



Faster Cheaper **Smarter**

**Improving Efficiency
at Ontario Universities**

A report by the Council of Ontario Universities, 2015

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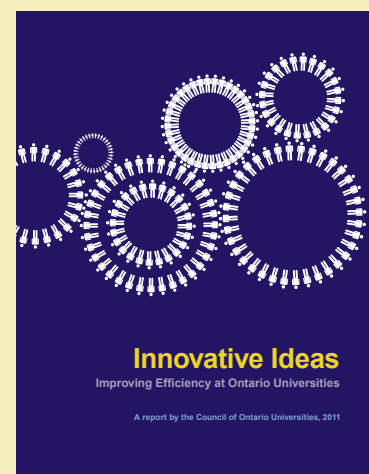
INTRODUCTION

In 2011, COU released *Innovative Ideas*, a report that highlighted how Ontario universities were improving efficiency by finding new ways of doing business. From operations to purchasing to facilities management, it demonstrated that saving money doesn't necessarily mean sacrificing quality.

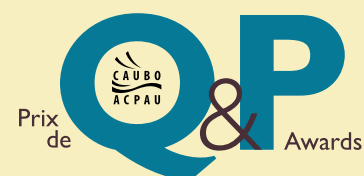
This follow-up report, *Faster, Cheaper, Smarter: Improving Efficiency at Ontario Universities*, focuses on innovation through partnership. Universities continue to control costs through collaboration, shared services, and administrative efficiencies, while improving services for students and staff. The Ontario government's Productivity and Innovation Fund (PIF) – a \$45 million investment in Ontario's postsecondary sector – was a major catalyst for collaboration that has achieved amazing results. We thank the government for this significant investment.

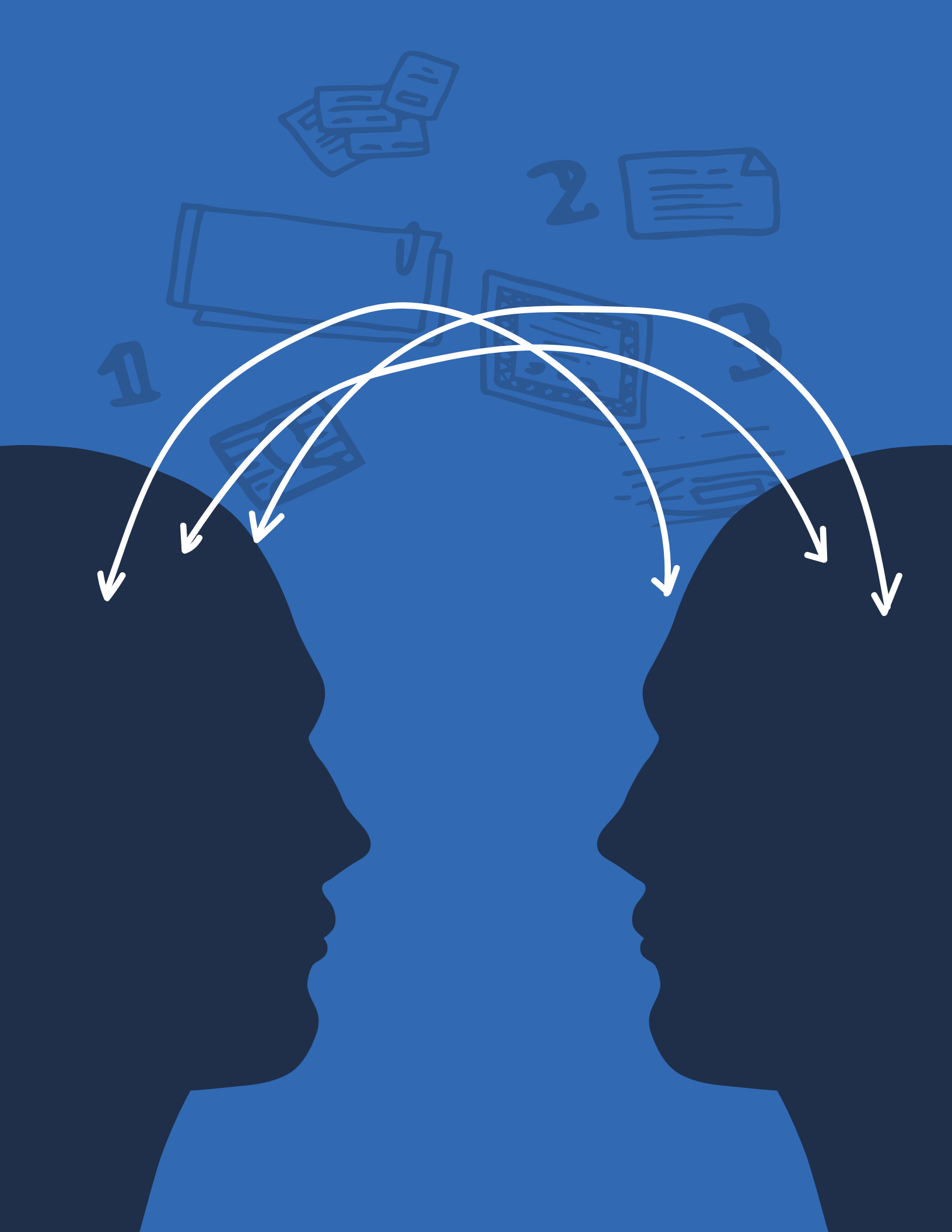
The report features several PIF projects and also highlights what individual universities are doing to leverage technology, modernize administrative processes and make their facilities and operations run smarter, not harder.

Each year, the Canadian Association of University Business Officers (CAUBO) recognizes Canadian universities for their leadership through its Quality and Productivity Awards. Several of these award-winning projects are featured in this report.



Innovative Ideas, published in 2011.





PRODUCTIVITY & INNOVATION FUND (PIF) PROJECTS

In 2013, Ontario's Ministry of Training, Colleges and Universities launched a fund for postsecondary institutions. It spurred partnerships to further the development of common services in areas such as data storage, procurement and libraries.

