

# Innovative Ideas

Improving Efficiency at Ontario Universities

A report by the Council of Ontario Universities, 2011

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# Innovative Ideas

## Improving Efficiency at Ontario Universities

Ontario universities are committed to the efficient use of public funds, and continually seek opportunities to streamline administrative processes, enhance productivity and use fewer resources in order to ensure that every public dollar is maximized for the benefit of the high quality programs we provide to students. This report is designed to showcase examples of recent efforts by universities to manage their funding efficiently and effectively, and it will form the foundation for future discussions of best practices within universities and the Broader Public Sector (BPS). The report is organized according to five main categories: **Streamlining Operational Processes, Innovation and Partnerships, Managing Facilities Efficiently, Making Smart Purchasing Decisions** and **Planning for Safety**. Each speaks to how institutions are finding ways to reduce spending without sacrificing their level of service to students, staff and their local communities.

## Streamlining Operational Processes

Collectively and individually, universities are finding more productive ways to operate and enhance their administrative processes. An important example of a successful collective initiative is the Ontario Universities' Application Centre (OUAC, [www.ouac.on.ca](http://www.ouac.on.ca)), established in 1971 to process all university undergraduate applications. Ongoing modernization of OUAC systems is allowing the application centre to handle increasing volumes of applications for undergraduate and professional programs (including law, medicine, teacher education and rehabilitation), and take on new responsibilities for processing graduate applications for some institutions. Individual institutions have numerous operational initiatives in progress aimed at becoming more efficient.



The Furniture and Equipment Recycling Program was developed at the University of Western Ontario to collect and redistribute unused furniture and equipment to members of the campus community, with estimated savings of \$44,000-\$88,000.

### **Carleton University: Continuous Improvement Initiatives – Benchmarking and Lean Transformation Projects**

Carleton has introduced a series of Benchmarking and Lean Transformation projects with the goal of identifying opportunities for improvement and re-engineering processes to make them more efficient and easier for students. Improvements have already been made in processing admissions, residence applications and student fees. Benchmarking and strengthened university processes/services have led to a better understanding of roles and responsibilities, improved morale and teamwork, staff empowerment and a keener interest in best practices.



#### **Efficiencies Gained:**

- The **Student Residence Application Project** improved the cycle time to respond to and accept resident applications by three months; increased residence revenue by \$400,000; reduced vacancy rates for residence from 3.5 per cent to under 1 per cent
- The **Student Fees Project** increased the percentage of total transactions processed electronically by 18 per cent; reduced the number of refunds issued by 50 per cent; completely eliminated line-ups at the Business Office
- The **Applications for Admission Project** reduced lead time from receipt of an application to when a file is created by 75 per cent; reduced time spent looking for files and documents by 90 per cent; reduced time for transfer credit to be assigned to student records by 25 per cent (with further reductions expected)
- The **Graphic Services Project** increased productivity by 10 per cent; stopped revenue leakage; improved communication in the department; increased morale; led to better customer service
- The improved work processes, products and services have enhanced customer service and further improved the student experience

## **Electronic Reporting**

Ontario universities are accountable to the Ontario Government for the funds that they receive. Part of that accountability process involves over 50 separate categories of annual reports to the Ontario Ministry of Training, Colleges and Universities alone. To make part of that process more efficient and effective, COU and the Council of Finance Officers – Universities of Ontario (COFO-UO) developed a new website for online financial reporting in 2010. The site provides a more convenient and user-friendly interface, automates reports and surveys, and offers the option to produce customized reports. These improvements will lead to increased transparency of university financial information and allow for access to data in a timely manner. The following are further examples where universities are implementing technologies, simplifying reporting requirements and managing documents to streamline core business processes.

### **McMaster University: Green IT – eReports**

As part of its *Inspiring Transformation* initiative, designed to enhance service, simplify processes, leverage technology and save money, McMaster developed “eReports,” an electronic web-based delivery of current and archived financial reporting that ensures secure data access. Electronic reporting has consistently resulted in faster delivery times and simultaneous accessibility to remote locations and to multiple users. Multiple formats can be more readily developed and electronically searched, sorted and manipulated. This initiative has led to time and energy savings, and environmental benefits.

#### **Efficiencies Gained:**

- Annual paper use reduction of 85 per cent
- Total annual cost reductions of \$126,500, resulting from operational changes
- Additional annual cost reductions of \$113,000, resulting from avoided outsourced printing costs



### **Ryerson University:** **Imaging, Optical Character Recognition and Document Management**

Ryerson developed a highly efficient document management system that introduced new business processes, featuring state-of-the-art systems capabilities that support accountability and transparency requirements. The new system eliminated several time-consuming steps associated with manual invoice entry, and allowed for faster transaction processing and the ability to process financial transactions on campus or remotely.

