



CCS opening
doors
through
technology

responsive

2015 CCS annual report





introduction

Rebecca Graham

Chief Information Officer & Chief Librarian

We have chosen *Responsive* as the theme for the 2015 annual report believing it represents many critical aspects in the year presented.

In the area of Information Security, you will see we have made substantive progress on many elements of the “roadmap” developed a couple of years ago. These efforts are very much about being responsive to risk concerns within the University and the Board of Governors as well as to the rapidly evolving threat landscape. Within that landscape we have new challenges arising from the heightened targeting of higher education environments that result in increased phishing, spam, malware and even some early ransomware incidents. Through the acquisition & deployment of state of the art security solutions and our recruitment of skilled staff, we are working to move from a historically reactive posture to one that is more proactive.

We have also developed responsive themes for the University’s websites that provide for optimal user experience relative to the screen size of the device they are using at any given time. This development arises from our awareness of the increasing variety

of device types and form factors in use by faculty, students and staff. At this time of increased mobility, it is essential for us to provide improved experiences for users. Simultaneously, mindful of established provincial requirements for providing access to web content and websites for people with disabilities, the themes also facilitate our ability to do so. They are being leveraged in the centralized AODA remediation activity within CCS as well as Communications and Public Affairs and local units that have taken responsibility for their own remediation efforts.

And finally you will read about efforts within CCS to engage with partners across campus in order to meet their unique needs along with a more general approach to being both respectful of and responsive to changing trends in user needs and behaviours. In the latter case, recognizing the growing percentage of devices from within the Macintosh ecosystem in use across the University, we have moved from support for these products being done on a “best effort” basis to now being part of our core support. In our engagement with campus partners

you will see examples of our commitment to facilitating improvement for processes - both internal to the University’s operations and in our day-to-day services to students. We have seen an increased uptake in commodity services (managed desktops and servers) as well as creative engagement on new models of service for some of those same services. With the establishment of the Information Security team, we are also becoming more sought after to partner on and/or assist with assessments of new technology solutions.

CCS is committed to alignment with the strategic goals of the University. With new University leadership in place, and a robust strategic renewal program underway, we will continue to listen, engage, and anticipate future change for our organization and the broader community.



Rebecca Graham
CIO & Chief Librarian



Gayleen Gray

Deputy CIO & Associate Director
IT Strategy and Partnerships

our vision:

to be technology and knowledge solution leaders, partnering with University communities, enabling excellence in teaching, learning and research.

message from the associate directors

It has been a productive and active 2015 for CCS. We have been focused on growth, partnerships and collaboration. At our heart, CCS is a dedicated service organization. Our teams have been brought together to support the University as a research-intensive and globally-focused institution. We aim to understand the unique needs of our campus clients and to find beneficial and sustainable solutions that will enable the success of our students and the institution as a whole. This year, we have been strategically building our teams with an emphasis on security, connectivity and accessibility.

We successfully moved the entire campus over to secure WiFi to increase privacy and protection. Our new Information Security team represents our proactive approach to the current threat landscape in higher education. We also remain committed to engaging campus partners to share ideas and solutions, leverage opportunities to build efficiencies and streamline our processes, and continually meet the evolving needs of our community. We have supported many campus partners in their efforts to comply with AODA web requirements and to implement key business systems to support their unique business processes and needs. Our CCS Managed Desktops team now provides desktop support to more than 26 departments on campus, with Macintosh support being an official part of their service delivery. Our regular collaborations with groups like the Information Technology Student Advisory Committee (ITSAC) and the Information Technology Special Interest Group (ITSIG) help to inform our practices and processes and provide valuable feedback on our services.

Throughout this report, you will see icons representing the three pillars upon which CCS builds its service focus: people, technology and partnerships. Our intent with this report is to offer insight into how CCS continually strives to bring these pillars to life in our daily work and ongoing projects.