Universities embraced the challenge, with demonstrable results. In many cases, government funding for these projects has not only yielded one-time savings, but has laid the ground work for ongoing and future savings. Featured below is a sample of multi-institution projects – either multiple universities or universities and colleges.

Student Success

Career preparation is a cornerstone of modern university education. Our institutions are conscious of the role they play in preparing students with transferrable skills that will benefit them and their employers, no matter what road they take.

With busy academic and work schedules, graduate students often find it challenging to find time to develop the skills they need to market themselves for a career after graduation. The www.MyGradSkills.ca website was developed to improve the availability and quality of professional skills development training for graduate students. The website portal offers 18 self-paced modules to help students develop desirable skills across five courses: communication, entrepreneurship, teaching and learning, and career development. These modules are helping students enhance their job-readiness and prepare for careers in academia, government, non-profit and other sectors.

Seven universities – **McMaster, Guelph, Ottawa, Queen's, Toronto, Waterloo** and **Western** – collaborated to create the Ontario Consortium for Graduate Professional Skills Training Development, saving time and money by working together to create resources for all Ontario universities. The Consortium was able to draw on the strengths of each university to develop leading content in each course area.

Since the launch, other institutions across the country have subscribed to the site, including the University of Alberta, Dalhousie, St. Mary's and the Canadian Lung Association. In addition, new modules on project management and Indigenous research are being developed.





"Our government understands that we need to support innovative and collaborative change to strengthen our world-class postsecondary education system. I am thrilled to see that the Productivity and Innovation Fund is helping spur transformational change at our universities as they modernize their systems and processes to improve the learning experience for students."

Hon. Reza Moridi, Minister of Training, Colleges & Universities

Nursing simulation in action



Ontario's 13 college-university nursing collaborations are preparing nurses to be job-ready. Healthcare simulation, while a relatively new practice in education, is an innovation that is yielding benefits for students who receive hands-on practice training.

Using best practices in instructional design and simulation-based education, this PIF nursing partnership developed 40 evidence-based clinical nursing simulations for use with fourth-year nursing students – 27 new clinical scenarios and 13 existing scenarios that are now in a standardized format.

An electronic repository was created to house the simulations, which are available in the standardized format for all schools. The project also adopted a standard learning format for learning outcomes.

Drawing on the expertise and strength of each partner in the development of content, the project resulted in stronger partnerships and knowledge-sharing among schools. Students benefit from improved learning experiences and are better trained to deliver health services to Ontarians.

Procurement

The Best Value Business Model (BVBM) is a new procurement model developed by Arizona State University Researchers that supports the selection of expert vendors who identify and manage the performance risks of projects. This reportedly leads to savings in the five to seven per cent range and an average of 45 per cent fewer “delay days.” The experience in Ontario not only supports this but better these results.

BVBM was introduced to Ontario universities through a **Western**-led PIF project that included partners from **Ottawa, Queen’s, Waterloo, Western** and **Wilfrid Laurier**. This model takes a different approach to the traditional competition process: BVBM moves away from the “lowest bidder” mentality that can often result in costly change orders, project delays and cost-overruns. BVBM requires vendors to differentiate themselves quickly in the Selection Phase of the process. This is done through innovative techniques through the use of anonymous, simplified submissions of proposals, project team evaluations and ongoing metrics that reward vendor expertise, risk mitigation and performance management.

BVBM helps to transfer project risks to the selected vendors from the institution by having the vendors identify and explain their mitigation processes for all risks, both those within and outside their control. In this model,

the vendors are held accountable to ensure these risks are managed. These requirements drove the vendors to bring their best teams to work on these projects so that they minimized their risks. As a result, these high performing vendors delivered better results including fewer change orders, less managerial oversight and increased client support.

The return on a \$595,000 PIF investment has been remarkable. Of the 11 projects, executed by individual universities using BVBM techniques, a savings and cost avoidance of \$635,000, or 11 per cent, will be realized over the life of the contracts. In addition, this process saves the time of staff evaluating proposals: on one Western project alone, 160 hours of time and associated salary was saved, as compared with a traditional evaluation process. Similarly, two collaborative projects for travel and furniture have driven great savings opportunities for institutions joining the contracts. Western has seen combined savings of approximately seven per cent in these categories.

Western has continued using BVBM on seven additional projects seeing results in the range of 11 per cent and is starting their first construction-based project using BVBM.

\$595,000
PIF Funding

Return
on Investment:
4.7 Times
Over five years
10 Times
Over 10 years

\$5.6M

Estimated cost savings
and avoidance over
10 years, for
13 projects



CAUBO Award Winner 2015: Western University

Data & Information Technology (IT)

The digital age demands access to massive amounts of data in an instant. Finding cost effective models for storing, managing and accessing digital content is critical.



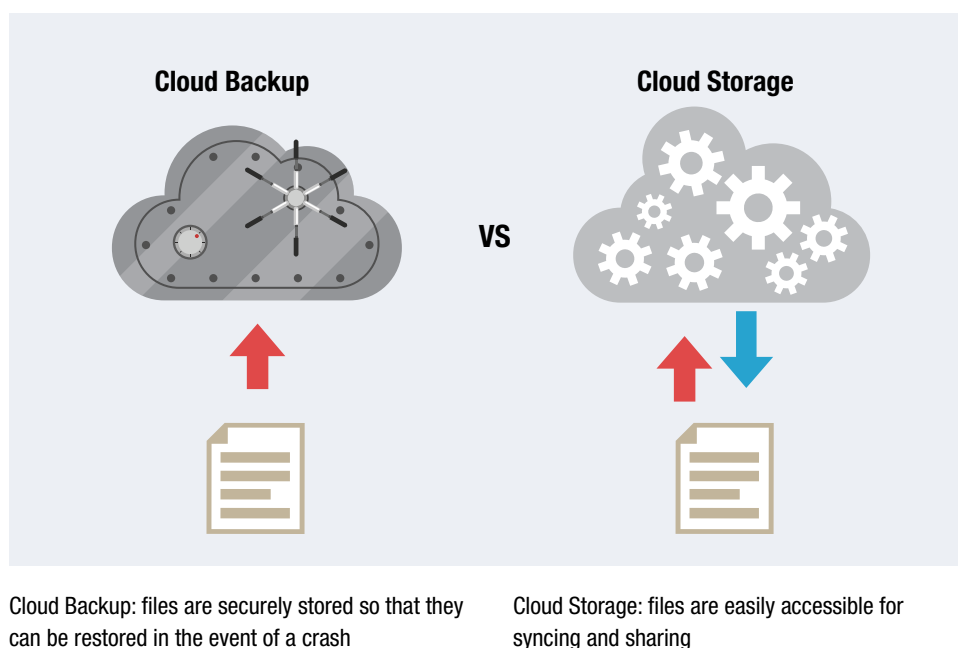
The Ontario (Digital) Library Research Cloud (OLRC) is the first cloud-based cooperatively managed storage service in Canada's university sector. This project leverages existing IT infrastructure and governance models, such as those developed through the Ontario Council of University Libraries (OCUL's) Scholar's Portal, which provides a shared technology infrastructure for all 21 university libraries in Ontario.

