

Computing & Communications Services



CCS 2010-2014 Integrated Plan (Update 2011)

CCS Integrated Plan

Proud of its accomplishments through the CCS Integrated Plan 2006-2010, CCS developed a new 5-year Integrated Plan in 2010. For 2010-2014 CCS will focus on delivering integrated, IT enabled academic and business solutions that meet the strategic goals of the University and its communities.

2011-2012 Update

As part of a continuous planning process, CCS does a formal review of its Integrated Plan annually assessing its successes, collaborating with clients and other partners, and monitoring IT evolution in higher education. This document informs University communities of the 2011-2012 update to the CCS Integrated Plan.

Executive Summary

Purpose of this Document

This document describes the CCS Integrated Plan for senior administration, directors and managers of University units and represents CCS' commitment to the University's Integrated Planning process.

- Within the context of a 5 year plan, this document informs University communities about CCS' Objectives and specific Initiatives for the 2011-2012 year.
- The document provides a focal point for CCS' continuing collaboration with all units interested in CCS-supported IT infrastructure, services, and professional services
- The CCS Integrated Plan and this Update reflect the enterprise IT needs and priorities identified by the University's Integrated Planning process.

Process

In 2009-2010, CCS completed a strategic planning process targeting the next five years. This process involved the development of

- a Planning Framework, describing the CCS Purpose, Values, Vision, and foundational Pillars.
- an Integrated Plan, identifying broad three-year Objectives for each foundational Pillar, strategies for accomplishing the Objectives, and specific one-year Initiatives to meet the Objectives.

In 2011, a CCS Strategic Planning Committee reviewed and updated the CCS Integrated Plan with a new list of initiatives for the 2011-2012 year.

- Through discussion with leaders from 7 University units, CCS plans were compared with current needs and priorities of University communities and reassessed to identify current opportunities for collaborative partnerships.
- By reviewing the success of the 2010-2011 Initiatives and identifying new opportunities, a list of new or continued one-year specific Initiatives was developed, and are highlighted here.

CCS Integrated Plan Update

The 2011-2012 update to the CCS Integrated Plan includes three components.

2010-2011 Successes

CCS Staff successfully completed many projects over the last year. Internal Initiatives have strengthened its staff and improved infrastructure and services. CCS has demonstrated capacity to deliver on commitments, introduce new services and significantly improve existing services.