#### **Efficiencies Gained:**

- Reduction from six (in 2007) to 4.5 (in 2010-11) full-time staff dedicated to keying in incoming invoices, despite growing volume of documents
- Existing staff were able to absorb an 8 per cent increase in volume
- Reduction in invoice processing costs by 14 per cent, with further reductions anticipated
- Freeing up of 230 square feet of storage space

## The University of Western Ontario: Challenge the Process – Procure to Pay

The “Procure-to-Pay” initiative was part of Western’s *Challenge the Process* exercise. The project was designed to define, measure and improve the business processes that encompass all aspects of engaging a vendor. Process improvements in this area have now become the standard way of doing business at Western. They offer a learning opportunity for staff to build skills related to process improvements and engage them in a change management exercise.



### Efficiencies Gained:

- Selection of a new VISA provider with better rebates and a more simplified reconciliation process for end users, resulting in time savings of approximately 50 per cent
- Corporate Travel Cards migrated to the same provider as the P-Card, attracting rebates on corporate travel (no rebate was previously received); increased accountability with higher compliance rates for P-Card reconciliations and approvals, increased P-Card use from 11 per cent of transactions to 35 per cent and an increase of 575 per cent in the total monthly “spend,” with corresponding reductions in purchase order and invoice processing
- Increased usage of the Online Travel Expense System by UWO employees (approximately 85 per cent utilization by faculty and staff) and streamlined reporting of airline and rail travel resulted in a reduction of reconciliation time by 30 hours per month
- A 100 per cent increase in the data entry capacity per person and completion of year-end invoice processing with reduced staff and no overtime
- Elimination of late payments to vendors (averaging 30 business days), improving vendor relations
- 50 per cent reduction in the number of vendor payments by cheque, through the use of Electronic Funds Transfer (EFT), with almost 1,200 vendors moved to EFT for their default payment option
- 25 per cent reduction in the number of purchase orders and 35 per cent reduction in the number of invoices processed annually as a result of efficiencies gained with the project

## Innovation and Partnerships

Ontario universities have an important role to play in community development and local economic initiatives by acting as employers, service hosts and venue providers for citizen engagement. Universities seek to optimize the use of their space, expertise and other resources, by finding new ways to work collectively with other community organizations and generate revenues. This allows the sector to leverage public funding for the benefit of its students, staff and the community as a whole. For example, law schools often operate legal services for the local population, many faculties offer public lectures that present learning opportunities to the community and university space is often used to host activities related to elections, charitable causes, the arts and professional associations.



## Sharing Space

To meet the challenges of growing student populations and old buildings that are not always appropriate for today's learning needs, universities are looking for innovative ways to acquire and manage new space. This includes working with the private sector, implementing new funding models and collaborating with other community partners. There are great examples of collaboration on facilities between universities and colleges (and universities and local communities) that help to leverage capital by sharing space. Further collaboration with communities to establish multi-purpose or shared-use facilities generates additional ancillary revenues to improve return on investments.

### **Ryerson University: AMC Entertainment Partnership**

Ryerson formed an innovative partnership with AMC Entertainment to acquire additional teaching space for 250 classes (about 11,000 students) without capital costs. In exchange for air rights over its downtown parking garage, Ryerson received access to 12 large cinemas that they will use as lecture halls from 8 a.m. to 1 p.m., Monday to Friday, for 20 years. The Ryerson-AMC partnership addresses the university's acute need for lecture spaces to accommodate class sizes of 125-285 students, for which there has been a 37.5 per cent increase in demand since 2007. As of fall 2010, the AMC facilities have met 22 per cent of this demand.

#### **Efficiencies Gained:**

- Enrolment growth without university capital investments in new buildings or building maintenance
- Reduced teaching costs through larger class sizes
- An improved reputation for Ryerson as a neighbourhood revitalization partner




## **Trent University: Revitalization and Expansion of the Trent Athletics Centre**

Due to limited resources and escalating costs, Trent could not afford to expand its athletic facilities to meet the needs of a growing student population (2,000 students in 1977 to 7,000 in 2010) and the community. By conducting extensive consultations with university students, staff, faculty, the Board and the community at large, Trent was successful in gaining student support and obtaining repayable loans, totalling \$18.6 million, for the construction of a revitalized outdoor stadium and expansion/revitalization of the Athletics Centre. The new Athletics Centre has been a resounding success, having a positive impact on student recruitment and retention, safety, sport development, community use and revenue generation.

