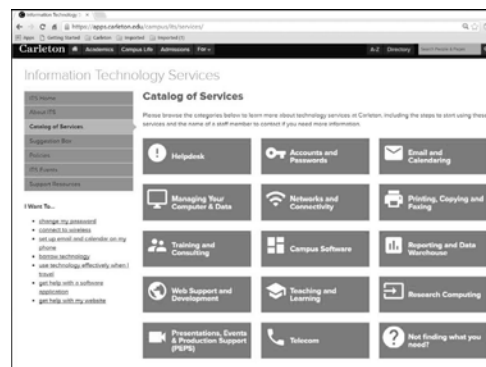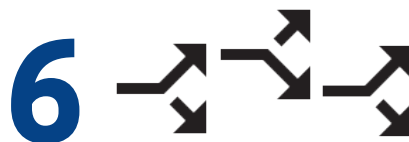

1500
Visits to the ITS Service Catalog pages in September 2016

730
Active websites are used to communicate with the Carleton community and beyond.

6
New OnBase workflows to improve process efficiencies across departments

INFORMATION TECHNOLOGY SERVICES

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Lead Systems Engineer

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Director of Web Services

Rebecca Barkmeier
Desktop Systems Administrator

Troy Barkmeier
Desktop Systems Administrator

Russ Bauer
Enterprise Analyst/Developer

Carly Born
Academic Technologist

Kevin Chapman
Computing Support Specialist

Julie Creamer
Director of Enterprise Information Services

Michael Decker
Hardware Asset Manager

Chris Dlugosz
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