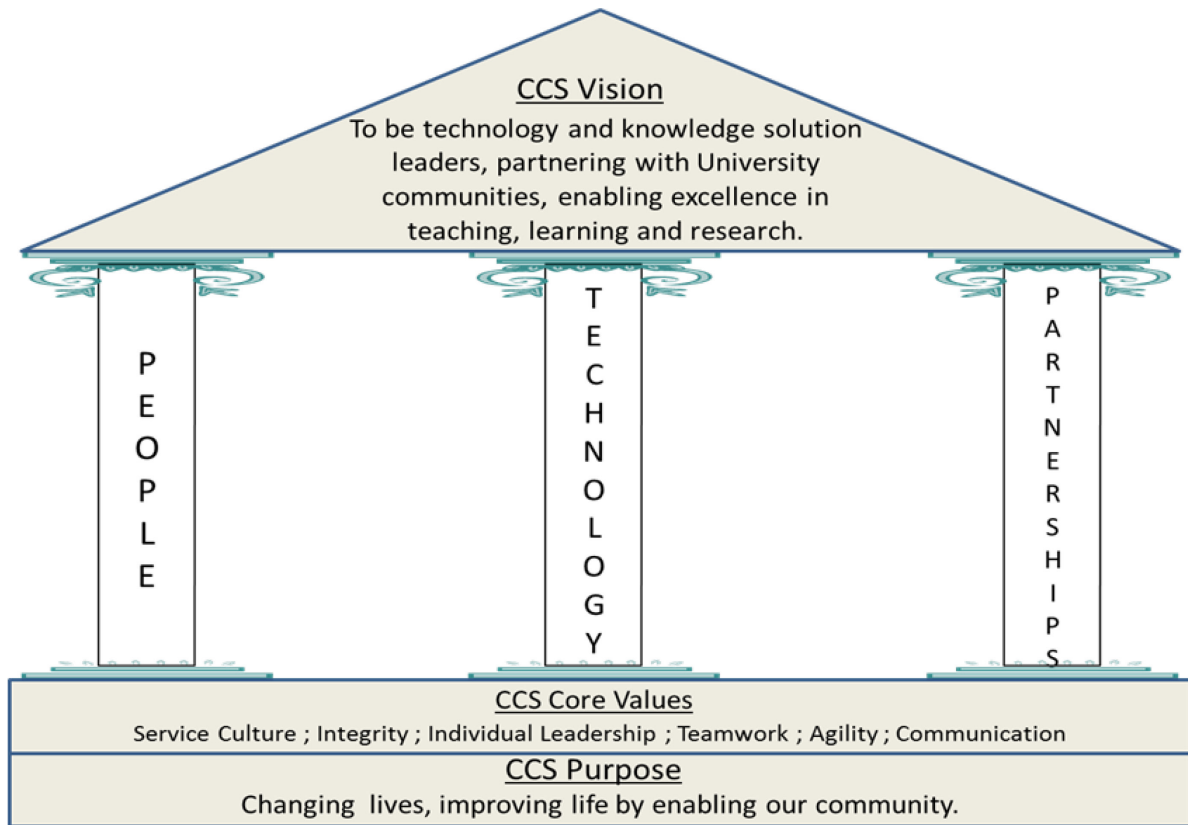
Emerging Themes

Resulting from ongoing discussions with its client partners, input from the CIO's discussion paper on Information Technology and Integrated Planning (August, 2011), and awareness of industry trends, CCS has identified a number of emerging themes that may become priorities in the next 2-3 years, influencing the continuing CCS planning process. Some themes are addressed by this year's initiatives. CCS will continue to explore these themes with its clients to develop specific initiatives.

2011-2012 Initiatives

As part of the planning process, CCS staff identified and prioritized Initiatives for the 2011-2012 year. The Initiatives include internal ones that improve the effectiveness of CCS staff and services. Initiatives that impact CCS clients are described in 2011-2012 Initiatives section below.

The CCS Planning Framework



CCS 5-Year Vision

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

CCS 3-Year Objectives

CCS relies on 3 foundational Pillars: People, Technology, and Partnerships. Within the 5 year Strategic Plan, CCS has defined specific 3-year objectives for each Pillar.

PEOPLE

Build a strength based organization and develop and align core competencies to the vision of CCS.

TECHNOLOGY

Adopt, build and integrate technologies to provide infrastructure and toolsets that empower University communities to achieve their goals.

PARTNERSHIPS

Grow CCS partnerships and share ownership of challenges, opportunities, and successes. Understand, translate and deliver effective solutions.

For more information on CCS Purpose, Core Values, Vision and Pillars, see [http://www.uoquelp.ca/ccs/sites/uoquelp.ca/ccs/files/CCS Integrated Plan - 2010-2014.pdf](http://www.uoquelp.ca/ccs/sites/uoquelp.ca/ccs/files/CCS%20Integrated%20Plan%20-%202010-2014.pdf)

2010-2011 Successes

CCS successfully completed many projects over the last year, delivering solutions based on its 2010-2011 one-year Initiatives, demonstrating capacity and competency in providing quality services and project leadership. The following internal and external initiative listings represent a highlight of some of CCS' accomplishments.

Internal Initiatives

As an outcome of its 2010/11 planning process, CCS completed internal projects that:

- strengthened core current Infrastructure and Service delivery,
- demonstrated progress on competency and skills improvement for management and staff teams, and
- resulted in CCS being better equipped to provide reliable, effective, enterprise services to University communities.

Successful internal projects included

1. **Virtualization of over 75% of the servers** in the Data Centre has resulted in significant energy and cost savings. The Virtual hosting environment provides an effective and manageable platform for CCS-managed and departmental services.
2. The **University telephone service** was upgraded with new servers and software without user impact. Telephone services at Ridgetown campus (Kemptonville already completed) and Lab Services were upgraded and integrated into the University telephone network providing local extension calling.
3. Evolving from the CCS incident management support, the **Footprints Knowledgebase** was made public, providing self-help support for CCS services and common IT problems.
4. **Network improvements** included 2,100 more network connections in new/renovated buildings. Additional **wireless network coverage**, including the University Centre, provided better access for mobile devices such as smartphones and tablets.
5. **Upgrades improved the Gryph mail and calendaring service.** Reliability of the Blackberry Enterprise Service access to mail and calendaring was significantly improved.
6. **Software Distribution, Course Evaluation, Lime Surveys and Test Scoring services** have been improved and enhanced. CCS support was improved to meet the growing use of these services.