At CCS, our people are our biggest asset. We take great pride in our teams and the individuals who comprise them. Their client dedication is unparalleled, as is the value they bring to CCS and the University as a whole.

throughout the report, look for these three icons that represent our pillars:



people:

the dedicated individuals behind our success



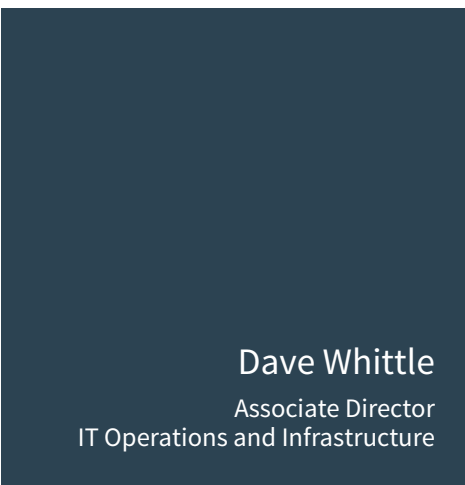
technology:

the equipment and infrastructure that keep U of G on the cutting edge



partnerships:

critical collaborations with key stakeholders to ensure we are meeting the needs of our campus



Dave Whittle

Associate Director
IT Operations and Infrastructure





security

higher education: the current threat landscape and the critical role of information security

Higher education institutions have historically been perceived as ‘open’ environments. Compared with private corporations, universities place significant value on information sharing and transparency among faculty, staff and students. While this culture has advantages from a learning and research perspective, it poses significant risk relative to information security. “An open environment creates a wider attack surface for cyber criminals,” says Stephen Willem, CCS Manager of Information Security (InfoSec) at U of G. “There are multiple points of entry, and the constantly shifting population of students in the university setting provides new targets each year.” Willem adds that cyber criminals are also well aware that students may be more trusting and less suspicious of potential scams.

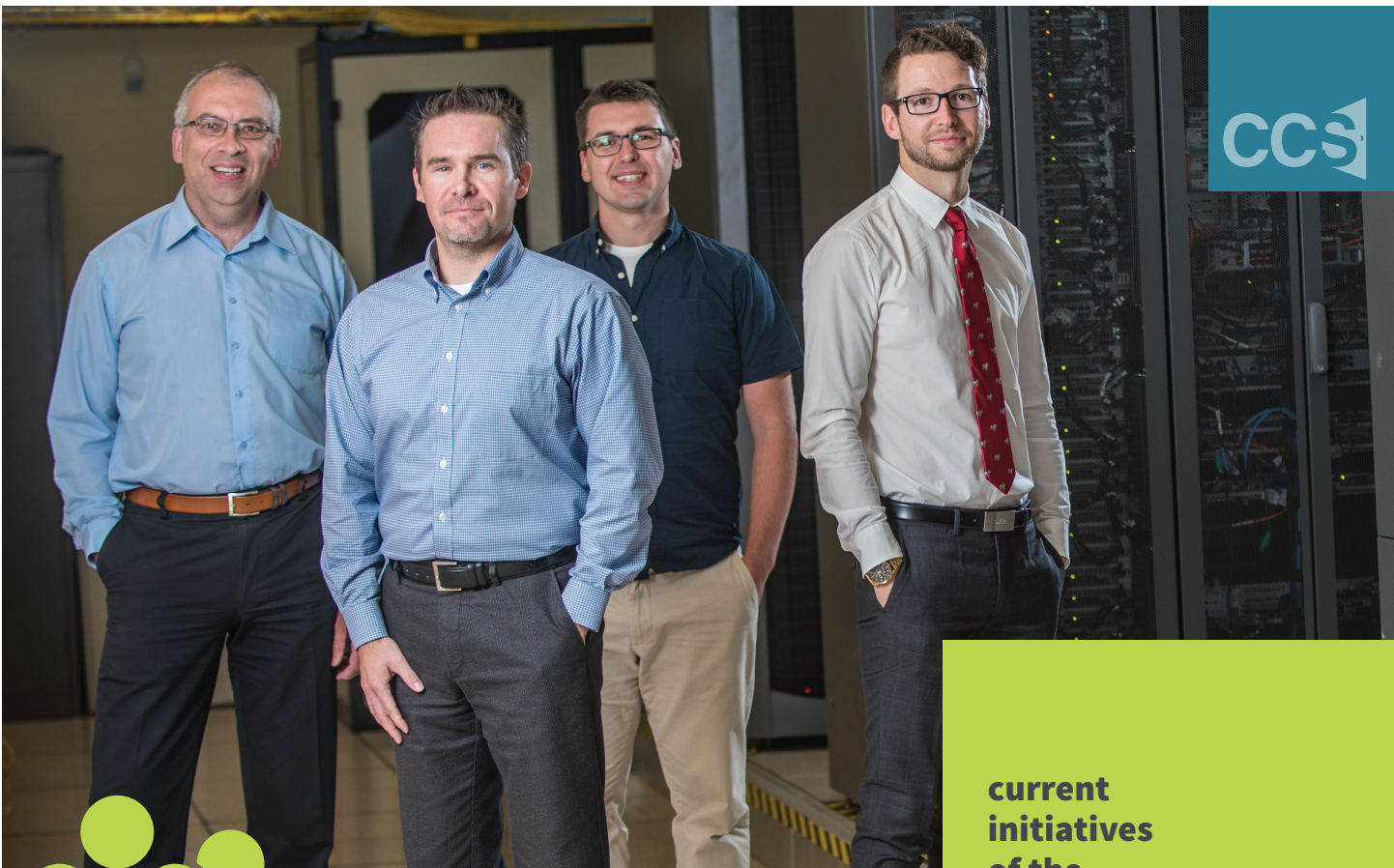
The most significant threats to the university environment include:

