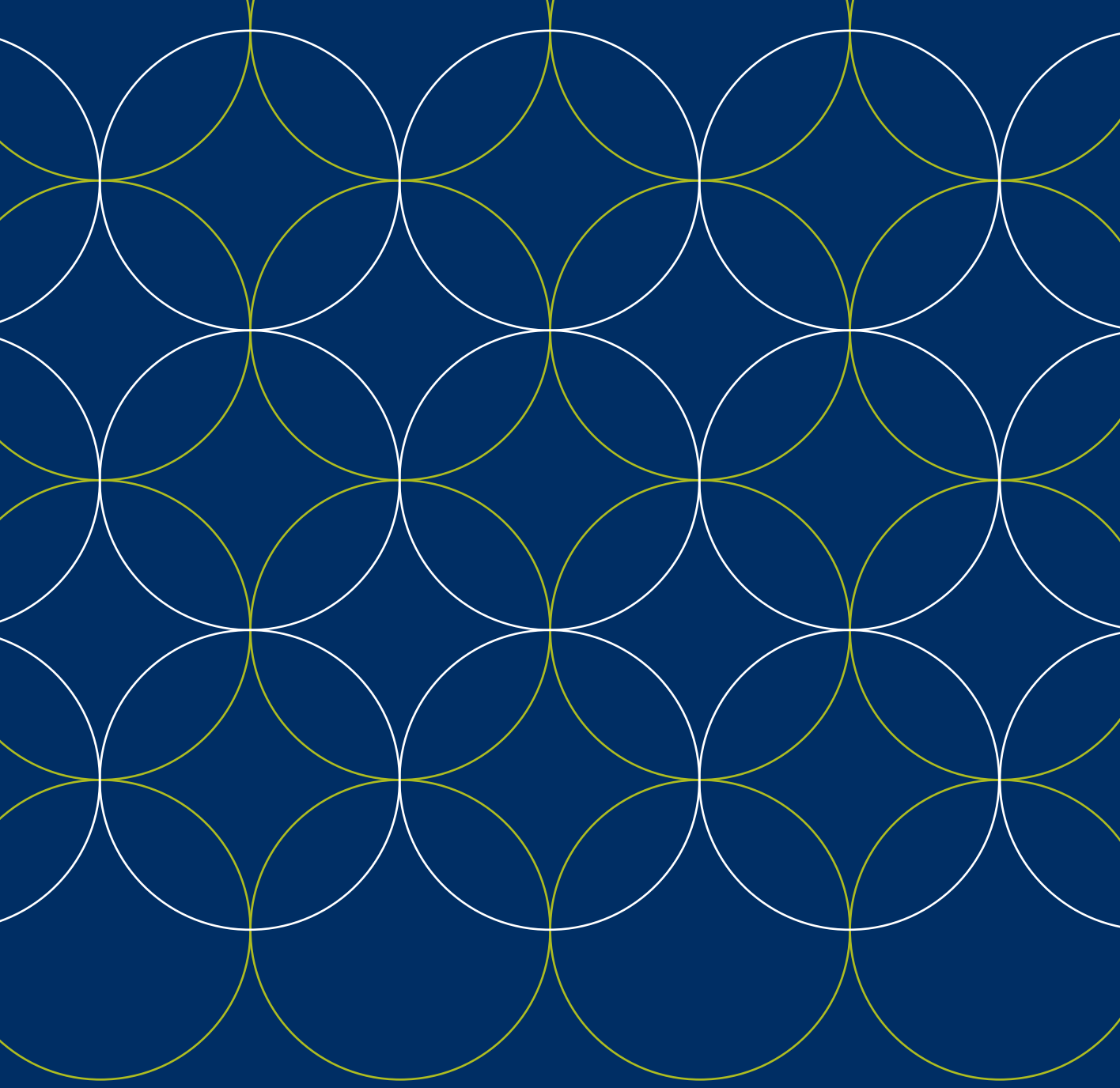
Community Impact Report 2010

UNIVERSITY OF TORONTO

Building Stronger Communities in Canada and the World



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FOREWORD

This publication, ***U of T: Building Stronger Communities in Canada and the World***, offers a panoramic snapshot of the University of Toronto's impact across several meaningful areas of the lives of Canadians and people elsewhere around the world. It is representative, not comprehensive. It is an introduction to a more detailed picture available on a companion website located at **www.impact.utoronto.ca**. Together, the publication and website capture the varied ways in which academic experts, students and graduates, individually and in groups, draw from diverse disciplines to address societies' critical challenges. This publication is the first in a series.

Daily, in the Toronto region and across Canada and the world, students, faculty, alumni and staff of the University of Toronto are engaged in activities that make a difference in the lives of others. These activities amount collectively to community partnerships that are sustained and significant. They are reported frequently in various university reports and publications such as *U of T Magazine, Edge, intuit,* college magazines and in the general media. While such reports are regular reminders that the work done across the three campuses in classrooms, in laboratories, in the field and in libraries has relevance and practical application, as individual examples of community impact they do not reflect the full breadth and scope of the University of Toronto's rich contributions to social, economic, cultural and environmental vibrancy.

With its unparalleled array of academic strengths, combined with its committed staff and active alumni, the University of Toronto is uniquely positioned to foster innovative community collaborations and partnerships. Many of the impacts of these collaborations can be felt almost immediately: better medical procedures, safer buildings, hardier crops and faster computers. In turn, these collaborations contribute to work on further significant and longer term contributions in scholarship, research and teaching – with beneficial effects that will not be fully realized for decades.

From promoting health domestically and internationally, to sustaining the environment, to strengthening Canada's economy, the University of Toronto is a leader, a partner and a major contributor. This publication reflects U of T's commitment to building stronger communities in Canada and the world.