These libraries are pooling resources to build a large-scale shared storage service with the capacity to house existing and new digital content. The cost is significantly cheaper than what individual universities could achieve and cheaper than current commercial cloud storage alternatives. It also allows OCUL members to maintain control of their data.

A cloud-based backup solution is also in the works for several Ontario universities. **York** partnered with **OCADU**, **Guelph** and **Queen's** to prototype a centralized solution for both storage and backup services. PIF funding of \$815,000 was provided. This pilot project successfully demonstrated that a Shared Backup solution is technically feasible, one

that takes into account unique requirements of universities by developing a flexible system design that can be scaled to other institutions.

By taking advantage of economies of scale, cost savings can be realized.



Many organizations are facing pressures including work backlogs due to competing priorities, limited financial and human resources, and aging infrastructure.

Queen's University brought together 12 institutions that use PeopleSoft, a resource planning platform/shared services model for IT, to better understand how individual institutions are using the software and to identify operational challenges. By revealing shared problems, the project explored a "shared responsibility model" as a potential solution. The group made recommendations about how to move forward in six core PeopleSoft support functions: knowledge sharing, testing, application development, reporting development and maintenance, enterprise architecture and service desk.

The study identified more than \$11.2 million in potential productivity gains, future operational savings, and service delivery improvements

over a 10-year period. Savings will be realized through common technological platforms and reduced duplication.

In order to maintain momentum on this important project, institutions have committed their own resources to pursue the first phase on knowledge sharing by creating the Knowledge Content Centre (KCC). The KCC will launch this fall with a web-based platform to allow participants to easily share relevant information, documents and materials. The platform will encourage the adoption of standards and sharing of best practices that will ultimately reduce time and effort to troubleshoot issues.

The KCC may provide a platform and structure to implement the other recommended shared responsibility solutions for each support function, though further investment would be required.

\$560,000
PIF Funding

\$11.2M
Potential savings/
productivity gains
over 10 years

Led by...

Queen's with McMaster,
Ryerson, Waterloo,
Western, York and three
colleges: Niagara, Seneca
and St. Lawrence



Transforming Service Delivery & Administration

Several PIF projects have modernized systems that have a campus-wide – and even sector-wide – impact, yielding amazing results.

Space Management

Space on campus, including classrooms and labs, is a limited resource and must be used effectively. With outdated systems nearing their “end of life,” it was critical that universities explored a modern technology solution to replace these legacy systems.

All 20 universities, and Durham College, embarked on a project led by the **University of Toronto** to implement ARCHIBUS, with the help of BRG as ARCHIBUS Implementation Consultants. This standardized system includes the use of shared software, standardized training and support, common reporting and analytical tools, and mobile technology. With all universities using the same system, a support network of users is in place to share knowledge and best

practices on an ongoing basis. It also allows universities to more quickly identify opportunities to improve space utilization, which assists the entire campus in planning.

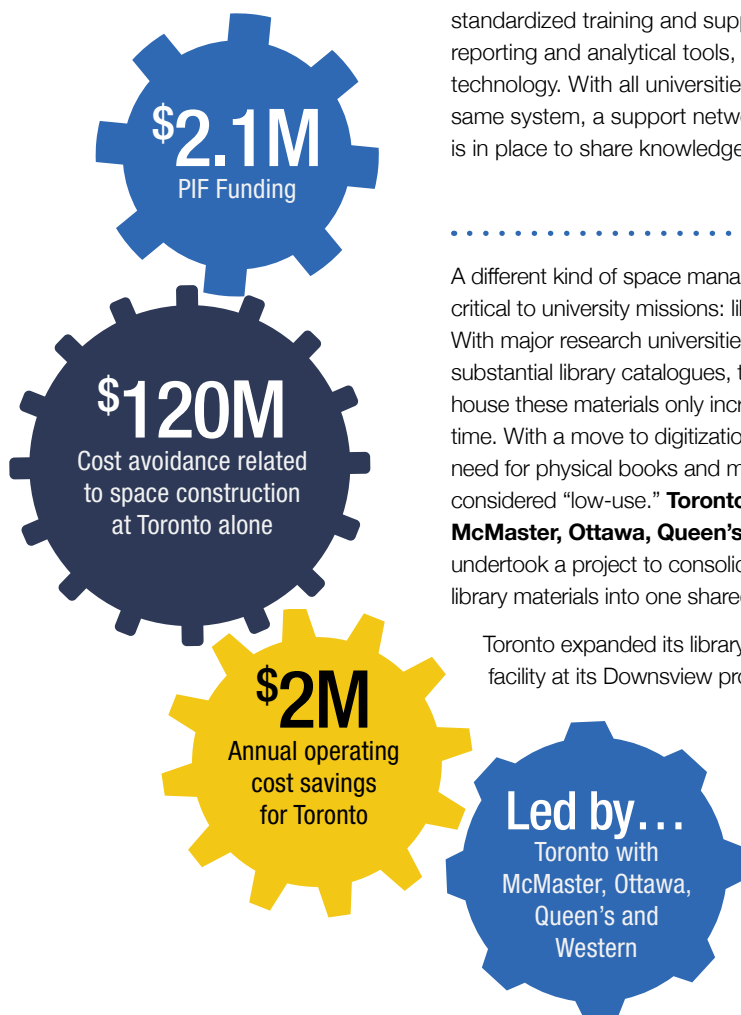
The shared approach resulted in administrative and cost savings through shared purchasing. Universities closer to their replacement date for current systems avoided replacement costs thanks to the \$2 million in PIF funding provided, which reduced financial pressures and allowed investments in other priorities. Notional savings for the collective implementation of ARCHIBUS is approximately \$1.5 million, including implementation services, software and RFP preparation.