- **Phishing scams** - attempts via email to lure individuals into clicking on a link or opening an attachment, in the hopes of gaining access to identity information (e.g., passwords) or to infect systems with malicious software (malware)
- **Password credential theft** – cyber criminals trying to gain access to passwords for reasons of information/identity theft or monetary gain
- **Software vulnerabilities** – widely-used software programs are often found to have security “holes” that can make the institution vulnerable to attack. Keeping abreast of security updates and patching these holes is critical to keeping the institution’s security profile intact.

The two most critical components in which CCS has engaged to manage these threats are the creation of a Security Operations Centre, enabling constant monitoring of the institution’s network and those connected to it, and awareness campaigns, such as its annual Security Awareness Roadshow, to improve security practices across campus.

“Today’s technology can detect on average 65% of advanced persistent threats,” says Dave Whittle, Associate Director of CCS. “The remainder of our work is focused on changing the behaviour of our users. They need to know how to create strong passwords, recognize phishing scams, perform software updates and ultimately understand the risks inherent in our environment – this culture change is critical to our success.”

Read on to see how new practices implemented across various CCS teams are helping to keep our campus community protected and secure.



The new InfoSec team (L to R): Gerrit Bos, Stephen Willem, Brendan Hohenadel, Chris Sowley

introducing the CCS InfoSec team

While new strategic directives and the acquisition of new technology will arm CCS with the tools to combat security threats, it is the people within CCS that are its greatest strength. The new CCS InfoSec team is poised to build and develop leading-edge security policies and processes, create awareness among the campus community, and launch the new CCS Security Operations Centre at the University.

The team is comprised of the following campus security experts: Gerrit Bos, who focuses on risk, compliance, and security awareness; and Brendan Hohenadel and Chris Sowley who look after security operations, incident response, investigations and cyber forensics. The team is led by Stephen Willem – CCS Manager of InfoSec – who joined U of G in June from Blackberry where he was the Manager of Global Cyber Security Operations and Systems and led a team of security professionals responsible for security operations, incident response, and support for security infrastructure.

The vision of the InfoSec team is to be a trusted partner working with IT groups on campus. “Our goal is to move from being reactive to proactive, from having limited visibility to increased visibility, and from ad hoc practices to documented and repeatable processes,” says Willem. “We don’t want to be an impediment to the important work on campus, but rather an enabler of safe and secure practices.”