Please visit **www.impact.utoronto.ca**.

Left: University of Toronto's St. George Campus – location of the 2010 CIBC's Run for the Cure. Photo credit: Rick Chard

Community Health Outreach

Fluoride varnish application in a young First Nations child living in the Sioux Lookout Zone in northwest Ontario, is part of the Faculty of Dentistry's "Baby teeth, keep them beautiful with fluoride varnish" project to prevent early childhood caries. More than 1,200 Aboriginal children benefited.

PROMOTE

HEALTH — HERE AND ABROAD

U of T is:

The home of breakthrough research into disease-causing genes and life-saving diagnostic tests and treatments;

The heart of a powerful academic network, collaborating with hospitals across Toronto and central Ontario to train the health practitioners of tomorrow; and

A partner with schools, governments and NGOs around the world, improving healthcare in places such as Haiti and Ethiopia.

U of T probably trained your healthcare professional including your doctor, dentist, nurse, occupational therapist, pharmacist, physical therapist, social worker or speech-language pathologist.

Left: Speech-language pathology student Liana Levinson on a placement at Comprehensive Community Based Rehabilitation in Tanzania, summer 2008.

KEEPING COMMUNITIES HEALTHY

The University of Toronto makes an enormous contribution to the health of Canadians. Many high priority specialists in Ontario trained at U of T, including 83% of community medicine experts, 72% of neurosurgeons and 56% of radiation oncologists. Most dentists and pharmacists, and more than a quarter of the doctors trained in Ontario, are graduates of U of T.

Compared with other medical schools in Ontario, a higher proportion of physicians trained at U of T remain in the province to practise – about 80%. Almost 4,000 members of U of T's medical faculty are practising clinicians. They care for a roster of patients even as they continue to do research and teach. Their practice is informed by the latest medical discoveries and their teaching is strengthened by practical experience.

U of T graduates comprise up to 76% of Ontario-trained physicians in the high-growth areas around Toronto, and alumni are also bringing their expertise to rural and northern Ontario: 37% of specialists and almost 10% of family physicians in northern Ontario are graduates of residency training at this University.

In the past 10 years, the number of students in the master's level professional programs, such as physical therapists, occupational therapists, speech-language pathologists and public health practitioners, has tripled. And almost 40% of new postgraduate medical students at U of T specialize in family medicine – good news for a country in which an estimated 4.1 million people do not have a family doctor.

U of T's contribution does not stop with graduation. In 2008, almost 21,000 practising health professionals took continuing education courses at U of T. And every year, some 1,000 members of the general public take the opportunity to learn more about their health by enrolling in Mini-Med School, a program designed to help people critically assess health information in the news and on the Internet, to bolster awareness of the resources available to them.

UNIVERSITY OF TORONTO'S SHARE OF ONTARIO GRADUATES

DENTISTRY: 59%

MEDICINE: 27%

OCCUPATIONAL THERAPY: 25%

PHARMACY: 100%

PHYSICAL THERAPY: 23%

SPEECH-LANGUAGE PATHOLOGY: 46%

THE UNIVERSITY OF TORONTO HAS EDUCATED:

36% OF FAMILY PHYSICIANS

83% OF COMMUNITY MEDICINE SPECIALISTS

72% OF NEUROSURGEONS

56% OF RADIATION ONCOLOGISTS IN ONTARIO

ALMOST 4,000 PRACTISING CLINICIANS IN THE GREATER TORONTO AREA ARE ALSO U OF T FACULTY

THE HEART OF A POWERFUL NETWORK

The University of Toronto is one of the anchors of Ontario's healthcare system. Through collaboration agreements and outreach, its students and faculty are making the system stronger, learning and teaching outside the classroom, in our communities and outside our borders.

- Two-thirds of the Faculty of Medicine's MSc and PhD students work in 10 hospitals across central Toronto. Medical residents receive training at 40 sites across central Ontario, from Barrie and Port Perry to Bowmanville. The new Mississauga Academy of Medicine, slated to open in August 2011, has broadened U of T's reach even farther. This vital network means hospitals and clinics receive skilled and valuable trainees, while medical residents can choose to gain experience in rural, urban and suburban settings.

- U of T faculty and students share their expertise with universities and NGOs in Kenya, Namibia, Zambia and Nigeria to help in the fight against HIV/AIDS. Working through U of T's Centre for International Health in the Dalla Lana School of Public Health, they work with local teachers and healthcare workers to improve public understanding of this disease that is ravaging their region.

- Foreign-trained professionals are rebuilding their careers with the help of U of T's Pathways to Employment in Biotechnology program. Through this free program, instructors and mentors from the biotech industry provide 160 hours of instruction in areas such as biotech essentials, career development and Canadian workplace culture and communication.

- U of T medical students are going back to kindergarten. Through Kids2See, a student-run organization, they provide free vision screening for children living in at-risk neighbourhoods. And through Kids2Hear, they look for hearing deficits in elementary school children from inner-city and non-English-speaking immigrant communities. If a problem is identified, the students arrange referrals. It is a way to ensure vulnerable kids get access to early intervention for treatable problems. And it helps medical students become advocates for a broader community.

LIVING LONGER AND BETTER

More people will live longer because of the work done at the University of Toronto. New techniques are giving health professionals more options for treatment, while new ways of sharing best practices are expanding who gets care.

Where is the research taking us?

- An inexpensive microchip developed by U of T researchers in nanomaterials, pharmaceutical sciences and electrical engineering may be able to detect cancer in a patient even before he or she leaves the doctor's office. A handheld device the size of a smartphone will be able to sense the biomarkers that indicate cancer at a cellular level within 30 minutes. And it could be in doctors' offices within five years.