External Initiatives

Achievement of externally focused initiatives demonstrates CCS success in working as partners with its clients to address their needs and to improve service to their clients. Significant successes include

1. The **Branch Research Data Centre**, a secure data enclave which allows local UG researchers to access Statistics Canada Master Files, was opened on the 2nd floor of the Library. CCS and 6 partners, The Library, CME, CSAHS, Department of Economics, FARE, and the Office of Research, secured funding, renovated space, and provided IT systems meeting StatsCan requirements.
2. The **Managed Desktops Service** has expanded to include support of more departments, including Alumni Affairs and Development, Environmental Health and Safety, and the Office of the VP Research.
3. **Web Solutions** developed tools and services for many clients. Projects included the EHS Bio-hazard Materials Permit tracking, Athletics Intramural Team Registration, Athletics Varsity Eligibility and Waivers information management, TA and Sessional job posting for the Office of

the Provost, and the OVC Cancer Registry.

4. **Single Sign On (SSO)** improves security and ease of use by having users login into many services using their central login credentials. This functionality was implemented on CourseLink (D2L), Pay&Pension, and the Library's ARES service. Kemptville and Ridgetown users were added to the account management framework.
5. **Telephone call handling functionality** was designed and implemented to improve services in Enrolment Services, Student Financial Services, Graduate Studies, and the OVC Companion Animal Hospital.
6. CCS continued **infrastructure renewal for many enterprise applications** provided by administrative units, including Human resources (Payroll), the Registrar's Office, and Financial Services. A new document management system (ImageNow) services Financial Services and the Registrar's Office.

Fiscal Management

CCS demonstrated a strong commitment to prudent fiscal management with its 2010-2011 budget. While we faced many challenges, stemming in part from the overall financial climate, key strategic investments and tactful responses allowed CCS to successfully overcome them. This ensured CCS commitment to service delivery remained a priority, enabling University units to advance teaching, learning and research.

Emerging Themes

Themes that drive CCS planning and priorities over the 1-, 3- and 5-year timeframes will continue to be generated from collaborative endeavours, including many cross campus partnerships, integrated support model engagements, adherence to the University of Guelph Integrated Plan and direction from the CIO office.

Consultation with Client Partners

This year CCS met with various client partners and a number of potential directional themes have been identified. The meetings included Athletics, School of Engineering, Alumni Affairs and Development, Student Housing, OVC, Library, and COLES. The following broad themes and overarching goals were identified in this year's consultations.

- *The University must begin to identify, define, and manage Institutional Data and start to take down barriers, ensuring access by all units which require the information.*
- *Several groups identified needs for Customer Relationship Management tools. We need to ensure any common purposes and synergies in these systems are identified and leveraged.*
- *There are significant opportunities for leveraging the enterprise learning management system beyond current functionality to enhance the learning community.*
- *A partnership to establish expertise in Learning Analytics was seen as necessary as we move towards a culture of assessment and performance based learning metrics.*
- *Most units are very interested in developing applications for mobile devices but identified core technology issues such as wireless network coverage, cellular coverage and mobile solution servers.*
- *Better coordination of the procurement of IT services and resources would reduce duplication of effort and provide economic efficiencies.*

- *Coordination on physical access control was identified by some units, including integration with a central identity management system for the broader University community.*
- *Ongoing and growing storage and backup needs and requirements were discussed, including the desire for additional policies and guidance towards solutions.*

Integrated Support Model

In early 2011, as a response to an identified need within Athletics, CCS engaged an external consultant to undertake a full review of IT services and support in the department of Athletics. Amongst the list of recommendations presented in the final report was a key initiative that outlined the value of a more integrated approach to central IT support between CCS and Athletics. This model values the imperative for IT systems and services to meet the core business needs of individual departments and units on campus, in addition to meeting the strategic direction of IT at the enterprise level. A strategic element in this model is the role of a Business Analyst.

As a result of this engagement, CCS developed a Business Analyst position to better understand specific business processes in departments, and to assist with strategic IT direction and project management. CCS will directly manage the Business Analysts, utilizing its strong processes around IT management and project management and ensuring there is a strong connection to enterprise services and service delivery models. The first Business Analyst is now working in Athletics. CCS has also partnered with the Office of Research to implement a Business Analyst in that unit. We are committed to the success and ongoing development of a CCS integrated support model.

Supporting the University Integrated Plan

The CCS Integrated Plan supports the next phase of University Integrated Planning by ensuring CCS objectives and initiatives support the University mission. The CCS Planning cycle includes collaboration with various University communities to enhance a plan that is appropriately integrated with the central campus vision and strategic plan. The University's Integrated Plan will in turn influence CCS planning by highlighting potential opportunities for partnerships and integrated solutions.