With their collective experience and expertise, an additional Cyber Security Analyst set to join the team in 2016, and growing engagement with units across campus, U of G’s security posture continues to be enhanced.

current initiatives of the InfoSec team

- security operations and incident response
- data protection
- vulnerability scanning
- security policy development
- security risk assessment
- security consultation
- standards compliance
- security awareness initiatives
- security investigation
- encryption service



security



improving security awareness on campus

A key priority of CCS and its InfoSec team is to foster a culture change on campus, moving toward a more informed and security-savvy environment. Initiatives that took place in October 2015 - part of global Cyber Security Awareness Month initiatives - were aimed at engaging the campus community in this culture change. One key event was the Security Awareness Roadshow, now in its second year, which is a fun and interactive way to engage students, staff and faculty about secure practices. CCS invited some of its external IT vendors to play an important role in this initiative, offering relevant information to Roadshow attendees (and great swag giveaways!). In addition, the InfoSec team launched the revamped security section of the CCS website (infosec.uoguelph.ca) making it easier than ever to report a security incident, find relevant information and policies, and become aware of the latest phishing scams. Also taking place during October was a secure application development training session, where IT specialists across campus had the opportunity to learn how to better protect their applications.

Additional and ongoing awareness activities that will take place over the coming year include increased engagement with IT experts on campus regarding patching vulnerabilities, and a strong security presence on Twitter (@CCSnews) with many tips and tricks for staying safe online. The InfoSec team will also be promoting a monthly security theme throughout 2016, with security-themed blog entries and cross-campus marketing campaigns.



campus network security

While the CCS Information Security team develops the policies and procedures around the security of U of G networks, the CCS Network Infrastructure team is charged with managing the technology that enforces these policies and ensures compliance.

Two critical components of a secure network include appropriate firewalls and Network Access Control (NAC). While the CCS Network Infrastructure team has been implementing and monitoring these programs for a number of years, the new and significant emphasis on information security at U of G and the continuous evolution of end-user device technologies means that the University's robust requirements are outgrowing the capabilities of current firewall and NAC technologies. As a result, the team is actively pursuing successor solutions that will allow for an improved security posture at U of G and will recognize and work with the latest generation of end-user devices (tablets, smartphones, etc.).

Tom Herr, CCS Manager of Network Infrastructure, is eager to implement these updated programs. "These new solutions will provide greater visibility into who is connecting to our network, and help us better understand the intention behind those connections," he explains. "We want to continue to enable users to connect to services they need, when they need them. If someone is connecting with malicious intent, we need to be in a position to recognize this activity and act accordingly, in order to keep our network and users safe and productive."



secure wifi

In an important effort to improve the protection of our connected campus community, CCS took on the challenging task of moving the entire campus over to an exclusively secure wireless network: uog-wifi-secure. The new network has full encryption from the endpoint (device) to the wireless access point, ensuring increased data protection and greatly minimizing any vulnerability to attack. “It took a well-planned and coordinated effort to educate and encourage all individuals on campus to make the switch,” says Tom Herr, CCS Manager of Network Infrastructure. “In addition to the increased data protection, uog-wifi-secure offers better speed and performance compared to the retired uog-wifi network. This helped entice people to make the change.” The safer network is only one component of CCS’ security roadmap, but it was a crucial step to improve protection for the 19,000 daily wireless connections on campus.



infosec.uoguelph.ca



service



enabling accessible websites across campus

The provincial government's Accessibility for Ontarians with Disabilities Act (AODA) aims to make Ontario accessible by 2021. As part of this process, organizations – including the University of Guelph – must make their websites compliant with the requirements outlined in the act.

To support the campus effort with this task, CCS created a branded, responsive (adjusts to all device screen sizes), AODA-compliant template in partnership with the U of G Library, upon which departments and units can build their remediated sites. This template is used by many departments on campus including Human Resources and Financial Services.