- A tiny patch of specially engineered tissue developed by a U of T researcher may repair the damage caused by a heart attack. Most of the 70,000 Canadians who suffer a heart attack each year survive, but the rigid scar tissue that forms on the damaged muscle can lead to congestive heart failure. Using stem cell technology and tissue engineering, a professor at the Institute of Biomaterials and Biomedical Engineering has created a "bandage" of living tissue that a surgeon could use to replace the scar tissue. Additionally, a professor at the Department of Surgery has developed techniques to replace portions of the heart with tissue-engineered grafts.

- A researcher at the Faculty of Information is investigating how the iPad and iPod Touch could help children with autism spectrum disorder (ASD) overcome communication disabilities. Her study suggests that the touch-based visual interface of these devices empowers non-verbal students to share information without spoken language.

- A nursing leadership and capacity building program between the University of Toronto and two Brazilian states will build an ongoing network to support professional development among primary healthcare nurses. The collaboration will address the needs of family health teams in Brazil and will facilitate north–south knowledge translation in nursing, research and education.

- A U of T student-driven initiative will bring healthcare to those living on the streets of downtown Toronto. Students from nine healthcare programs are joining forces to launch IMAGINE, a healthcare service for Canada's largest homeless population. IMAGINE will create a unique learning environment that promotes interprofessional collaboration among students while extending care to one of Canada's most vulnerable populations.

Above: The Donnelly Centre for Cellular and Biomolecular Research – an interdisciplinary research institute encouraging the integration of biology, computer science, engineering and chemistry spanning leading areas of biomedical research. Photo credit: Tom Arban


Tyvek
JULIE

ENGAGE

BUILDING COMMUNITY

U of T is:

Faculty members donating time and expertise to advise communities and governments around the globe; and

Students working outside the classroom to develop skills and share their knowledge in local neighbourhoods.

U of T is shaping the leaders and community builders of the world around you.

Creating Connections with Youth

Members of U of T's competitive Skipping Club partnered with the Rexdale Community Centre to run an after-school drop-in club called SkipHop where hip hop music was combined with skipping, attracting girls and boys alike.

Left: University of Toronto staff volunteer on a Habitat for Humanity project. Photo credit: Jason Krygier-Baum

LEADERS & COMMUNITY BUILDERS

University of Toronto alumni have a long tradition of using their knowledge and critical thinking to serve the public good. They comprise no fewer than thirteen Justices of the Supreme Court of Canada, four Prime Ministers, seven Ontario Premiers, two Governors General and nine Lieutenant Governors of Ontario. More than 100 alumni have been appointed to the Order of Ontario and almost 700 have been appointed to the Order of Canada. Of those, more than 100 have been named Companions of the Order of Canada, in recognition of a lifetime of achievement and outstanding merit.

U of T graduates comprise almost 20% of the membership of the Ontario College of Teachers, the men and women who educate elementary and high school students in classrooms across the province.

The Faculty of Physical Education and Health offers countless summer camps and after-school programs promoting a healthy active lifestyle through the Junior Blues. These programs build a child's social, emotional and physical development through fun activities and participation.

U of T also looks to the future by creating opportunities to engage youth years before they come to university. Since 2003, the Da Vinci Engineering Enrichment Program (DEEP) Summer Academy has worked with more than 4,000 highly motivated students to explore today's most compelling issues in engineering and science. The program's success has led to Jr. DEEP, a series of one-week courses for students in grades 7 and 8 on topics such as biomedical engineering, principles of robotics and video game design.

In 2010, the U of T chapter of the National Society of Black Engineers collaborated with the Faculty of Applied Science & Engineering to launch ENGAGE, a $20 per week summer camp for highly motivated middle school students. And since 1994, promising high school students from Aboriginal and African-Canadian communities have enrolled in the Faculty of Medicine's multidisciplinary Summer Mentorship Program. Most graduates have gone on to post-secondary

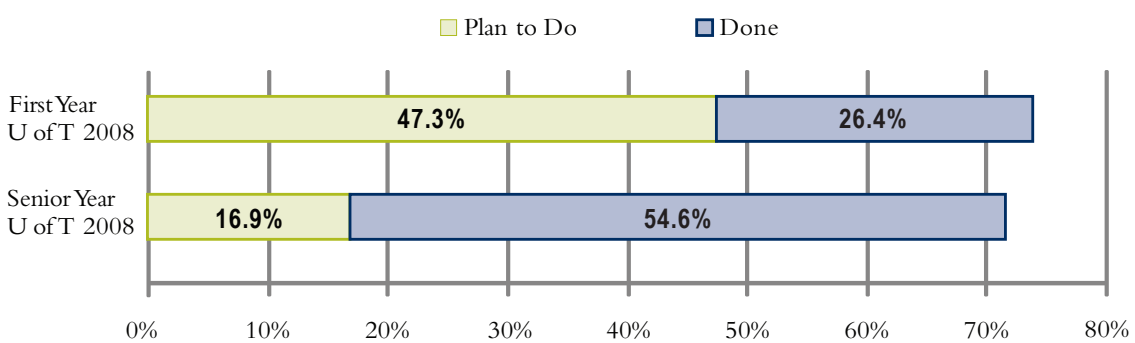
education, with one-third now in medical careers – including a PhD in nursing, a surgical resident and doctors with a range of specialties.

The University's role in building leaders also continues off campus. Faculty of Law professors and students volunteer through the Law in Action Within Schools (LAWS) to tutor, mentor and conduct workshops for at-risk high school students. Since its launch in 2005, the program has boosted grades, attendance and post-secondary enrolment among participants.

After opening its doors in 1992, First Nations House (FNH) quickly became a home away from home for Aboriginal students while studying at U of T. FNH has developed deep networks, seeking expertise and guidance from community members including Elders, leaders, artists, youth and colleagues. First Nations House provides culturally supportive student services and programs from financial aid counselling and housing, daycare and employment referrals, to access to Elders and ongoing cultural events.