A different kind of space management is also critical to university missions: library space. With major research universities having substantial library catalogues, the space to house these materials only increases over time. With a move to digitization, there is less need for physical books and materials that are considered “low-use.” **Toronto**, along with **McMaster, Ottawa, Queen’s and Western**, undertook a project to consolidate physical library materials into one shared space.

Toronto expanded its library storage facility at its Downsview property and

implemented a High-Density Racking System and Mechanized Retrieval to ensure orderly retrieval of materials. By reducing the duplication of low-use print materials – for example, retaining one copy of a book instead of five, one for each university – significant space can be saved. This ensures that space is maximized while historical print materials are retained and available to students and faculty.

This also frees up physical space in libraries used by students, whether for quiet study space or collaborative work areas.



Tracking Utility Usage

A Utilities Dashboard, or the University Utility Consumption Database and Benchmarking System project, tracks the use of utilities – electricity, natural gas and water – which are a major operating expense for universities and source of greenhouse gas (GHG) emissions.

This web-based solution provides automated monitoring of energy use and performance by building. The system includes the capability to display the energy performance publicly, thereby raising awareness of energy use among all campus community members and creating a culture of conservation.

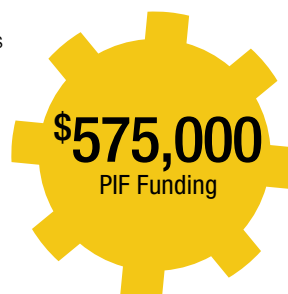
Cost savings have been achieved through the collective implementation of the system, and will help each university realize savings through labour costs, through automation versus the manual entry of data. The ability to track usage data can help universities identify areas where

improvements can be made to reduce usage or GHG emissions. Utility cost savings to universities will be based on a 12-month period of operation and would be ongoing.

The Dashboard is a flexible platform that can be leveraged for the university sector and for other organizations in the Broader Public Sector (BPS).



McMaster's Utilities Dashboard



From Paper-Based to Electronic Systems

York University is leading the way to move travel expense claims from paper-based forms to an innovative online solution that is saving time, money and trees.

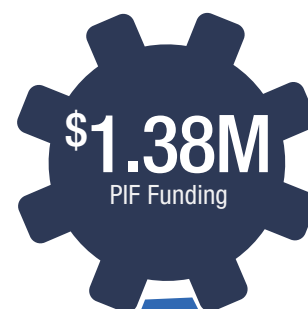
Travel related to academic and research work can constitute a large portion of expense claims, and thus a major area for savings and efficiency. Like many organizations, most universities use paper-based systems that are manual and time-consuming, resulting in delays and an inefficient reimbursement process.

A web-based platform is resulting in faster payment through streamlined approval systems and better use of technology to improve compliance and perform automated calculations. The entire system is online, from claims that can be submitted online or from mobile devices, to approvals to electronic transfer payment to the recipient. The system also allows claimants to trace

where their claim is in the approvals process.

In addition, it provides the opportunity to leverage spending as the system tracks specific travel expenses – what airlines, hotels and car rental agencies are most frequently used. Universities will be able to engage these vendors to seek collaborative pricing on services as well as rebate opportunities.

The system has been fully implemented at York, with other universities at varying stages of implementation.





UNIVERSITY PROJECTS

Universities are embarking on initiatives to seek productivity improvements through technology and partnerships. From creating safer campuses to collaborating with local partners to save money in the procurement process, universities are committed to transforming the way they do business.

Leveraging Technology

Technology's role in our modern universities is indisputable. From online learning to virtual labs, universities have kept pace with the innovation that will help students succeed in a 21st century economy. They are also using technology to run leaner and more efficient services. Manual processes are being eliminated in favour of faster, automated ones, data virtualization is becoming increasingly common and campuses are becoming safer.

Safer Campuses

At **Western University**, 21 Special Constables provide 24/7 community policing services to a student population of over 30,000. In order to make the best use of their time in providing timely support to the community, iPads were purchased for each Special Constable.

With support from their software vendor, an app was developed for Western at no cost, which was then loaded on to the iPads. The app and device allows officers to remotely enter data, capture photographs or video, and conduct interviews and statements on-the-spot. This saves time for officers and witnesses who no longer need to return to the office for interviews or data entry.

Mobile access allows officers to complete reports and interviews throughout the 93 building complex at Western and connect to Western's records management system through a secure Virtual Private Network. Documents and data are uploaded directly into the system, which provides real-time access for other officers and supervisors.

The iPad is a lightweight and portable tool that can be carried on foot, bicycle or in a patrol vehicle, and means that campus police have additional time to remain in patrol zones.

Western is also using iPads to enhance their fire services: over 140 alarms are activated each year on campus, all of which require a response from London Fire Service (LFS).



iPad in use by officer

Upon consultation with senior command personnel at LFS, Western purchased 21 tablets to equip every fire vehicle in the City of London. Each vehicle arrives on scene with the precise electronic data for every building on campus, including requisite fire plans and building data in PDF format. While the law requires that hard copy fire plan documents be located in a secure containment device in every building's fire panel, the new electronic system ensures the fire commander

has immediate access to fire plans and building structure data in just one touch.

Electronic versions of documents are updated as needed by the university. The data is then transferred to a portable USB device and provided to LFS, who then update each tablet on a semi-annual basis.

This initiative has provided enhanced safety and accuracy for responders while achieving the cost savings of a full time position.