CCS developed its overarching 5 year plan in the 2010-2011 fiscal year, in sync with the original University integrated planning cycle, and prior to the decision to extend the central integrated planning process by an additional 2 years. Despite this shift in timing, CCS plans to continue to build on this plan with new annual initiatives. We will await the next central 5 Year Integrated Plan and will revise and re-align CCS plans as necessary to match the overarching direction of the University Integrated Plan.

CIO White Paper

CCS recognizes and supports the emerging themes identified in the White Paper, [*Office of the CIO Information Technology and Integrated Planning: A Discussion Document*](#). University discussion, feedback, and actions resulting from this Paper are influencing current CCS initiatives and will direct future CCS planning.

1. **Internationalism**

Through CCS networking Partners, such as CANARIE and ORION, CCS provides advanced networking capacity to the international Research and Education Community. Participation in international forums such as EDUCAUSE provides opportunity for CCS to engage in and support to international efforts.

2. **Information**

CCS can provide the direction and leadership in providing the technologies that support an "information strategy", including protected storage, network capacity, and access management services.

3. Financial Models

CCS is an innovator in infrastructure cost management and actively supports new “cloud” service models and is developing new integrated support solutions with campus partners.

4. Collaboration

CCS has delivered Gryph mail and calendar for basic communication and explores other collaboration technologies with campus partners. Collaboration beyond campus requires widely utilized services and support of common standards.

5. Analytics to Support Student Learning

With a broad understanding of student information and learning systems, CCS can support the development of tools to access and analyse information that would support a University program to understand and manage elements that lead to effecting learning.

6. Integrated IT Support Model

CCS is actively developing a integrated support model (see *Integrated Support Model* above)

7. Mobility

As an integrated part of the University network, the wireless network provides cost-effective connectivity to support the rapid move to mobile devices. CCS can provide direction and support to effectively integrate mobile-aware functionality into new and existing University services.

8. Media

The CCS High Speed network provides the communications capability for fast access to rich media and CCS-managed storage content management services can reliably preserve this content.

9. Inter-Institutional Collaboration

By continuing to maintain working relationships with IT units at other universities, CCS can provide effective technical leadership and support for inter-university projects to leverage common procurement and deliver common infrastructure and services. In working with partners such as CANARIE and ORION, CCS demonstrates value in inter-institutional collaboration.

10. Canadian Digital Infrastructure

Having provided early leadership in Canadian higher education networking, CCS continues to support dialogue in the Canadian higher education community through CUCCIO (Canadian University Council of CIOs), about a Canadian Digital infrastructure, incorporating networking, computation, and storage infrastructure supporting a broad range of services for information sharing, high performance computation, data visualization, research publishing and many other applications.

2011-2012 One-Year Initiatives

As part of the ongoing planning process, CCS teams identified and prioritized a list of Initiatives for the 2011-2012 year. Initiatives that directly impact CCS clients and end users are described in the list of 2011-2012 Initiatives below.

These initiatives support the key objectives of the CCS Foundational Pillars: PEOPLE, TECHNOLOGY, PARTNERSHIPS. Although initiatives may contribute to multiple objectives, they are listed only once.

PEOPLE

Strength Discovery

- In order to align the strengths of its staff with the required skills and knowledge, CCS is developing an organizational framework that enables the broad adoption of a Strength-Based Organization. The framework establishes a common lexicon within CCS and improves the CCS talent management and performance development processes.

Strength Building

In order to align its strengths to areas of opportunity, CCS ensures that staff members have the required skills.

- CCS will continue its efforts to increase the value and adoption of its Project Management Framework (PMF) by focusing on improved tools and scorecards.
- CCS will continue to undertake a self-assessment of the organizational maturity in four critical dimensions: process, people, technology and business management. The assessment will lead to a roadmap for improving the organizational management and capacity in CCS.
- CCS will continue to provide robust training in self-development, team building, leadership skills, business analysis and technical acumen through
 - support and use of UG's HR Learning and Development Opportunities,
 - continued CCS High Performing Teams training,
 - Business Analysis improvement, and
 - Customer Service Best Practices
- To build technical competence in areas of strategic importance, CCS will continue to provide training for its team members. Focus will be provided in key areas: Virtualization, Operating Systems, Identity, Federation and Access Management, Enterprise Databases (Oracle, MS-SQL, MySQL), Enterprise Storage, and Enterprise Content Management (Image Now).
- CCS will continue its efforts to formalize development paths for its personnel. This will include ongoing effort to increase appropriate opportunities to prepare CCS staff members for talent management efforts within the context of succession planning.