University of Toronto students learn and practise engagement in the community while they study. A list of opportunities is available at **www.impact.utoronto.ca**.

Have you done or do you plan to participate in community service or volunteer work before you graduate from your institution?
(The National Survey of Student Engagement 2008)



SERVICE & LEARNING

The University of Toronto runs several programs that allow students to earn credit through hands-on learning experiences in the community. Thousands have benefited from their commitment to service, a value that runs through the entire University.

- Downtown Legal Services, a free community legal clinic and clinical education program, gives 180 law students each year the opportunity to work on cases in family law, tenant housing and refugee law. Supervised by professors, the students serve more than 3,000 clients each year. A few blocks away, students gain experience in family, criminal and administrative law at the Barbara Schlifer Commemorative Clinic, where they provide free assistance to survivors of violence. Since it was founded in 1985, the clinic has helped more than 35,000 women.

- The Faculty of Dentistry operates a full-service clinic in downtown Toronto, providing low-cost dental care to patients in financial need. Undergraduate and graduate students in pediatric dentistry also work with Mount Sinai Hospital to provide services to special needs patients who could not be served by dentists in the community. Students in this program gain the experience they need to welcome this patient group to their own practices after graduation.

- Students from U of T's Factor-Inwentash Faculty of Social Work share their expertise with more than 600 community agencies, schools, hospitals and healthcare organizations in the Greater Toronto Area, while learning to integrate knowledge with practice. In 2009, every Master of Social Work graduate had completed a minimum of 1,001 hours of practical experience within the community.

- Thousands of U of T undergraduate students connect with community organizations in co-curricular service placements organized by the Centre for Community Partnerships. Service learning benefits both partners, with organizations gaining from students' work and students learning to put theory to the test in real-life settings. Work placements range from developing educational materials for the Kidney Transplant Network to designing music programs for the disabled.

- Faculty members answer the call when tragedy strikes. Several professors were on the ground shortly after the devastating earthquake in Haiti. Governments and aid agencies have relied upon their expertise there and elsewhere in dealing with everything from disease prevention to disaster management.

- U of T formed a unique partnership with the City of Toronto to relocate and reuse its historic greenhouses. The greenhouses had served as the focal point for botany research for more than 70 years. Now, as the Allan Gardens Children's Conservatory, they provide Toronto primary school students with the chance to explore nature in the inner city.

Above: U of T students assist in the Special Olympics held on campus during the Centre for Community Partnerships' Outreach Day of Service event.

SHAPING THE WORLD AROUND US

The University of Toronto's scholars and researchers are tackling the tough issues. When policy-makers need to understand the big picture, they turn to the University's experts for advice.

- Ideas and innovations developed by experts at the Munk School of Global Affairs will strengthen global security. With a renowned network of specialists contributing to its programs, centres and institutes, the Munk School engaged in a critical dialogue about the forces reshaping the international landscape. Already home to the Citizen Lab, which has made headlines around the world with its reports on cyber security, the Munk School will house the Canada Centre for Global Security Studies. Its G8 and G20 research groups engage scholars from around the world in tracking and analyzing the commitments countries make at these summits.

- The School of Public Policy and Governance and its Mowat Centre for Policy Innovation are informing and revitalizing Canadian public policy in the face of a rapidly changing economy. The Mowat Centre fosters collaboration between public and private sectors, social innovators and government, while conducting research that will inform debate and help create evidence-based policies to deal with the realities of free trade and globalization.

- The Lloyd & Delphine Martin Prosperity Institute, affiliated with U of T's Rotman School of Management, is a leading think-tank on the role of city-regions in economic prosperity. With its integrated view of prosperity, the Martin Prosperity Institute looks beyond economic measures to include the development of society's creative potential and the significance of quality of place.

- Established in 2007, the Cities Centre, led from the John H. Daniels Faculty of Architecture, Landscape, and Design, brings together experts from a range of disciplines, encouraging and supporting both scholarly and applied research on a broad array of urban issues in Canada and abroad. Meanwhile, the Program on Global Innovation (PROGRIS) is seeking clues to why certain cities attract and retain creative and innovative thinkers who contribute to civic engagement, a dynamic economy and social inclusiveness. Researchers at PROGRIS are investigating how knowledge flows within city regions, within industrial sectors and across sectors.

Smart Investments

One-hundred collector panels provide up to a quarter of the hot water used at U of T's Athletic Centre.

SUSTAIN

A MORE SUSTAINABLE ENVIRONMENT

U of T is:

The home of groundbreaking research into today's most pressing environmental problems; and

A corridor of parkland and green space in an urban centre.

U of T has led by example for almost 40 years.

Left: University of Toronto Scarborough's faculty lead students in field research as part of their environmental sciences studies.
Photo credit: Kaldor Design Group Ltd

A CULTURE OF SUSTAINABILITY

When it comes to energy efficiency and sustainability, the University of Toronto has been leading by example for decades. In 1969, Pollution Probe – a student organization mentored by a professor of zoology – fought to get environmental issues onto the public agenda. By 1977, the University had appointed a full-time professional engineer to enforce energy conservation on campus. In 1994, U of T adopted a University Environmental Protection Policy, requiring all planning decisions to reduce waste, minimize energy consumption and respect biodiversity.

The impact has been significant.

Over the past 35 years, U of T has avoided an estimated 22% increase in greenhouse gas emissions – or one million tonnes of carbon dioxide. Since 1991, U of T's St. George campus has achieved a waste-to-landfill reduction of 107% which means that since 1991 the St. George campus has recycled more waste than it has sent to landfill. Herbicides have been banned since 1994 and incandescent light bulbs since 2007. A cogeneration plant that reclaims heat now provides 25% of the electricity on the St. George campus. On the University of Toronto Scarborough campus, special motion detectors that switch off vending machines when no one is around reduce their energy use by an estimated 46%.