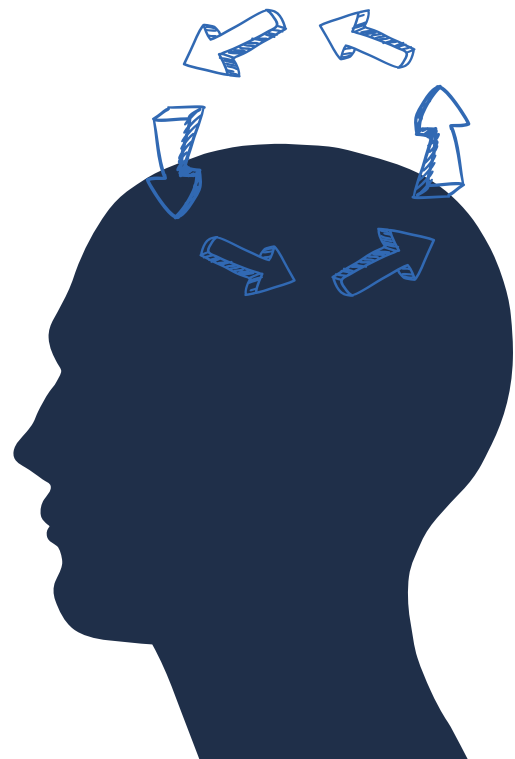
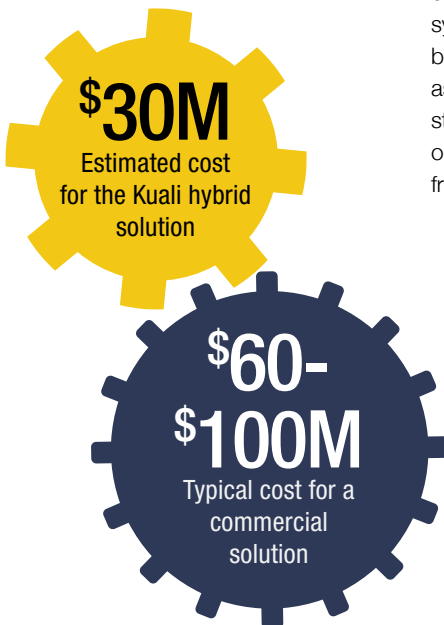
Information & Data Management

Managing traditional student information systems can be costly and limiting. The **University of Toronto** sought out a next-generation system in Kuali Student.

Toronto's systems were traditionally decentralized (17 registrars) and becoming outdated. With an expensive and inflexible system, the university was experiencing a backlog of service improvements, as well as performance problems as a result of student growth. Kuali Student offered the opportunity to reduce costs, provide a flexible framework for future service evolution, and

provide services beyond registrarial: the system offers modules on academic planning, student life, and business continuity planning, among others. An open-source platform, Kuali Student comprises collaboratively developed applications tailor-made for universities by functional experts.

The **University of Toronto** is leading this project that will allow universities to avoid licensing costs and to reduce implementation costs via partners' collaborative investment and shared knowledge.





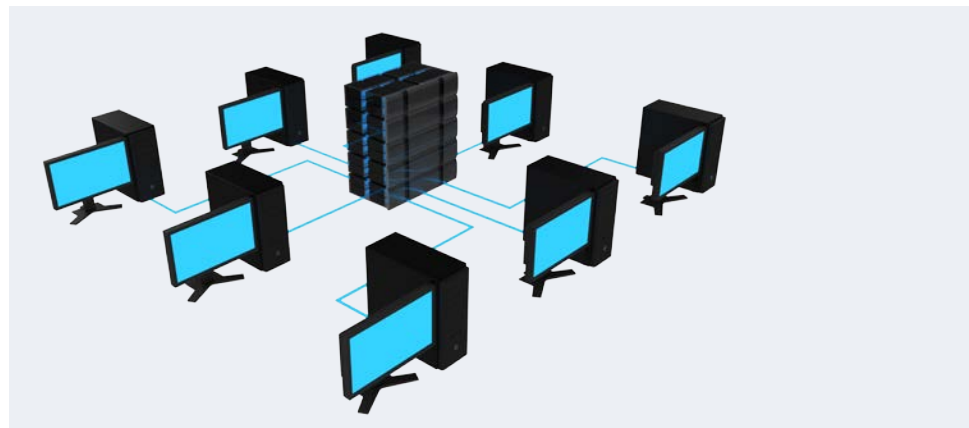
University of Ottawa's Data Centre

When faced with the challenge of relocating its aging data centre, the **University of Ottawa** looked at ways to leverage opportunities to introduce sustainable IT, network and storage convergence, and improved virtualization deployment. Virtualization takes existing hardware – like physical computers – and maximizes their potential by allocating their processing power to different services: one powerful server's resources can be hived off to operate multiple virtual operating systems. Virtualization reduces physical equipment space requirements, energy use and redundancy.

After two years of planning and preparation, they moved from an outdated facility to a state-of-the-art data centre. As part of the overall strategy to improve IT infrastructure and its value to the university, innovative technologies were implemented that support the business functions and reduce the university's environmental footprint. For example, they now virtualize storage to avoid the purchase of new storage devices. This also allows for "thin provisioning," where the system automatically allocates space as usage requires, which results in increased flexibility and reduced operational costs by purchasing only used space.

Highlights of the project include:

- A 100 Gigabit network – the fastest commercially available network at the time of implementation
- More than double the storage capacity thanks to tiered storage and backup,



Virtualization: when one powerful server's resources can be hived off to operate multiple virtual operating systems

resulting in cost savings; the university avoided spending a minimum of \$500,000 in additional hardware purchases and in operational activities

- Heat generated by the computing equipment in the Data Centre is recaptured and recycled to heat 40 per cent of the entire building
- At the time of launch, the virtualization strategy led to a 100 kw reduction in power consumption
- Over 90 per cent of the servers running in the Data Centre are virtual servers with over 1,400 servers running on 50 server hosts
- Built-in safeguards protect systems in the event of flooding, earthquakes or other natural disasters



McMaster University and the **University of Waterloo** have entered into a reciprocal agreement to provide secure data centre space and connectivity for equipment that will enable each institution to safely and securely store their administrative data at the other's data centre. University administrative systems provide and support Human Resource, Financial and Student services to the university community. These systems collect, process and generate enormous amounts of data, which are critically important to the ongoing operation of the university. Complete loss of such data has led to indefinite shutdowns of organizations that find themselves unable to restore lost data.