### **Efficiencies Gained:**

- The ancillary budget of the Athletics operation at Trent has expanded from \$2 million to \$3 million
- The Athletics operations will return an additional \$66,000 in new revenues annually to the university, and expand athletic services by 1/3 to the university and the entire community
- There has been an exponential increase of student, staff, faculty and community use of facilities
- The Athletics Centre is now the highlight of university recruitment tours and is the biggest and best community sport and recreation centre in the region
- The City wants to be associated with the facility, and its investment in two new artificial grass playing fields is currently being negotiated
- The facility is the only LEED-certified building on campus





**University of Ontario Institute of  
Technology (UOIT):  
Regent Theatre**

UOIT received the Regent Theatre in downtown Oshawa through a private donation in the fall of 2009. The facility required approximately \$2.5 million worth of renovations and has been repurposed as a state-of-the-art, dual-use facility with wireless access and power at every seat. During the academic year, the Regent is used exclusively as a lecture theatre Monday to Wednesday from 8 a.m. to 10 p.m., and Thursday and Friday from 8 a.m. to 2 p.m. On Thursday and Friday afternoons and on the weekend, UOIT rents the theatre to community members in order to generate revenue for the university. The Regent gives UOIT the flexibility to move to larger class sizes in a modern venue. Through the use of the facility as a performance house, UOIT can recover its investment over time.

**Efficiencies Gained:**

- Enrolment growth without significant university capital investments in new buildings or building maintenance costs; revenues are anticipated to be \$300,000-400,000 per year with a payback period of 7-10 years
- Reduced teaching costs through larger class sizes
- Enhanced reputation as a partner in Oshawa's downtown revitalization
- Community goodwill generated with the restoration of a well-known landmark property in downtown Oshawa that now bears the UOIT name





## Innovation through Information Technology

Information technology (IT) is a tool for universities to administer operations more efficiently and share information between institutions. For example, the Ontario Council of University Libraries (OCUL, [www.ocul.on.ca](http://www.ocul.on.ca)) is a consortium of Ontario's 21 university libraries, whose strength lies in maximizing collective expertise and resources for the benefit of all institutions. Scholars Portal, one of OCUL's mainstays, is an online research tool for faculty and students across the province, and gets about eight million visits a year. Here are some other ways that our universities have implemented new IT solutions without major implications to their operating budgets.

### **Nipissing University: Partnership with Apple Canada**

Nipissing formed a partnership with Apple Canada to supply computers at a preferential price point to students in the Bachelor of Education Consecutive Education laptop program. New teachers were provided with the latest technology and applications, so they could become familiar with utilizing it to teach youth in a classroom environment. To support their students, Nipissing staff members were fully trained as certified Apple service providers. With the expanded use of Apple products on campus, Nipissing's Technology Services Department was able to open an Apple Service Centre that is available to the public for future revenue generation.

#### **Efficiencies Gained:**

- Secured service agreements at the Apple Service Centre with Canadore College and local school boards that generate additional revenues for the university
- \$10,000 in revenues generated in the first eight months of the project, even though the Centre is not yet open to the public and has not been advertised
- Additional revenue from the Service Centre is used to enhance Nipissing's technology and offset program costs



By extending its print shop clientele beyond campus, Nipissing University is able to offer printing services to the community and generate additional revenue. Nipissing and Canadore College have also collaborated to provide shared services to generate financial, operational and staffing efficiencies in a number of other areas.



## University of Windsor:

### Key Stakeholder in the Windsor-Essex Smart Community


Under the umbrella of the Windsor-Essex County Smart Community initiative, the University and Windsor-Essex Region received \$10.6 million in funding for fibre optic infrastructure from both federal and provincial government agencies. Laying fibre optic infrastructure has helped better connect the region, especially in rural areas that did not have high-speed Internet connections, and join higher education institutions, school boards, government departments, businesses and hospitals, enabling research and collaboration. Group purchasing has made the procurement of hardware, software, services and training more affordable. The Windsor-Essex County Smart Community was recently identified as one of the top seven smart regions in the world by the Intelligent Community Forum think tank. Estimates suggest that the total direct and indirect benefits to the region from this project are more than \$19 million.