Commitment to One Another

CCS understands the value of knowledge, and the value of sharing knowledge. CCS values its people and their desire to collaborate on ideas and solutions and to share knowledge accumulated through practice and experience. In the 2010 Integrated Plan, CCS committed to expand its "knowledge delivery" throughout CCS teams and individuals and to the rest of the IT and general University community.

- CCS will expand "knowledge delivery" between teams and individuals, both internal and external to CCS. CCS will utilize existing web technologies (Footprints knowledge base, community forums, wikis, and collaboration services) in order for its CCS Clusters (teams) to share knowledge internally (cross-training, enhanced support avenues) and throughout University communities. CCS will utilize the strengths of all CCS employees and engage more deliberately across clusters to enhance its services (analysis, design, development, testing, documentation, quality assurance, training, etc).

An additional outcome of the CCS talent development process will be a formal process to attract, retain, engage, and develop individuals with the right skills, knowledge, and abilities to meet the current and future needs of the University of Guelph.

- CCS will continue to plan for and implement standardized training, hiring and orientation processes.

Measuring CCS Effectiveness

To continuously improve its effectiveness, CCS monitors and reports on its ability to complete projects successfully and to provide quality user-focused services.

- To continuously improve CCS service delivery, CCS will implement a customer feedback survey as part of its incident management system, Footprints.
- Building on the success of a pilot implementation, CCS will define, set up, monitor, report, and act on various key service performance indicators (KPIs) for service delivery.

TECHNOLOGY

Commitment to Accessibility

CCS supports the University's implementation of the *Accessibility for Ontarians with Disabilities Act, 2005* (AODA).

- CCS continues to support the AODA Customer Service standard through compliance, by ensuring all staff having completed the AODA customer service training.
- CCS has and will continue to proactively monitor the AODA Information and Communications standard currently being developed.

Self-Service

CCS continues to enhance the University community's methods for utilizing CCS services. In many cases, providing a "self-service" mechanism meets those needs.

- To empower University communities, CCS will create an Online Service Catalogue, providing a single, comprehensive information source for all CCS services.
- CCS will improve access to University departments, services and staff by implementing a speech-enabled Auto Attendant that will directly route internal and external callers when they speak the name of a department or person.

Listening to CCS Partners

CCS understands that technology changes rapidly and is committed to working with its client partners to improve and upgrade systems or choose new technology solutions to meet campus requirements.

Virtual desktops are seen as an effective method of centralizing administration of the client computing environment and extending the life of desktop computer hardware while providing a consistent, mobile-accessible computing experience.

- CCS will partner with the School of Engineering to implement a student lab based on virtual desktop technology for the Fall 2011/Winter 2012 semesters.

Protection of the University's digital assets is a critical enterprise responsibility. Common practices, reliable storage, and off-site backups can be improved to ensure digital assets are cost effectively and securely protected.

- CCS will refresh and expand its information backup and recovery service offering and accommodate requirements for archival solutions. Partnerships with other institutions to provide a shared solution will be explored.

Document Management is a critical function in many parts of the University. A common enterprise-level document management system will provide a cost effective solution.

- CCS will centralize support for ImageNow, the document management solution implemented by Financial Services and the Office of Registrarial Services. This will enable the adoption of the solution by other units, such as Alumni Affairs and Development, who share a common need.

Communication and Collaboration

Continuing its strategy to enhance collaboration services in support of campus academic, research and administrative initiatives, CCS will build comprehensive IT service delivery models by accessing cost effective hosting opportunities beyond the University infrastructure.

- CCS will work with its vendor and hosting partners, Zimbra and Scalar, to migrate Gryph Mail to a cloud-based service to improve performance and capacity while avoiding capital investments and minimizing internal support resources.

Extending the wireless network to student residences will provide improved access for the students with mobile devices.

- In partnership with Student Housing, CCS will pilot Wi-Fi coverage in Johnston Hall's residence rooms. The pilot will provide an informed assessment of the delivery of an enhanced wireless service for student residences and the resulting recommendation will include an implementation timeline for the remaining residences.

Mobile phones are an important communications tool for many University staff and faculty. Better integration of cell phones with the University telephone system will enhance their effectiveness.