Highlights of the project include: lower connectivity costs by leveraging established university connections for transmission of data and lower ongoing costs as there is no service provider to pay for the physical hosting of the equipment. The system also uses smart technology that improves efficiency by only copying new or changed data to the server.

The two universities are at the initial RFP phase of the project for equipment selection and procurement, with a goal of implementation early in 2016. It is expected that the cost savings for both institutions will be realized over several years; however, the risk mitigation achieved for enterprise data will be immediate.

Wilfrid Laurier University has undertaken a suite of initiatives to move from manual to automated processes.

When a company hires a new employee, they often conduct a credential check by contacting the institution the new hire attended. Requests to Laurier were previously handled manually, which could be a time consuming process that often involved sending the degree verification form back to the company via fax. Laurier is now using third-party vendor AURADATA to verify educational credentials automatically, reducing the number of degrees that need to be verified manually by over 85 per cent.

To improve the level of service to staff and faculty, Laurier transitioned to a Microsoft suite of solutions in the spring of 2015 from an outdated email and network system. Over a three-month period, a dedicated team planned and then undertook the migration of over 60,000 email accounts, 2,553 workstations and over 350 printers – no small or simple feat. The project has resulted in service improvements, better user access provisioning and the ability to rollout new services for the institution, as well as annual savings of \$130,000 in licensing costs.

Many universities are moving to leading edge collaboration tools in Google Apps and Microsoft Office 365 to avoid costs and increase productivity.

Facilities & Operations

From energy and sustainability to building operations, from grounds and custodial to building and design, it is imperative that university facilities run smoothly and buildings run at an optimal level. Universities have undertaken a breadth of initiatives to improve student life and contribute to a greener campus.

Improving Student Life

When the **University of Windsor** needed to re-locate their Campus Bookstore to accommodate an expansion of the Odette School of Business, an opportunity was presented to re-evaluate the Bookstore's space needs. The goal for the new store was to reduce the physical footprint and construct an inviting and functional space in a convenient location for students to acquire their course materials, technology, supplies and spirit wear.

With the changing trends of campus stores, the space needed to accommodate two peak academic periods and then provide flexible space for other programmatic needs for the

remainder of the school year. The new store is located in the high-traffic Student Centre and has moved from a three-floor construction to one. Operating costs have been reduced thanks to the 30 per cent reduction in space. In addition to lower costs, students have the benefit of a flexible space that is functional year-round, which they can use for study groups, events and to socialize between classes.



Windsor Campus Bookstore

The recent re-design of **Laurentian University's** iconic Great Hall transformed the old cafeteria space into a contemporary marché-style dining venue. Previously one of the largest waste generators on campus, the Great Hall is now a zero-waste facility: there are no garbage bins and no recycling bins; everything that is used to serve meals is washable, and food scraps go directly into compost.

The waste diversion team at the City of Greater Sudbury was instrumental in bringing composting to the campus for

the first time. As the first large-scale test of the municipality's composting system, this exciting new partnership between the campus community and the broader community has broken new ground.

The number of customers served increased three-fold in the first year, while diverting over 21 tonnes of waste to compost. As a result, the annual cost savings from landfill fees will allow for reinvestment into new sustainability driven projects for the campus.



Laurentian's Great Hall



Ottawa's new student residence

The **University of Ottawa** has entered into two unique, long-term lease arrangements to accommodate the growing number of first-year students requiring residence: converting a Quality Inn and a local retirement residence into student housing.

In order to attract students to the converted retirement residence, a 10-minute walk from campus, the university's Housing Service offered unique student programs in the facility that resulted in a 98 per cent occupancy rate in its first year. In addition, many community projects initiated by the students were appreciated and recognized by the local community. Students contributed over 400 volunteer hours to the neighbourhood, leading to the development of the university's first "living-learning community" that focuses on leadership and community engagement.

A third residence exclusively for upper-year students will open in September 2016 as a result of another partnership with the private sector.

In the context of limited land and funds, the university leveraged opportunities with the private sector that provided immediate residence facilities with 1185 new beds in the span of two years. All three projects were achieved with limited capital from the university's Housing Service while mitigating the need to address future deferred maintenance costs.

Reducing Energy Costs & Footprints

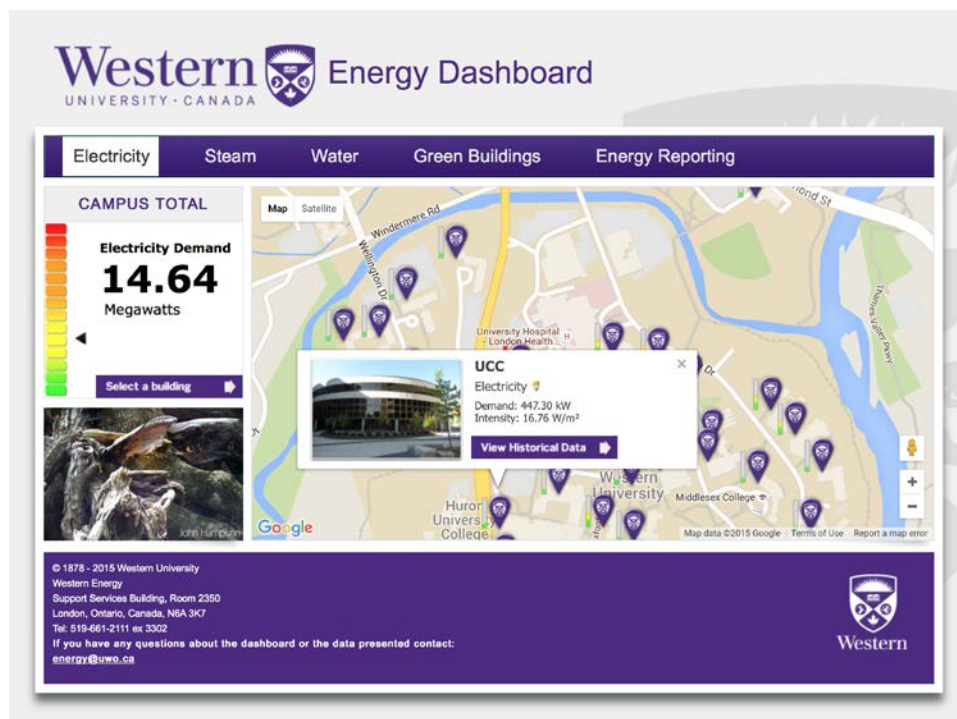
To track energy use in real-time, **Western University** implemented an Energy Dashboard to capture electricity, water and steam use across all campus buildings. Enhanced access to high quality current data is used to inform building design and upgrades, energy and demand management, research projects, and budgeting and planning processes. The Dashboard assists with billing process by eliminating the need for onsite meter readings. As the Dashboard is publicly available online, it promotes awareness and education to campus members on utilities use and green buildings.