### Efficiencies Gained:

- Preferential rates negotiated for smart phones, BlackBerry and wireless phone services have resulted in savings of \$30,000 per year; preferential rates negotiated for home Internet access save users \$5 per month and anti-virus software for home computers save users \$50 per month
- By conducting advanced training classes for member organizations together, classes are large enough to be held locally so travel expenses can be avoided, resulting in savings of \$750 per person, per day
- Video conferencing has been set up between the regional hospitals, the University of Windsor medical school and the Schulich School of Medicine in London
- Access to several Internet Service Providers to maintain connectivity in case of carrier issues and minimize down time

## Managing Facilities Efficiently

Managing infrastructure efficiently is critical for universities given its impact on the institution's ability to fulfill its teaching and research mission, and contribute to economic and community development. Aging buildings, teaching with technology, renovation restrictions for heritage buildings and improving accessibility for people with disabilities, all pose a challenge for universities in managing space. However, institutions continue to seek creative solutions to address space requirements and manage facilities efficiently, in order to maximize the available space for student and faculty needs.



Universities seek to optimize their resources, in order to ensure that every public dollar is maximized for the benefit of students,

## Space Management

COU has a long history of working to improve university space management. Its space standards, developed over 30 years ago to determine the sufficiency of available space to meet the university's teaching and research needs, are widely referenced as a best practice in university space management, and are used in many countries.

The university sector collaborates on an annual Facilities Condition Assessment Program (FCAP) report for submission to the Ontario government. The report catalogues the sector's infrastructure requirements associated with deferred maintenance, system and equipment renewal, and the required funding for the adaptation and ongoing maintenance of university infrastructure. By negotiating as a collective, the university sector obtained an excellent rate for the use of a web-based capital planning and management software system, produced by Vanderweil Facilities Advisors (VFA) Inc., to track data related to facilities' condition.



## University of Toronto:

### Setting a New Standard for Office Space

Space assigned to the Facilities and Services (FS) and Real Estate Operations (REO) departments at U of T was expropriated for academic use in 2009, and staff members were moved to a new location at 255 McCaul Street with 10 per cent less space. The challenge was to address the space and design issues within a smaller overall square footage, while maintaining staff productivity and addressing the perception that the two departments were being moved to inferior space. The project successfully addressed these issues, as well as sustainability from an environmental, social and economic perspective through the LEED program.

#### Efficiencies Gained:

- New office standard that has been transformative and addresses sustainability
- Improved staff morale, communication, collaboration and teamwork, while achieving 25 per cent improved space utilization compared to the old office standard
- Through the LEED gold certification process, U of T has achieved better energy efficiency, saved operating dollars and reduced its overall environmental footprint; being U of T's first LEED Gold Certified Project also gave FS/REO a chance to affect a wider audience, both within and outside the University; other U of T departments have followed their lead and adopted the new office space standard
- The list of economic efficiencies includes electrical savings of 15 per cent, estimated water savings of 62 per cent through capture and reuse of rain water and efficient washroom fixtures, and real estate cost reduction by \$45,000 through creative interior office design that allows for more "we" space as opposed to "I" space



### **York University:** **Sherman Health Science Research Centre**

In late 2006, a proposal was made to York's Board of Governors to fund the renovation of an older, underutilized building, in order to increase York's capacity in health science research. The Sherman Health Science Research Centre, which opened in February 2010, was re-purposed with an approach that was cost-conscious, agile and an environmentally responsible solution to the University's evolving needs.

#### **Efficiencies Gained:**

- The construction component of the project was completed in just over 12 months at a cost of under \$2,400 per square metre, compared to approximately \$4,800 for a new health or science building
- The project eliminated over \$2 million in deferred maintenance required to renew the old arena
- Almost 50,000 net assignable square feet of research space was created through the \$11.5 million project (compared to the estimated cost of \$21-22 million for an equivalent new building)
- The pre-existing arena ice pad was repurposed as a landscaping feature, while also providing uneven terrain for testing robots in research
- The new Centre helps York attract the best faculty and students, improve its research capacity and maximize its potential as a university community; two new NSERC grants totalling \$596,000 (including equipment) have already been received for faculty working at the centre, with decisions pending on additional applications

### **Carleton University:** **Classroom Demand and Utilization**

To improve classroom space utilization, Carleton has implemented new technologies, increased centralized and co-ordinated scheduling, and added a variety of other measures to deal with growing demand for classroom space, based on a series of Classroom Demand and Utilization studies conducted over the last decade. With the implementation of new scheduling software, co-ordinated timetabling, establishment of utilization targets and an investment of \$2.9 million for classroom upgrades – resulting in physical improvements to 69 classrooms from 2000 to 2010 – Carleton is better positioned to manage its classrooms. A Co-ordinated Timetabling project resulted in improved matches between available classroom/lab space, course size and preferred teaching space; reduced need for frequent schedule changes; accommodation of instructor requirements for teaching needs; and a flexible/balanced schedule for students.