In the summer of 2015, the team refreshed the template to align it with the new and accessible campus homepage design, launched by Communications and Public Affairs. This version is now in use by the Ontario Agricultural College, the Undergraduate Academic Information Centre, the Office of Graduate and Postdoctoral Studies, and CCS itself. “The task of remediating our campus websites also provided us with the opportunity to ensure responsive and mobile-friendly websites,” explains Craig Hyatt, Acting CCS Manager of Business Solutions. “The new platform provides an inclusive experience for all users and we look forward to sharing this with the rest of campus as the AODA web remediation efforts continue.”



campus desktop support

The CCS Managed Desktops service motto is, “We’ll manage your desktops, you manage your business.” The team strives to provide a high quality support experience for Windows and Macintosh (Mac) desktop computing with an emphasis on security, reliability, and client productivity. CCS Managed Desktops clients enjoy the benefits of standardization and economies of scale – attributes of the service which allow the team to streamline and automate many aspects of desktop support. When personal service is needed, the team provides timely, courteous, and knowledgeable support, using remote support techniques or desk-side visits as required.

Since its inception over 10 years ago, when only 120 computers were supported, CCS Managed Desktops has grown significantly, now supporting more than 1,200 computers for 26 different departments and units across campus. New clients this year include McLaughlin Library and the University's Executive Units, including the Office of the President. Service delivery has also been enhanced in many ways. As an example, CCS supports the Mac platform, an increasingly important part of computing on campus over the past few years. The use of automation tools has been a key to customer satisfaction, such as a centralized approach to administering anti-virus installation, updates, and reporting, as well as centralized workstation encryption, and a support tool that enables the team to assist clients remotely without the need for a desk-side visit.



help centre

The CCS Help Centre is a central gateway to CCS for much of campus. The Help Centre provides IT support during business hours to U of G students, faculty, and staff. They can be reached by phone (x 58888), email (58888help@uoguelph.ca), or in person at the IT Help Desk on the first floor of McLaughlin Library. By using a tracking system called FootPrints, CCS ensures all requests are answered and resolved promptly, and feedback on each service interaction is collected, tracked and incorporated into future practice.

The IT Help Desk, often viewed as the face of CCS, is the “walk-up” support service which runs in partnership with the Library’s Learning Commons. The IT Help Desk is staffed by well-trained CCS Student Consultants who provide support on issues including connectivity, computer security, software updates and other potentially frustrating problems – problems that may compromise a student’s ability to study or meet deadlines. Issues that can’t be solved by IT Help Desk staff are escalated to CCS via the FootPrints system. This past year, approximately 2,000 students, faculty, and staff were helped with their urgent IT issues.

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service



enterprise applications

The CCS Enterprise Applications team has a simple focus: to improve the functionality and user experience of the three main business systems on campus: Student Information Systems (including WebAdvisor), Human Resources Systems, and Financial Systems.

In practice this work is anything but simple, despite the focused effort. As an example, this past year the team worked closely with the Registrar's Office to help enable a superior admissions experience for veterinary applicants to the University. "Significant documentation is required during the application process," explains Ruth Smith, CCS Manager of Enterprise Applications. "By making these forms electronic, and integrating them with our internal student information system, the application process is simplified and applicants are able to track the status of their documentation on-line in real time."

"We've been incredibly pleased with the support that CCS Enterprise Applications team has provided in several initiatives this year," says Deanna McQuarrie, Associate Registrar, Admission Services. "Creating a streamlined, on-line process for students to follow when completing their applications to the Doctor of Veterinary Medicine program enables a better experience for them and their referees. An added bonus is that it's eliminated the need for staff to manually track paper submissions which saves us significant time."



software distribution

The CCS Applications and Integrations team provides the CCS Software Distribution site (guelph.onthehub.com) to the U of G campus. CCS negotiates software licensing agreements with external software vendors so the entire campus can benefit from volume licensing and/or academic accounts. Depending on an individual's designation at the University, campus community members can download a wide variety of discounted and free software programs, including McAfee VirusScan, Adobe Creative Cloud, ArcGIS, SAS and Microsoft Office 365.



new IT onboarding resource for use across campus

CCS has responded to an important campus need for a clear and easy-to-use guide for new staff members at the University. The IT Onboarding Resource contains practical information on setting up or accessing key technology systems and services: Gryph Mail; Information Security; telephone systems and voicemail; WiFi; working remotely; printing; passwords; and where to get IT help.