Through the controls, the university can increase temperature set points, rotate fans and heat pumps throughout campus and monitor critical operations and areas in order to quickly address issues.

The system also allows real-time decision-making based on weather through the province, Ontario's demand, Western's



demand, peak predictions, and operations and activities on campus. When the system sends an alert that high electrical demand is predicted in Ontario, Western is able to manage and adjust their power use in order to mitigate their contribution to Ontario's demand. Since some of these hours coincide with Ontario's peaks, this program has saved the university an average of \$1 million per year.



Western Energy Dashboard

Brock University has undertaken an energy conservation project. In the winter months the need for chilled water is significantly reduced due to lower need for campus cooling and air conditioning. Due to aging chillers that are not operating to design loads – or the maximum amount the system can handle – Brock has fine-tuned their system to allow the process chiller in their CAIRNS building to be the primary winter chiller for the campus. By increasing its load from less than 10 per cent to approximately 25 per cent, they have placed the chiller in a much more efficient operating range. This then allows an aging chilling system that is much less efficient to be shut down and used as a backup.

The initiative has resulted in \$52,000 in annual operating budget savings. It has also been

a boon to the university's 10-year goal to reduce overall GHG emissions by 20 per cent: emissions have been reduced by 392 metric tons, equivalent to taking 69 cars off the road.

Similarly, the **University of Guelph's** Green Gryphon initiative was implemented to reduce energy and water use. In 2007-08, students committed to contribute \$10 per semester for 12 years toward a Student Energy Retrofit Fund, approximately \$350,000 per year. This Fund helps support \$26.2 million in projects, with the goal to save \$2.5 million in costs. One of the projects is a \$15 million, 22 million litre water tank that chills water in off peak periods; the cold water is then circulated through the university's existing cooling system during the warm season, and is returned to the tank on a loop.

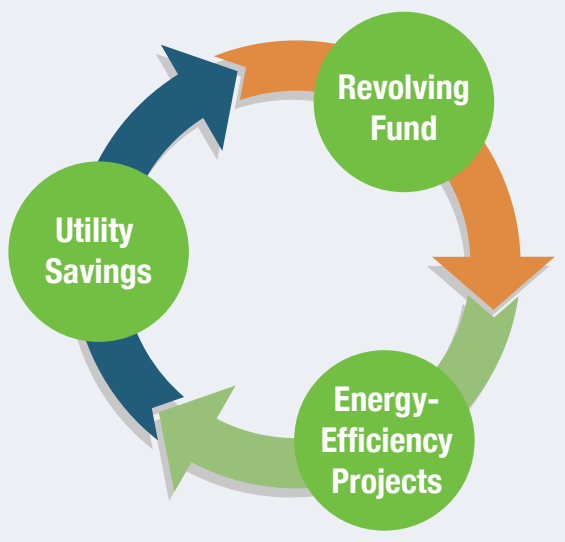
Toronto's Utilities Reduction Revolving Fund (URRF) is a \$4 million fund to support projects that will reduce the university's environmental footprint and utilities consumption.

for GHG reductions, reducing deferred maintenance and the potential to engage and educate occupants.

Success of the Fund can be seen at the Medical Sciences Building, which had a total project cost of \$1.49 million and incentives of \$589,000 from Toronto Hydro and Enbridge. The building has realized annual energy savings of \$1 million and a payback of less than one year. With new technology employed through a Building Automation System and cutting-edge wireless room level thermostat controls, the building has saved 45,078 GJ of energy, enough to power 455 Canadian households.

Annual savings from other URRF projects:

- \$1.1M: Robarts Library
- \$500,000: Ontario Institute for Studies in Education (OISE)



The revolving fund model

The concept is simple: money is loaned interest-free to promising projects that meet specific criteria; the resulting savings pay back the initial investment.

The main criteria to apply for funding include that the project must provide a minimum return on investment of 20 per cent, or a minimum payback of no more than five years, and cannot be a new build. Secondary criteria include the potential

Improving Administration

Improving processes in procurement, space management and human resources can sometimes mean small changes bring about big savings.

Collaborative Procurement

Traditional procurement models are decentralized, paper-based, labour intensive, and often do not result in the best deal. **York University** has introduced an e-Procurement marketplace – SciQuest – that provides a common technology platform that can be used across campus. This solution provides an “Amazon-like” shopping experience – a one-stop shop where faculty members can access catalogues from vendors with product descriptions and negotiate discount pricing to meet their research lab requirements. The system is completely online, from order to payment processing.

The system also provides detailed information sufficient to improve future price negotiations on contracts.

York’s expected return on investment for this initiative is \$4.8 million over five years resulting from strategic sourcing, contract compliance, administrative process efficiencies, and credit card rebates. In the first full year of implementation, York realized savings of over \$1 million.



In 2014, **Brock’s** Custodial & Grounds Services, with the assistance of Procurement Services, entered into two agreements with Ontario Education Collaborative Marketplace (OECM) vendors for the supply of paper

products and green cleaning chemicals. These two agreements produced a yearly operating savings of \$24,000, or a 56 per cent savings on cleaning chemicals and 13 per cent savings on paper products.

All Ontario universities participate in the Ontario Education Collaborative Marketplace (OECM) to leverage collective buying power. The university collaborative spend through OECM agreements has gone up 70% between 2014 and 2015.