#### **Efficiencies Gained:**

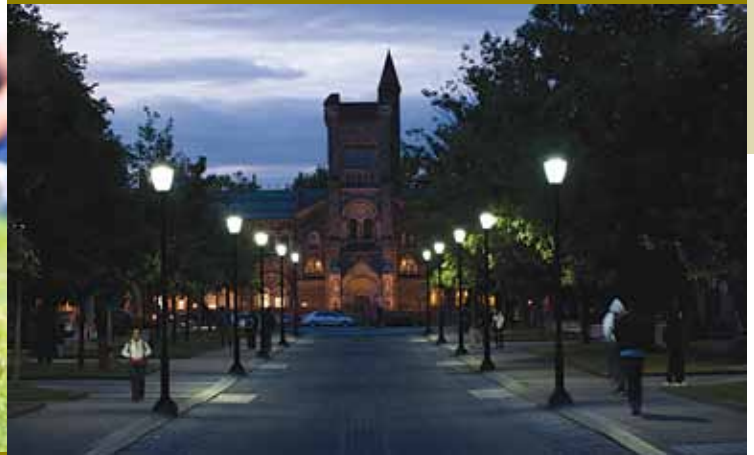
- Improvement in classroom space utilization from 45 per cent (20 hrs/week) in 1999 to 80 per cent (36 hrs/week) in 2010
- Classrooms are better equipped electronically (5 rooms in 1999 to 106 rooms in 2011); are more accessible; have improved architectural, building system and acoustic environments; and have better quality furniture and layouts that adapt to evolving teaching pedagogies
- Instructors are better equipped to deliver lectures and overall student experience has improved



After realizing savings with the conversion of its exit lighting to LED, Algoma University has begun replacing other areas of lighting and estimates energy consumption will decrease by up to 30 per cent.

## Energy and Utilities

Improving the environmental sustainability of facilities helps universities make their operations more efficient and acquire savings over time despite a higher upfront investment. According to the 2009-10 data, utility expenditures in the sector represent 3 per cent of total operating budgets, or \$189 million. As energy prices rise, potential savings resulting from the efficient use of facilities and the fewer resources they consume continue to increase. In 2009, Ontario universities pledged to assist in finding solutions to the challenges of environmental sustainability. Since that time, two annual reports have been produced that illustrate how universities are implementing initiatives to reduce resource consumption. The following are examples of how the sector is implementing its commitment to simultaneously generate environmental and economic benefits.



### University of Toronto: Exterior Light Conversion

Occupying 132 acres of land with substantial exterior lighting, some of it dating back to 1919, U of T embarked on a program in 2010 to replace 2,000 high intensity discharge (HID) exterior lighting fixtures with more efficient light-emitting diode (LED) and induction lamps on its St. George campus. The move to more energy-efficient lighting has resulted in reduced maintenance costs; fewer burnouts and dark spots that provide a safer environment for students and staff; environmental benefits from lower consumption; and decreased greenhouse gas emissions.

#### Efficiencies Gained:

- Induction lamps have a 100,000-hour longevity compared to the 4,000-hour lifespan of conventional bulbs, so they last for approximately 20 years, versus 1.5-2 years for metal halide lamps
- Longer life spans result in reduced labour costs associated with changing bulbs, as well as savings on electricity
- The annualized saving for the St. George campus once the 2,000 lights are replaced by energy efficient induction lights will be \$400,000

## **York University:** **YORKWISE Energy Management Program**

York University initiated the YORKWISE Energy Management Program in 2006 investing \$40 million over five years (with an eight-year payback period) in plant and building system renewal and retrofit projects. The program has provided funding for York to renew lighting and HVAC systems in buildings, as well as steam and water distribution systems, many of which were old and costly to operate. The renewals made possible by the program reduced failures that necessitated emergency maintenance; vastly improved the quality of learning and working environments; reduced York's environmental footprint and operating costs; and, mitigated the impact of future energy cost increases, while enhancing and renewing the infrastructure in challenging economic times.