“It’s important for new U of G staff and faculty members to have access to this information to ensure they experience an efficient and smooth integration with our core IT systems once they arrive on campus,” explains Gayleen Gray, Deputy CIO and Associate Director of CCS. “It also gives us peace of mind knowing that we have helped to set people up for success, and ensures that new staff members on campus can get in touch with CCS if they need assistance.”

This resource will be found on the CCS website and will be available to all departments as part of campus-wide onboarding.



Matt Kurylo, member of CCS Systems Management team.



managed servers

The CCS Managed Servers team takes the burden off individual campus departments to procure, install, configure, secure and maintain their servers. This team provides a secure, environmentally-sound data centre and manages day-to-day server operations including patch management. Campus clients use servers for a wide variety of applications, including payroll processing, storing and sharing varsity game videos, perimeter door-lock management, etc. This service frees up these departments to focus on the applications themselves, as well as their client interactions and other daily responsibilities.

Benefits enjoyed by CCS Managed Servers clients across campus include:

Security and reliability: The team has extensive experience maintaining Windows and Linux servers utilizing the latest technologies, and ensures servers are secured through a growing number of protection systems. All this is built and maintained by a team of professional CCS analysts.

Time and cost savings: The CCS Managed Servers team will install, configure, manage and monitor the operating systems, assist with determining requirements and guide clients through the procurement process.

Consultation: The CCS Managed Servers analysts are available to assist with planning and specifications to assist clients with their business needs.

Altav Virani, Assistant Director of Information Technology in Hospitality Services, has been very pleased with their move to the Managed Servers environment. “For many years, Hospitality Services has managed its own data centre - comprised of 18 servers and managing 65,000 transactions every day - requiring considerable expertise and resources. With the increasingly reliable and dependable service provided by the Managed Servers team in CCS, and their specific expertise regarding virtual servers, this past year we began transitioning to the Managed Servers environment,” explains Virani. “Our experience has been exceptional: we have cut considerable costs on hardware, warranties and staffing; we are no longer burdened with the constant patching, updating and security concerns; and know we are protected in power outage situations and during environmental crises. Having a trusted voice on the other end of the phone means everything to us. They have been phenomenal to work with and I look forward to our continued collaboration.”

making connections



ITSIG

(IT Special Interest Group)

CCS maintains ongoing partnerships with IT specialists across campus. These relationships are critical to the mutual success of campus IT programs and services.

York University

CCS and York University have partnered on a shared backup service, providing each institution with redundancy and disaster-recovery capabilities. This successful shared service effort is intended to grow over time to include additional campuses.

Library

One of the newest clients of the CCS Managed Desktops service. With 121 desktop computers to maintain, the Library is the service's largest client.

U of GH

CCS provides the University of Guelph-Humber campus with many of the same IT services as the rest of U of G, including secure WiFi and software distribution, and works closely with them on strategic consultations for service direction and IT staff hiring.



opening doors
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Open Learning and Educational Support

The CCS InfoSec team performed a number of vendor risk assessments to ensure a balanced decision when evaluating various vendors for educational tools.

President's Office

The CCS Managed Desktops service now provides expert support to one of the busiest and high-profile offices on campus.

Campus Researchers

The CCS Enterprise Applications Database Services team partnered with U of G researchers leading the Guelph Family Health Study to ensure their highly sensitive patient data (S3 level data) is hosted on a secure database.

Alumni Affairs & Development

CCS is providing key database and server infrastructure in support of the implementation of the new AA&D Customer Relationship Management system, The Cannon.