A total of 13,334.5 tonnes of paper/fibre has been recycled since 1991, resulting in:

Trees Saved	247,817	Landfill Space Saved	36,779 m^3
Water Saved	386,231 m^3	Energy Saved	59,796,854 kwH
Air Pollution Prevented	397,568 kg	Oil Saved	58,310 barrels

U of T opened its first LEED-certified (Leadership in Energy and Environmental Design) building in 2006 and a second followed in 2008. An additional five construction and renovation projects are being built to LEED standards. More than 40,000 square metres of sustainable roofs have been installed across 25 buildings on the St. George campus to cut heating and cooling costs, and solar panels at the Athletics Centre now provide up to 25% of that building's hot water for showers and laundry. In 2010 the City of Toronto recognized U of T's energy conservation with an Award of Excellence.

Like Pollution Probe, those solar-heated showers began as a student initiative. In recent years, U of T students founded Bikechain, a bicycle repair and resource centre, and a recent graduate launched Rewire, an organization that encourages people in residences and offices on campus to save electricity by changing their behaviour – turning off lights when leaving a room or changing the power-saving settings on their computers. With eight student groups across three campuses devoted to environmental issues, the University's Ecolink website helps connect students with job opportunities, green living tips, environmental events and programs.

With its green roofs, gardens and publicly accessible park spaces, the downtown campus functions as a green corridor through the heart of the city. The east and west campuses preserve even greater swaths of green space. Through its naturalization programs, the University of Toronto Mississauga, the steward of a 90-hectare protected belt along the Credit River, has replanted 1.4 hectares with native species. And this year alone, UTSC – which cares for 120 hectares of hiking trails and parkland – replanted more than 130 native shrubs, trees and wildflower species.

GREEN LEADERS

The University of Toronto is a hub for environmental leadership and education. Its researchers and students are full participants in today's most important scientific debates.

- Thousands of undergraduates in hundreds of courses are preparing to become the environmental leaders of tomorrow. With 350 faculty members investigating issues in energy and the environment, U of T's research and mentorship opportunities are unparalleled. The interdisciplinary Centre for the Environment connects 25 academic units and hosts seminars and lectures that bring local, national and international scientists to campus to discuss current research and critical problems. And, in the fall of 2010, the Department of Physical and Environmental Sciences at the University of Toronto Scarborough launched a multidisciplinary PhD program – one of only a handful of such programs in North America.

- U of T is home to leading climate scientists. Fourteen of its researchers have contributed to the United Nations' Intergovernmental Panel on Climate Change which was a co-winner of the 2007 Nobel Peace Prize. These scientists are helping us understand some of the many surprising effects that climate change will have on Canada and the world.

- The Royal Ontario Museum's famed Green Plant Herbarium was originally part of U of T. Today, its curator is a cross-appointed professor and many graduate students use it in their research. Built from the personal plant collections of U of T researchers in the 1840s and 1850s, the herbarium now contains 350,000 specimens, one of the largest collections of Ontario flora in the world.

- A U of T spin-off company is producing 60 million litres of biodiesel fuel every year. Biox Corporation is using technology developed by a professor of chemical engineering and applied chemistry to produce biodiesel from waste animal fats through a process that is both cheaper and more efficient than previous biodiesel production techniques.

LONG-TERM SOLUTIONS

The daunting problems on the horizon do have answers. The search for solutions has already begun in the University of Toronto's labs and classrooms.

- The planet's population is expected to reach seven billion within a few years. Many regions of the world are already experiencing food shortages. U of T researchers are addressing this challenge by developing new crop strains to grow in hostile environments. For instance, researchers at the University of Toronto Scarborough are developing a strain of "super rice" that can grow in saline soils. This research could transform agricultural productivity in some of the world's poorest countries.

- U of T researchers are finding new ways to cut our dependence on non-renewable resources. Research into alternative uses of biomass has shown that organic byproducts, such as potato peels, corn cobs and wood bark, can replace petroleum-based plastics and adhesives in everything from furniture to auto parts. These discoveries will not only "green" the chemical and automotive sectors, they potentially create valuable new revenue streams for Ontario agriculture and forestry sectors.

- The sun offers unbounded energy, but today's solar technology remains stubbornly inefficient and expensive. Using developments in nanotechnology, U of T researchers have developed a solar paint to capture more of the sun's energy. This material can be applied to any surface and will harvest energy even on cloudy days.

Above: University of Toronto Mississauga's new Instructional Centre will use energy and water-efficient fixtures, as well as local materials with renewable or recycled content, and will include a green roof. Geothermal pipes will help regulate the temperature inside the building all year round.


Scene
Take
Roll
Prod.

An illuminated lattice adorns the entrance at Hart House as part of an installation of works for Nuit Blanche.

PERFORM

UNLEASHING THE HUMAN SPIRIT

U of T is:

A hub for creativity among students, staff and faculty;

A dazzling array of sports, music, art, theatre, film and cultural events; and

Home to old and new architectural treasures.

U of T is home to three radio stations, five art galleries, 17 theatres, 18 award-winning buildings, 44 intercollegiate teams and a 5,000 seat stadium.

Left: University of Toronto Mississauga/Sheridan Theatre and Drama Studies Program 2009 production of *The Spot*.

ARTS, ATHLETICS & DESIGN

For more than 150 years, the University of Toronto has been bringing people together through arts, athletics and design – pursuits that ignite passions, inspire imaginations and transcend individual differences.