### **Efficiencies Gained:**

- At the end of February 2011, 60 per cent of the \$40 million project funds had been spent and about \$3.5 million in annual savings had been realized
- Lighting systems have been consolidated and re-engineered to remove approximately 10,000 lighting ballasts and more than 30,000 fixtures have been retrofitted with more efficient components
- Incentives have been pursued to help support the project; the goal was to generate \$1.5 million in incentive funding; to date, \$2.1 million has been received, with an additional \$330,000 in applications in progress
- Greenhouse gas emissions and energy consumption have already been reduced by over 20 per cent





Carleton University has piloted a benchmarking project to assess the environmental performance of facilities and identify opportunities for cost savings in utilities. Data can be used to measure and track savings in costs and resource consumption, and offer recommendations based on return on investment and ease of implementation.

### **University of Ottawa: Eco Prosperity Program**

The University of Ottawa has embarked on an \$18 million Eco Prosperity Program that targets large-scale renovation projects aimed at reducing energy costs and increasing the efficiency of campus facilities. These projects will generate annual savings of more than \$5 million and have a payback period ranging from one to 10 years. The Eco Prosperity Program has helped the university improve the quality of its service, environment and working conditions.

#### **Efficiencies Gained:**

- Capital investments of just under \$18 million will result in approximately \$5 million in annual savings
- There was a reduction in total energy consumption by nearly 10 per cent from 2008 to 2010, and total annual energy consumption reduction of 25 per cent by 2015, despite significant growth
- Other initiatives resulting from the project aim to reduce purchases of furniture and paper, decrease waste, and develop eco-efficient practices across the campus, including the sports complex

### **University of Windsor: Energy Upgrade Accounts**

The University of Windsor has aggregated recently received rebates from energy-saving initiatives, totalling over \$120,000, into one account that allows for other, smaller energy projects to be funded. The combined result of these projects has led to a levelling off or decrease in energy usage, even with increased demand. The university was awarded the GreenSTAR Award by Enwin Utilities in May 2010. This award recognized the university's accomplishments related to implementing energy audits and improvements, lighting replacements and upgrades, water reduction and retrofits, and internal recycling programs. These initiatives helped reduce operating costs with relatively short payback periods.

#### **Efficiencies Gained:**

- Leddy Library: re-lamping with T8 technology and motion sensors between the journal stacks  
Cost – \$31,000, Payback 2.2 years
- Odette School of Business Classroom Project: re-lamping and lighting controls  
Cost – \$33,000, Payback 5.9 years
- St. Denis Fieldhouse: re-lamping and replacement of lighting and controls  
Cost – \$124,000, Payback 7.1 years
- Faculty of Education: replacement of gymnasium lighting  
Cost – \$15,000, Payback 5 years
- Service tunnels across campus: replacement of fixtures and lights  
Cost – \$37,000, Payback 2.2 years
- Building exit signs: replacement with photo luminescent fixtures  
Cost – \$30,000, Payback 6 years



With capital costs financed by the Sault Ste. Marie Public Utilities Commission (PUC), Algoma University has installed solar panels on its George Leach Centre that will produce 158KW of electricity to be sold back to the grid. Annual income is projected to be \$180,000, with a 15 per cent profit margin shared between PUC and Algoma.

### **The University of Western Ontario: Addressing Energy Needs**

During the winter of 2011, Western was adversely affected by limits on the amount of natural gas that the main steam plant was able to consume, resulting from a capacity issue with the local utility. The University worked with the utility to increase the size of the incoming pipeline and substation, thus increasing the amount of natural gas available to the campus and reducing the need to burn more expensive oil during these periods. With increasing pressure to reduce consumption and costs, the new power plant and pipeline is quickly becoming a technological vanguard for the future of university operations.


#### **Efficiencies Gained:**

- Light fuel oil generates 70.48 kg of CO<sub>2</sub> equivalent per gigajoule produced, compared to 49.33 kg from natural gas (a difference of about 43 per cent), meaning that the transition from oil to natural gas as a fuel source has significant environmental benefits
- The price of oil on the current market is highly volatile, but on average can cost about twice as much as the equivalent amount of natural gas; in an average winter, Western's main boilers would normally have used about 400,000 litres of oil to compensate for the higher steam loads; assuming a cost of about \$1/litre for oil, the payback for the delivery improvement of increased quantities of natural gas was realized within a few winter months; the installation of the new plant and pipeline was \$140,000 and payback in the first winter was estimated between \$150,000 and \$200,000

### **Laurentian University: Geothermal Building Heating and Cooling**

In spring 2011, Laurentian University completed construction of its Vale Inco Living with Lakes Centre, a research and teaching facility that houses the Cooperative Freshwater Ecology Unit. The Centre was constructed to meet LEED Platinum standards and one of its key components was the installation of a deep-well geothermal system that seeks to minimize long-term operating costs of the Centre by avoiding utility expenditures, as well as reduce the greenhouse gas emissions associated with energy consumption. This is the first geothermal installation at Laurentian, designed to fully meet the load of a specific building. The initial cost is higher than conventional systems (e.g. natural gas, electricity); however, it is anticipated that the long-term benefits and impacts on quality and productivity will offset the investment over time.