ITSAC

The Information Technology Student Advisory Committee (ITSAC) was established in 2003 and has been an important forum for students and CCS staff to meet and discuss campus IT priorities. Student government representatives from each college, as well as from the Central Student Association and Graduate Student Association, are invited to ITSAC’s monthly meetings (with free dinner provided for students at each meeting!). ITSAC members disseminate surveys to their specific constituencies, providing a means for CCS to gauge student needs and gain valuable feedback on the effectiveness of various IT initiatives.

ITSAC has been an important channel for CCS over the years. Margaret Barth, a CCS staff member who is this year’s ITSAC Chair, knows the importance of the Committee and tries to reiterate that to the student group. “CCS relies on this information and places significant value on feedback received via ITSAC,” says Barth. “Engaging with students in this way helps us to better understand our users and improve our service delivery.”

Each year ITSAC provides CCS management with an annual report – the findings of which are considered when prioritizing new initiatives on campus. In response, CCS Management provides a response report with specific actions it has or will undertake to address the ideas and feedback that is shared by the Committee.



beyond our network

Margaret Barth, SIS Operations & Project Management Coordinator in CCS, was one of five individuals selected for Project Serve, a community-building volunteer program at U of G. Margaret spent two weeks helping elders in the Pequis First Nation Community prepare for their Sundance ceremony. “It was a four-day event focused on gratitude and purification,” explains Barth. “I was honoured to both help and participate in this special ceremony, and had the opportunity to gain deeper insight into this important cultural tradition.”



testimonials

“My experience in working with the U of G’s Information Security team on several system security reviews has been extremely positive. The team members are responsive to the needs of the department, consider what we are trying to accomplish and are solution focused. The team is talented, with a high level of knowledge and experience in the area of IT security. I am confident that they ensure the highest level of IT security standards across all IT partners.”

Michelle Fach

Director, Open Learning and Educational Support

“We had a very positive experience working with CCS, who helped us with a project to move invoice approvals from a manual to an automated process. The team was very motivated to find workable solutions and kept the end user top of mind, and they were responsive to our needs throughout the project. The end result is a much more efficient approval process with positive feedback from all those involved. We look forward to future projects with CCS.”

Ray Pero

Director of Procurement Operations, Financial Services

“The person who helped me was very courteous, knowledgeable in his craft and very diligent. He took time to resolve my problem and helped me save precious time. I am grateful for the good service the University offers. Many thanks.”

Simone Granger

Student requesting help from CCS Help Centre

“We required significant modifications to our Undergraduate Psychology website, and were delighted to work with the professionals at CCS. We needed to combine five sites into one, comply with accessibility requirements, and make our site consistent throughout. We now have a professional appearance to our site that reflects the new U of G template. We’ve also added unique features like easy linking to Google Scholar Profiles for our faculty, integration with department and graduate iCal streams, and a vastly improved and customized application process for graduate students. We had a fantastic experience working with CCS and highly recommend their services.”

David Stanley

Associate Professor of Industrial-Organizational Psychology


“CCS has been invaluable during the implementation of ResearchLink – a web-based portal used to automate and integrate business processes related to research at U of G. CCS has been involved from the early stages and has remained involved throughout the project. They have been very responsive and supportive, exactly what one would hope for in a partner. We are grateful to have them on board as we roll out future modules.”

John Livernois

Professor and Associate Vice-President, Research Services

looking forward

Looking toward 2016 and beyond, CCS remains focused on collaboration and on building its teams and resources to both protect and enable the campus community. It will be an exciting year with insights to glean from the campus-wide strategic renewal process, a new and inspired University leadership team, and important new partnerships being forged across and beyond campus by CCS and the University as a whole. With an eye to the rapidly-changing future of technology and higher education as a whole, it remains an exhilarating time to be part of this great organization.



“We must open doors and we must see
to it they remain open, so that
others can pass through.”

- Rosemary Brown, Canadian politician and activist



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