- CCS will pilot a mobile communications project in the Fall 2011 and Winter 2012 that will leverage cell phones and the existing University wireless infrastructure to evaluate the appearance of University extensions on University cell phones.

Continuing CCS Initiatives

CCS continues to deliver on many strategic offerings, including the recently enhanced, robust storage architecture, its client focused Knowledge Base, expanded single sign on implementations, and more. The provision of effective services involves continual improvement and enhancements.

- CCS will continue to improve its processes for enhancing the delivery of CCS services and infrastructure. CCS will continue to improve its Change Management processes.
- CCS will complete a multi-year initiative to upgrade the University network infrastructure to 10 gigabit speeds. In addition we will work with its Research & Education network provider, ORION, to implement a 10G connection to provincial, national and international research networks.
- CCS will provide capacity in the computing infrastructure to expand its private cloud (virtual servers and storage) service offering to University communities. CCS will achieve this through the implementation of monitoring, administration and capacity planning tools in the CCS Managed Server environment.

The continued world-wide growth in the number of networked devices is exhausting the availability of internet device addresses used to connect these devices to the internet. The solution involves the adoption of new network protocols (IPv6) with a very large address space. This transition involves the massive coordination of changes to the entire world-wide internet over several years. Conversion of the University network, computer systems and applications must be completed in concert with changes in both the commercial internet and the Research and Education advanced internet.

- In consultation with its University partners and service providers, CCS will develop, test, and communicate its multi-year IPv6 transition plan.

CCS provides an enterprise web hosting platform serving many University units. To maintain an effective service, CCS continues to upgrade and enhance this hosting environment.

- Through a series of client engagements and vendor consultations/research, CCS will work to establish the service roadmap for the University web hosting environment - both for organizational and personal accounts.

Single Sign On (SSO) is the mechanism for members of University communities to use their Central Login ID to log in one time only to access to multiple online applications. CCS is expanding SSO-enabled University applications to provide ease of use and improved security.

- In the coming year, CCS will make SSO available for CCS-hosted Drupal 7.0 websites. Clients upgrading to Drupal 7 will be able to take advantage of SSO.

PARTNERSHIPS

Adding Extra Value

CCS values its partners and understands that the needs of University communities are varied. Some areas are adequately supported with “turnkey” or “transactional” services. Others desire greater input and a forum where all parties can work together to understand the business challenges and collectively design solutions.

- Working with the Office of the Registrar, CCS will provide students with the ability to enhance their personal productivity through the use of its institutional productivity suite, Gryph Mail. CCS will develop a solution where Student’s personal Gryph Mail calendars will be populated with their course schedules. Students will also be able to load their course schedule from Gryph Mail onto their phone and other personal devices.
- In partnership with the department of Athletics and the Office of Research, CCS will establish two shared Business Analyst positions. These positions will create the foundation for a new integrated support model which couples the needs of the business with IT capability.
- CCS will work to support HR as a partner in the HR Business Process Review which is planned for the 2011/12 year.
- CCS will improve its University partners’ ability to access and leverage the student information system data through the adoption of an open, extensible student system architecture, achieved through a series of system changes starting in 2011/12.
- CCS will enhance its Geographic Information Systems (GIS) support by partnering with departments across campus, including Geography and Population Medicine to provide access to University expertise in GIS.
- In a shared resource arrangement with the COLES (Centre for Open Learning and Educational Support), CCS will undertake an extensive review of CCS current front line support services in order to provide an IT Service Management Roadmap which will provide clear direction on how we can continue to advance and enhance this service area.
- Under the direction of the Provost and in conjunction with partners from other units and perhaps other universities, CCS will select and implement an electronic CV system that will serve as a common repository for faculty and researcher information. As part of the decision making process for this project, CCS will monitor the progress of a Canadian universities electronic CV project led by the Canadian Council of CIOs (CUCCIO).
- CCS will continue to support a collaborative initiative to assess an enterprise class Event Registration system to effectively manage the wide variety of University events including training sessions, conferences, student activities, and volunteer events, replacing many ad hoc and

customized solutions. A business plan will be developed and presented to senior University staff with the expectation that funding can be allocated during the 2012-2013 budget year.

- CCS will contribute to a joint CCS/Library Green Committee to integrate green initiatives into its service culture, to bring a green presence to the Library and CCS, and to offer environmental Information and Technology (IT) solutions to the University community. The joint CCS/Library Green Committee will ensure Library and CCS goals are in parallel with those of the Sustainability Office and the Presidential Task Force on Sustainability.

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