**Efficiencies Gained:** At this time, the system has operated during a limited period and no quantitative data has been collected; however, through operation it has proven its capacity to provide sufficient heating to the facility during winter conditions.



Universities continuously seek ways to spend without sacrificing their service to students, staff and their local communities,

## Making Smart Purchasing Decisions

To gain the best value for all the goods and services they procure, Ontario universities participate in over 45 group purchasing schemes with other universities, colleges, the BPS and private sector organizations. COU has also moved the Inter-University Transit System (IUTS), which facilitates the movement of library material between institutions, to a private sector service provider that resulted in an almost 30 per cent reduction of associated costs to date, with further anticipated reductions of up to 50 per cent by 2011-12. Universities are continually sharing best practices through the Ontario University Purchasing Management Association (OUPMA), a COU affiliate. The following projects were implemented to make procurement practices more efficient.

### McMaster University:

#### **Sustainable Solutions – McMaster University Quits Talking Trash**

After extensive research of campus waste practices, this project was designed to reduce cardboard waste on campus and associated costs. A cross-functional campus team developed and issued a sustainability-centric RFP for office supplies and paper to get suppliers involved in the program. The team was able to reduce cardboard waste and the number of supplier deliveries, thereby saving money for other uses. The reduced deliveries improved campus safety by cutting truck traffic, and made schedules more efficient for employees who ordered and received deliveries.

#### **Efficiencies Gained:**

- Combined savings of \$2.3 million over five years from renegotiated contracts for office supplies and paper
- Cardboard delivery boxes were replaced by reusable bags, resulting in a minimum reduction of 20,000 boxes in the waste stream
- Truck deliveries were reduced from 3,200 to 52 per year by eliminating the 'on demand' schedule
- There was a move to paper with 30 per cent recycled content
- Contracts were opened for all Ontario universities to join



### **Nipissing University: Migration to Google E-mail Services**

A 2007 review of Nipissing's community e-mail services revealed the need to establish a permanent student/alumni e-mail system that could follow these populations throughout their careers. After examining internal versus external hosting options and discussing the long-term benefits with the Student Union to gain its support, Nipissing decided to migrate its e-mail for students to the Google Education edition, which took place over a 2-month period in 2007 at no capital cost. After two years and a positive experience with the student e-mail services, Nipissing decided that the Gmail domain should be expanded to include staff and faculty, which saved operating dollars while maintaining information security.

#### **Efficiencies Gained:**

- Zero cost for hosting services
- \$250,000 in immediate savings from the initial migration in necessary infrastructure upgrades and licensing
- \$100,000 ongoing annual savings in licensing, hardware maintenance and system management fees
- 30 times the available space per user compared to the previous system
- Reduced risk for service interruptions in the event of an emergency situation, since Gmail is operated externally

### **OCAD University (OCAD U): Access to Software Tutorials**

Increased enrolment and laptop use by students has led to significant growth in demand for software instruction related to curriculum. In order to efficiently meet this demand and provide students with an enhanced learning experience, OCAD U negotiated a multi-year, campus-wide agreement for unlimited student and faculty access, and a reduced cost with Lynda.com, a web-based company that provides an extensive online library of software tutorials related to art and design curriculum and studio practice. At the same time, the tutorials provided an enhanced student learning experience through expanded curricular exposure to members of the university community, as well as access to multiple tutorials on over 100 different software titles and programs.

**Efficiencies Gained:** OCAD U was able to re-allocate and reduce \$70,000 in resources to assist teaching, while expanding the curricular exposure to members of the University community.

## Planning for Safety

Universities have a responsibility to provide safe and secure environments to students, staff, contractors and campus visitors. Careful planning and training in emergency preparedness procedures minimizes safety-related risks and harm to the university community. It is an important investment in managing potential liabilities. Ontario universities work hard to meet safety goals as efficiently and effectively as possible.