More than 400 members of the University community have participated in the Olympics and Paralympics, winning 110 medals, including 43 gold. In the 2010 Vancouver Winter Olympic Games, U of T students won gold medals in ice hockey and bobsleigh.

Almost 50 intercollegiate teams compete in 26 sports. The U of T Varsity Blues swimmers hold the record for the most consecutive championships – 32 – of any swim team in Canada, while the women's ice hockey team has captured a league-leading 17 Ontario conference championships since 1972. The women's field hockey team was recently crowned the 2010 National Champions. Along with its athletes, U of T sends coaches, organizers and sports physicians to the Olympics. With one of the largest and most illustrious university sports programs in North America, the University's expertise is highly sought.

U of T faculty, students and alumni also entertain and engage the public through visual and performing arts at the city's premier cultural events, from Luminato and Nuit Blanche to the Toronto International Film Festival. They create provocative installations, moderate important conversations and challenge audiences to think critically about the world around them. In 2010, the University of Toronto Film Festival at Hart House Theatre screened 100 films from 15 countries, while U of T's Festival of Dance included more than 60 different dance pieces and more than 200 performers.

Right: Sarah Charles, an MSc candidate in Exercise Sciences and member of the 2008 Canadian Olympic Team, trains at the University of Toronto's Athletic Centre. Photo credit: Ryan Hughes

Many of today's most influential directors and writers for stage and screen developed their talents at U of T. Atom Egoyan, Don McKellar, David Cronenberg and Norman Jewison all attended the University. Before he created *Saturday Night Live*, then-student Lorne Michaels directed and co-wrote the satirical musical revue *The UC Follies*. Before creating the television show *House*, David Shore helped edit *Hearsay*, a student publication at U of T's Faculty of Law.

Notable artists, writers and performers in all areas of cultural endeavour have called U of T home. They include artists Robert Bateman and Doris McCarthy, authors Robertson Davies and Rohinton Mistry, poet Dorothy Livesay and comedians Johnny Wayne and Frank Shuster.

The University is a living laboratory for students of architecture and design, preserving more than 50 heritage properties while constructing award-winning new developments. Since 2007, U of T has won 18 awards for design, including the Governor General's Award for the University of Toronto Mississauga's Communications, Culture and Technology Building and the Terrence Donnelly Centre for Cellular and Biomolecular Research on the St. George campus. The Leslie L. Dan Pharmacy Building, designed by Foster and Partners / Cannon Design, quickly became a local landmark. These sleek, modern buildings serve as fascinating counterpoints to heritage treasures such as University College's much-photographed Romanesque Revival building and the Queen Anne Revival style of Annesley Hall at Victoria College.

Left: The Thomas Fisher Rare Book Library is home to approximately 700,000 volumes and 3,000 linear metres of manuscript holdings.

NURTURING TALENT

Students and visitors are enriched by the University of Toronto's cultural and athletic facilities. Beyond its classrooms, the University is home to both track and stage.

- U of T facilities support inspiring athletes from Toronto and across Ontario. The University is leading the renewal of high performance venues in the province, with state-of-the-art athletic, fitness and competition facilities such as the recently reconstructed Varsity Centre at the St. George campus and the new Recreation, Athletics and Wellness Centre at the University of Toronto Mississauga. U of T is looking forward to being an important venue for the athletes during the 2015 Pan Am Games.

- Each year U of T's Faculty of Music offers more than 100 free concerts, master classes – led by artists such as pianist and honorary graduate Angela Hewitt – and guest lectures. World-renowned faculty performers and resident ensembles include the Gryphon Trio, NEXUS Percussion Ensemble, St. Lawrence Quartet and Tafelmusik Baroque Orchestra. Each year, the Faculty hosts the Tafelmusik Baroque Summer Institute, offering master classes for students and professional musicians in the baroque repertoire. The Faculty of Music also contributes vital talent to institutions such as the Toronto Symphony Orchestra and the Canadian Opera Company.

- In 2010, four U of T alumni and one student received Juno Awards. Soprano Measha Brueggergosman, classical guitarist Liona Boyd, Barenaked Ladies' bassist Jim Creegan and indie musician Owen Pallett all graduated from U of T, while jazz vocalist Sophie Milman is working towards a commerce degree. Opera singer and Engineering Science graduate Isabel Bayrakdarian has been honoured with four Juno Awards since 2004 and sings on the Grammy® Award-winning soundtrack of the film *The Lord of The Rings: The Two Towers.*

- More than 1,000 students each year participate in extra-curricular dance, drama, film, theatre and music at Hart House, following in the footsteps of such Canadian icons as William Hutt, R.H. Thomson and Donald Sutherland, who all got their start at U of T.

FOSTERING CREATIVITY

The University of Toronto's extracurricular programming and numerous cultural spaces encourage risk-taking, critical thinking, and interdisciplinary collaboration.

- According to alumnus Hart Hanson, former editor of the *UC Gargoyle* and now creator and executive producer of the TV series *Bones*, students need to seize the opportunity to get involved. "Go into student politics, go into the clubs, go into the athletics – just embrace that community," Hanson says. "Aside from the great education I got in classes it was the extracurricular activities and the community that really were my education at U of T."

- Margaret Atwood and Camilla Gibb are among several U of T graduates who have gained international acclaim as recipients of the Man Booker Prize, the Commonwealth Writer's Award, the Scotiabank Giller Prize, the Trillium Book Award and many Governor General's Awards. U of T's Fund for Emerging Writers supports the next generation of writers at the University, who are already gaining recognition for their work, appearing on shortlists for such awards as the Forward Poetry Prize in the U.K. and the Writers' Trust of Canada Journey Prize.

- The Faculty of Music's alumni can be found in every leading musical and educational institution in Canada and in many abroad. In 2010, two students and one alumnus received Awards for Young Composers from the Society of Composers, Authors and Music Publishers of Canada (SOCAN).