St. Jerome's University, a federated institution of the **University of Waterloo**, has undertaken a \$47 million campus renewal construction project of a new seven-storey, 360-bed student residence and an academic centre using a design and construction methodology known as Integrated Project Delivery (IPD).

The IPD approach reframes procurement, selection and construction methodology to

ensure projects are completed on time and on budget. Importantly, it removes profit from the design process, actively involves the owner in the design process and shares risk among the key participants.

IPD employs Target

Value Design (TVD), Value Engineering, LEAN methodologies and Building Information Modelling (BIM) to achieve

unprecedented collaboration and results. Through a defined contract structure, IPD involves key participants from the early stages of the project to increase transfer of knowledge, reduce work duplication, target process efficiencies and improve design.

Adopting a full IPD approach has enabled St. Jerome's to mitigate risks, explore and realize continuous cost savings, achieve milestones on time and on budget, enhance active management and project transparency, and improve the project's final design.



St. Jerome's Academic Building



In order to acquire the best price and service quality for elevating devices, **Trent University** played a leadership role in preparing a Request for Proposal for elevating device maintenance on behalf of regional partners in the Kawartha Collaborative Purchasing Group (KCPG). The Group, which includes the education and municipal sectors, is now benefitting from more cost effective contracts for passenger and freight elevators, and lifts for persons with physical disabilities.

Prior to joint procurement, KCPG members spent over \$385,000 per year on 132 elevating devices. With varying price structures and individually negotiated terms, cost increases averaged five per cent a year.

Thanks to this collaborative procurement initiative, a successful bid project was managed and a contract was awarded to one vendor with the new annual spend

for the partnership at \$166,920 – an annual collective savings of \$218,636.

Trent University specifically recognized an overall contract term savings in excess of \$316,000.

Other efficiencies achieved under this project included a comprehensive, all-inclusive service model with defined pricing for term, easier contract management with one vendor managing portfolio of inventory and compliance with supply chain guidelines and BPS mandates. This successful collaborative project has given rise to further strategic initiatives with the KCPG, with an ongoing effort to grow opportunities. Trent's realization of the elevator contract has also resulted in an increased commitment internally to work collectively on other projects, which has yielded savings on additional contracts.

Sourcing and procurement is a daunting and cumbersome process for any large institution. In 2011-12, **Ryerson University** and **Wilfrid Laurier** began to collaborate with the creators of Bonfire, a new web-based sourcing and procurement tool that would reduce the time, paper and cost burden of the evaluation process of supplier proposals in response to Requests issued by universities.

From 2011 to 2014, Ryerson and Laurier completed 135 competitive projects with great success, as measured by improvements in quality, timeliness, efficiency and transparency. Having played an important role in developing the tool to meet the needs of the university sector, both schools have signed with Bonfire as licensed users, and are now regularly invited to present on their experiences to other institutions.

Productivity and cost savings:

- Bonfire's electronic storage feature eliminates the need for physical document storage, which is both costly and in short supply.



CAUBO Award Winner 2014: Ryerson and Laurier

- Switching to electronic proposals has decreased Ryerson and Laurier's environmental footprint, together saving 1.15 tonnes of paper in just a few months.
- Suppliers are also saving money in the bid process by avoiding printing and delivery costs, which totals nearly \$72,000 thus far, or an average of \$79 per submission. These cost savings are already being reflected in bids by not being passed on to universities in the project costs.



Schedule & Space Management

In 2008, **Carleton University** first moved to centralized comprehensive timetabling. INFOSILEM's scheduling system was implemented with the goal of providing effective space management and ensuring that students have access to all the courses they need to graduate on time.

The system provides a centralized coordinated timetable by evenly and fairly distributing course meeting times throughout the academic week while abiding the requirements and constraints outlined by departmental administrators.

Additional improvements followed in 2012 with the implementation of a Data Collection Utility (DCU) add-on, a user-friendly interface for departmental administrators to enter timetabling requirements and constraints in a common, consistent and understandable format. It has also decreased the time departments spend entering timetabling requirements.

This advanced scheduling tool has been hailed by users for its efficiencies and

the team responsible for implementation received a Service Excellence Award for their work from the university.

To further improve space management and ad hoc booking efficiency, Carleton implemented the Infosilem Enterprise system, which consolidates all campus activity scheduling operations and covers 49 departments and over 550 rooms and spaces. The implementation of Enterprise has increased efficiency, customer service satisfaction and transparency of space booking.

Overall benefits:

- Room utilization is optimized – as high as 91 per cent in the lecture category
- Room utilization is more evenly distributed between timeslots
- Growing user demand, with the scheduling team processing approximately 3,000 requests during the fall/winter terms

Human Resources

The **University of Guelph** and **Wilfrid Laurier** have partnered on the design, development and implementation of a “management essentials program.” This six-course program is being designed to address the specific needs of managers who are new to working in a university as well as staff who have been promoted to a management role internally.

The program has been designed using a blended learning approach – where the delivery of content and instruction takes

place through digital and online media as well as in class. This program is being co-created by the learning and organizational development departments at both institutions in an effort to share resources, control costs and reduce duplication of work.

Many of the modules are specific to managing in a university environment, but are designed with flexibility for institutional customization, leaving potential for this program to be used by other institutions looking to develop a similar program.



CONCLUSION



In an environment of limited resources and competing demands, it is increasingly important to seek opportunities that will save money and time. Whether through shared services or common technological platforms, the projects presented in this report represent a forward-looking view. Universities are looking to modernize and transform their systems for the benefit of students, faculty and staff, in ways that leverage an initial investment for a longer-term benefit.

Thanks to the support of the Ontario government and MTCU, universities will be able to leverage the successes and learnings from the various PIF projects. The sector will continue to work together to scale-up

promising projects that can benefit all universities. It is hoped that these projects can spur ideas across the BPS as all our organizations seek new ways to innovate operations.

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The Council of Ontario Universities promotes university education and research and their role in preparing both undergraduate and graduate students for success in life and careers. A membership organization consisting of Ontario's 20 publicly assisted universities and one associate member, the Royal Military College of Canada, COU works with members to find consensus on a wide range of university issues and advances them with government and other stakeholders.

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