Collectively and individually, universities are finding more productive ways to operate and enhance their administrative processes,

### **University of Guelph: Risk-Based Hazardous Waste Management System**

The University of Guelph has effectively managed the risks associated with the handling of hazardous wastes, through a new system that economically addresses risks associated with regulatory non-compliance, the environment, personal health and safety, and the institution itself. It also provides strict procedures for selecting contractors, a centralized and user-friendly disposal process that limits faculty, staff and student contact with the waste, and a central facility designated for chemical and radioactive waste management. Two other Ontario universities have successfully implemented this program based on site visits to the University of Guelph.

#### **Efficiencies Gained:**

- There was a reduction of annual hazardous waste disposal costs by 49 per cent over a 5-year period, i.e. from \$474,000 in 2003-04 to \$242,000 in 2008-09, resulting from:
  - Annual cost reductions on direct expenses, such as labour and benefits, vehicles and related expenses, and materials and consumables
  - Reduced insurance costs for liabilities not previously managed or identified appropriately
  - Staff and students no longer transporting waste from their labs to a central storage location
- The Chemical Management facility has created a safe work environment for waste storage and packaging, allowing for:
  - A successful delay and decay program for a large portion of radioactive waste, resulting in significant cost savings and diversion from the hazardous stream
  - A program whereby liquid wastes are bulked to permit 65 per cent more waste to be shipped per drum
  - The judicious packing of solid waste ensuring that drum contents are maximized

### **Wilfrid Laurier University: Hydrocarbon Fuel Handling and Equipment**

The University partnered with the Technical Standards & Safety Authority (TSSA), Ontario's non-profit regulatory body responsible for safety inspections, to become the first university in North America to be awarded a Quality Assessed Facility designation for meeting the highest safety standards for hydrocarbon fuel handling and equipment. The program is a successful example of co-operation between many stakeholders and has reduced maintenance costs and increased equipment life expectancy. The initial assessment was completed in July 2009, after which Physical Resources staff, consultants and outside service providers began correcting problems identified during the audit. Facilities were reassessed in June 2010 and the designation was awarded by the end of July 2010.

#### **Efficiencies Gained:**

- Higher level of service from maintenance staff and outside service providers
- Increased awareness and recognition of regulatory requirements for fuel-burning equipment across campus
- Physical Resources overseeing all related equipment installations and maintenance
- Skilled trades taking ownership of equipment and the need to document every procedure
- Reduced maintenance costs and longer equipment life expectancy
- Inspection by TSSA of all new or renovated buildings with hydrocarbon fuels equipment prior to turnover



Wilfrid Laurier University and the University of Windsor have both adopted a partnership approach to emergency response with their local communities. Wilfrid Laurier, through its Campus Assist program, allows for emergency communications via text message. By leveraging resources from surrounding communities, Windsor has improved real time, online communication between partners.



A partnership between Trent University, Sir Sanford Fleming College and community organizations to conduct joint, live action emergency planning exercises has not only averted costs of approximately \$10,000 per year, but has improved Trent's ability to respond effectively to emergency situations.

## Looking Forward

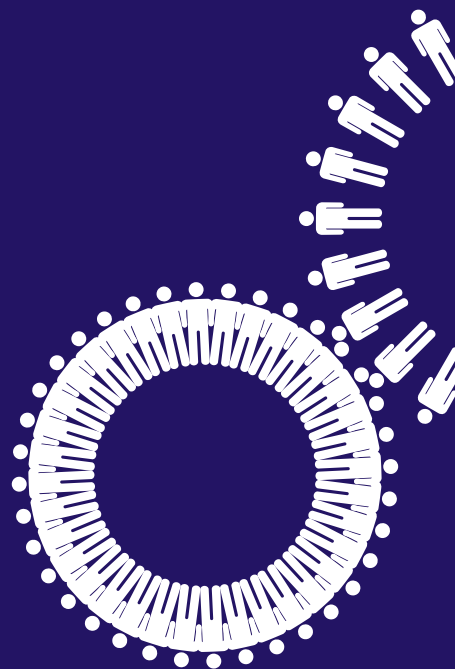
Ontario universities are re-evaluating traditional ways of doing business and transforming their operations to ensure that public dollars continue to be maximized for the benefit of students. By seeking administrative efficiencies, universities are working individually and collectively to compete in today's global marketplace, attract and retain top educators and students, and proactively respond to financial risks and shortfalls. Looking forward, the sector is committed to working together and with other organizations to explore new funding models, collaborative opportunities and even more ways of increasing services without the need for corresponding resource increases.



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