BUILD

CREATING JOBS, BUILDING BUSINESSES

U of T is:

Students connecting with employers;

Researchers commercializing innovative breakthroughs; and

Internationally trained professionals rebuilding careers in Canada.

U of T contributed billions to the economy last year.

Connecting Highly Qualified Students with Employers

The Career Centre at the University of Toronto provides career education and connects employers with exceptional students and recent graduates.

Left: The University of Toronto graduates approximately 15,000 students each year. Photo credit: Jason Krygier-Baum

CONTRIBUTING TO THE ECONOMY

As one of "Canada's Top 100 Employers", the University of Toronto is a significant contributor to the development of human capital and the economic success of Ontario.

The active population of the University – its students, faculty and staff – is about 100,000. When continuing studies students are included, this number increases to more than 150,000, or roughly the size of the city of Guelph. The U of T community comprises almost 9% of the adult population of the Greater Toronto Area (GTA), making a vital contribution to the local and national economy simply through their spending and taxes alone.

Population Category	Number
Students-Degree Programs	73,700
Faculty and Librarians	10,500
Admin Staff	10,800
Total Core Population	**95,000**
Students-Continuing Education	56,000
Total Population	**151,000**
Alumni-GTA	242,300
Total Extended U of T Community in GTA	**393,300**
Alumni-Other	247,600
Total Extended U of T Community Worldwide	**640,900**

In addition to its importance as a contributor to Ontario's human capital, the institution's size and presence adds significantly to the province's economic success. In 2008-2009, the University and its faculty, staff and students contributed an estimated $1.475 billion directly to Toronto's economy. Such spending has a ripple effect. Spending in one area of the economy spurs spending somewhere else, which turns this $1.475 billion into $2.359 billion of indirect benefit for Toronto. When one factors in the alumni living in the city, who earn roughly $2.475 billion every year, this impact grows even more.

Contribution Category	Direct	Indirect
Students' Spending	$411M	$657M
U of T Faculty and Staff Spending (From Salaries)	$587M	$939M
U of T Expenditures (Non-Salary)	$477M	$763M
Local Sub-Total	**$1,475M**	**$2,359M**
Alumni Earnings (Incremental)	$2,457M	$3,931M
Total	**$3.9B**	**$6.3B**

With approximately 15,000 men and women graduating from the University each year, the number of U of T alumni is approaching half a million people. Whether they choose to work for a public or private sector employer, or simply go into business for themselves, the majority of U of T alumni remain in Canada, putting their skills to work for the Canadian economy.

Numerous major business leaders are U of T alumni. They include Blake Goldring, Chairman and Chief Executive Officer, AGF Management Limited; Jim Balsillie, Co-Chief Executive Officer, Research In Motion; Tom Jenkins, Executive Chairman and Chief Strategy Officer, Open Text; Loudon McLean Owen, Managing Partner, McLean Watson Capital; and Kathleen Taylor, President and Chief Executive Officer, Four Seasons Hotels Ltd.

An important dimension of U of T's research output is its translation into economic benefit. One important mechanism is providing groundbreaking inventions and solutions to companies. In addition, the University also helps inventors establish new companies on their own to commercialize their inventions. Faculty and students at the University of Toronto have established 125 spin-off companies including Rimon Therapeutics Ltd, Greencore Composites Inc. and Psiphon Inc. These companies create jobs and generate revenue for the Toronto region. Some of these companies have gone on to become successful global players.

U of T has many programs to assist the growth of these companies including the Entrepreneurship 101 lecture series. Championed by U of T faculty and offered at MaRS[1], the extremely popular Entrepreneurship 101 teaches engineers and scientists how to develop business plans to capitalize on the results of their research.

[1]A convergence and commercialization centre that connects science, technology and social entrepreneurs with business skills, networks and capital.

CONNECTING TALENT WITH OPPORTUNITY

Opening doors to learning has always been one of the University of Toronto's most important contributions. Since 1998, U of T has been governed by a policy that "no student offered admission to a program at the University of Toronto should be unable to enter or complete the program due to a lack of financial means"[2]. The University redirects almost 20% of the tuition it receives – roughly $105 million – back to students through bursaries and scholarships, 40% in the form of needs-based awards.

U of T is helping students succeed. Its work placement programs are allowing young people to put their knowledge into practice, while the University's bridging programs are giving foreign professionals access to the Canadian economy.

- Thousands of talented, driven U of T undergraduate students are bringing fresh approaches to hundreds of employers through internships and co-op placements. In 2009–2010, some 520 computer science and engineering students secured internships at more than 250 companies through the Professional Experience Year (PEY). The oldest and largest paid internship program in Canada, PEY uses workshops and one-on-one counselling to prepare students before sending them out to gain valuable industry experience. The John H. Daniels Faculty of Architecture, Landscape, and Design's Professional Experience Program (PEP) exposes students to the latest techniques and trends through placements in internationally acclaimed design firms. These programs give students the tools to manage and chart their career goals, while businesses benefit from an infusion of innovative, youthful energy.

[2]Policy on Student Financial Support, April 30, 1998

- The co-op education program at the University of Toronto Scarborough helps another 1,500 undergraduate students per year find local and international work placements, gaining up to 12 months of industry experience relevant to their undergraduate degree. Other internship opportunities at public and private organizations are arranged by faculty in a broad range of programs, including the Faculty of Information, the Ontario Institute for Studies in Education, the Munk School of Global Affairs and the School of Public Policy and Governance.

Above: Students during a work experience placement.

- U of T plays a key role in assisting foreign-trained doctors, dentists, lawyers, pharmacists and business people further their careers in Ontario. For example, more than 700 internationally-trained pharmacists have enrolled in U of T's intensive bridging program since 2000. The programs has proven successful. Those who complete the program do as well as Canadian-educated students in national licensing exams.

- Each year U of T's Faculty of Dentistry admits approximately 30 students into its International Dentist Advanced Placement Program. These students have been trained as dentists in other jurisdictions. After successful completion of this six-month program, students are fully integrated into the third year of the DDS program and are on the educational path to become licensed dentists in Canada.

RESEARCH & INNOVATION

Tomorrow's business decisions will depend on the technology and insights developed by the University of Toronto and its graduates.

U of T's impact is felt throughout the Canadian economy. Ideas generated at the University are being put to work by governments and private enterprise. The University's alumni now occupy every niche of Canadian society.

- With its data mining and content aggregation technology, Sysomos – a spin-off company launched in 2007 – has redefined social media analytics. Businesses around the globe use social media faster and more efficiently than previously imagined, thanks to the company's system, which was developed by a U of T student and his faculty adviser. Clients of the 25-employee company include Microsoft, Disney, Shell, Proctor & Gamble and Coca-Cola. In 2010, the Canadian company Marketwire acquired Sysomos for $34 million.

- Thanks to seismic-resistant construction joints developed by a U of T spin-off company, Cast Connex Corp., buildings in earthquake-prone countries will be better able to withstand collapse, saving lives. While working on his master's degree in civil engineering, a student designed a joint capable of absorbing the energy needed to survive an earthquake. In 2009, the Canadian Society for Civil Engineering bestowed its Award for Excellence in Innovation to the company and today its connectors are specified in projects including a nuclear facility at the Los Alamos National Laboratory.

- Public health decisions affect lives, but it can be difficult for policy-makers to know how well these decisions are achieving results. Researchers at the Department of Health Policy, Management and Evaluation are providing answers. Recently, one of the department's students measured the effectiveness of Ontario's mass H1N1 immunization rollout. According to the student's model, the immunization program prevented 4.1 million cases of symptomatic influenza, 50 deaths, 420 hospitalizations, 28,000 visits to the hospital emergency departments and 100,000 visits to doctors' offices – a highly cost-effective approach.

Left: Vive-Nano, an award-winning company that has developed an environmentally friendly process for creating products and materials using nanotechnology, is a spin-off company of the University of Toronto.

IMAGINE

IDEAS THAT SHAPE THE WORLD

University of Toronto researchers are making significant discoveries that affect the lives of everyday Canadians. Past breakthroughs have included medicinal grade insulin, Pablum, the "anti-black-out" suit used by air force pilots, the first electron microscope in North America, determining the potential of stem cells, the insight that "the medium is the message", photodegradable plastics, infrared chemiluminescence (for which Professor John C. Polanyi received the Nobel Prize), the T-cell receptor gene, the cystic fibrosis gene and a drug delivery system that directly targets ovarian tumours.

U of T's scholars continue their search for answers. Tomorrow's society may be better because of their efforts to:

Make auto parts from potato peels and corn cobs
Professor Mohini Sain, Faculty of Forestry's Centre for Biocomposites and Biomaterials Processing [1]

Discover new planets
Professor Ray Jayawardhana, Astronomy and Astrophysics

Develop a tool to help physicians predict whether a woman will remain free of breast cancer *Professors Jeffrey Wrana, Molecular Genetics, and Ian Taylor, Surgery* [1]

Understand how 600 million years of climate change is likely to repeat itself
University Professor Richard Peltier, Physics [2]

Give children who are non-verbal and have limited motor control the power to communicate *Professor Tom Chau, Institute of Biomaterials and Biomedical Engineering* [3]

Detoxify harmful chemicals in groundwater naturally
Professor Elizabeth Edwards, Chemical Engineering and Applied Chemistry [4]

Left: The main doors to University College – the founding nondenominational college established in 1853.

Grow cardiac patches from a patient's own stem cells to heal damaged hearts
Professor Milica Radisic, Chemical Engineering and Applied Chemistry [1]

Improve cellphone camera picture quality four-fold using quantum dots
Professor Ted Sargent, Edward S. Rogers Sr. Department of Electrical and Computer Engineering and InVisage Technologies Inc. [5]

Use knowledge of how memories are stored in the brain to treat post-traumatic stress disorder *Professor Sheena Josselyn, Physiology* [1]

Provide new insights into the minds of celebrated artists, such as evidence that Agatha Christie's later work exhibits signs that she suffered from Alzheimer's
Professor Ian Lancashire, English, and Graeme Hirst, Computer and Mathematical Sciences at U of T Scarborough [6]

Uncover massive cyber espionage rings
Professor Ron Deibert, Munk School of Global Affairs [7]

Design glasses that regulate a shift worker's circadian rhythm to help prevent chronic disease *Professor Robert Casper, Obstetrics and Gynecology* [1]

Expand the environmental evidence used in the global vs. local food debate
Professor Pierre Desrochers, Geography at U of T Mississauga [1]

Create new strains of salt-resistant rice to preserve the agricultural productivity of Asia's rice-growing regions
Professor Herbert Kronzucker, Biological Sciences at U of T Scarborough [1]

Please visit **www.impact.utoronto.ca** for a more comprehensive showcase of U of T's impact on communities in Toronto, across Canada and abroad.

[1]Toronto Life *magazine: 25 World Changing Ideas from the Smartest Torontonians*
[2]*Franklin Institute Bower Award and Prize for Achievement in Science*
[3]Globe and Mail - *Transformational Canadians*
[4]*NSERC Synergy Award Recipient*
[5]Wall Street Journal*'s 2010 Technology Innovation Awards in the Semiconductor category*
[6] N.Y.Times' *2009 Ideas list*
[7]*Canadian Journalists for Free Expression (CJFE) 2010 Vox Libera Award*

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